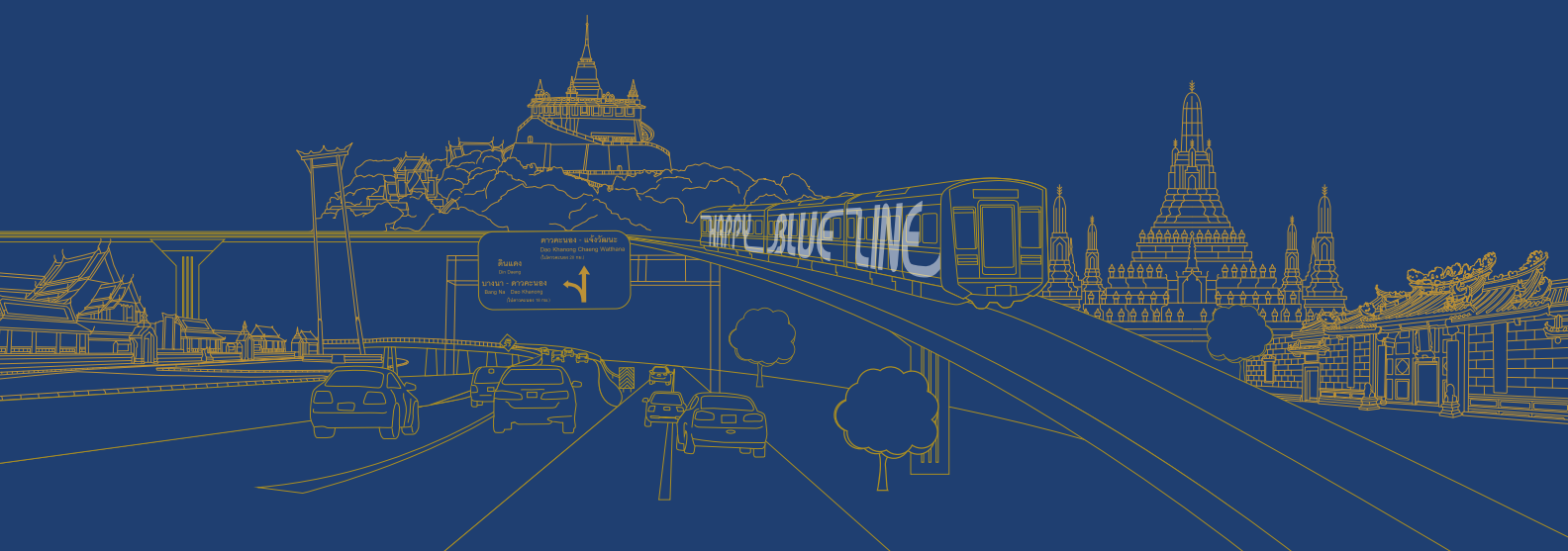


ANNUAL REPORT 2020

Bangkok Expressway and Metro Public Company Limited

Happy Journey

WITH BEM





An aerial photograph of a city, likely Bangkok, showing a dense urban landscape with various buildings and a prominent elevated highway or bridge in the foreground. The sky is a clear, bright blue.

Happy Journey

WITH BEM

With the intention of contributing to the alleviation of traffic problems in Bangkok and its vicinity, BEM is always committed to provide an efficient service of the expressway and metro with the prime aim of improving the quality of life and bringing smile of happiness to urbanites.

“Happy”

*Every Moment
of Your Journey*

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Financial Summary

Bangkok Expressway and Metro Public Company Limited and its Subsidiaries

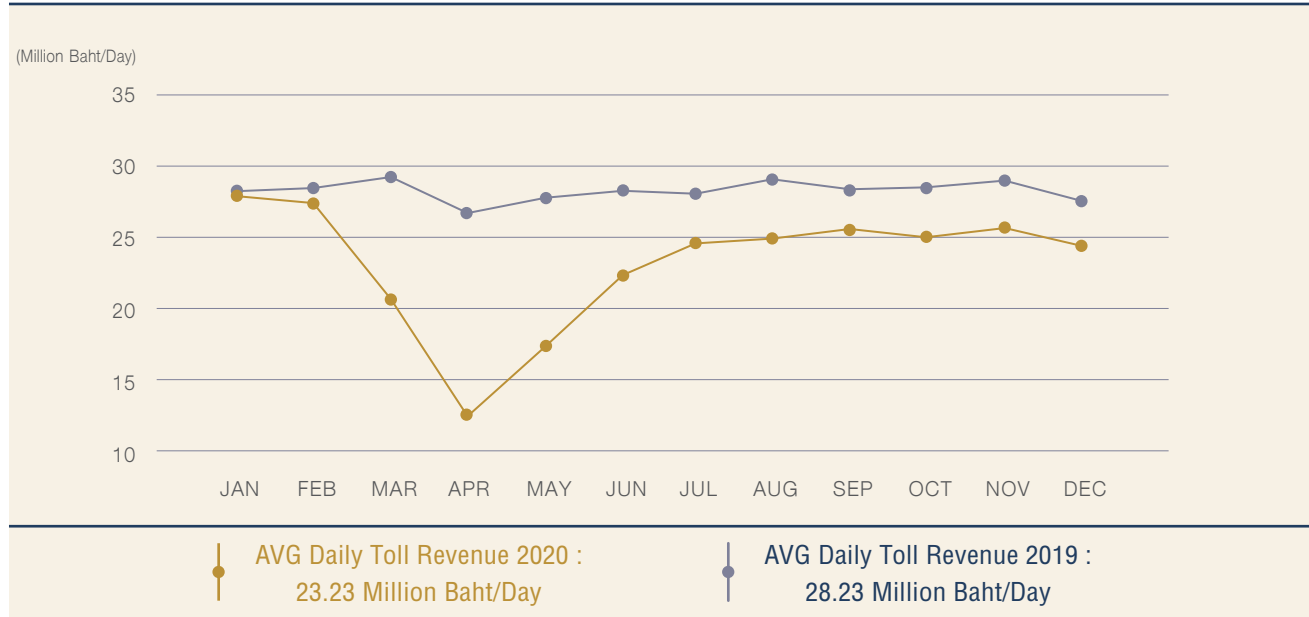
Financial Highlights

Unit : Million Baht

	2020	2019
Financial Position (As at December 31)		
Total assets	113,616	111,697
Total liabilities	75,582	72,874
Shareholders' equity	38,034	38,823
Operating Results (For the year ended December 31)		
Revenue from expressway business	8,145	10,302
Revenue from rail business	4,520	5,022
Revenue from commercial development business	825	783
Net profit attributable to the Company	2,051	5,435
Financial Ratios		
Net profit margin (%)	14.60	18.66
Return on equity (%)	5.35	8.38
Return on total assets (%)	2.00	3.24
Debt to equity ratio (times)	1.76	1.62
Interest bearing debt to equity ratio (times)	1.50	1.37
Book value per share (Baht)	2.49	2.54

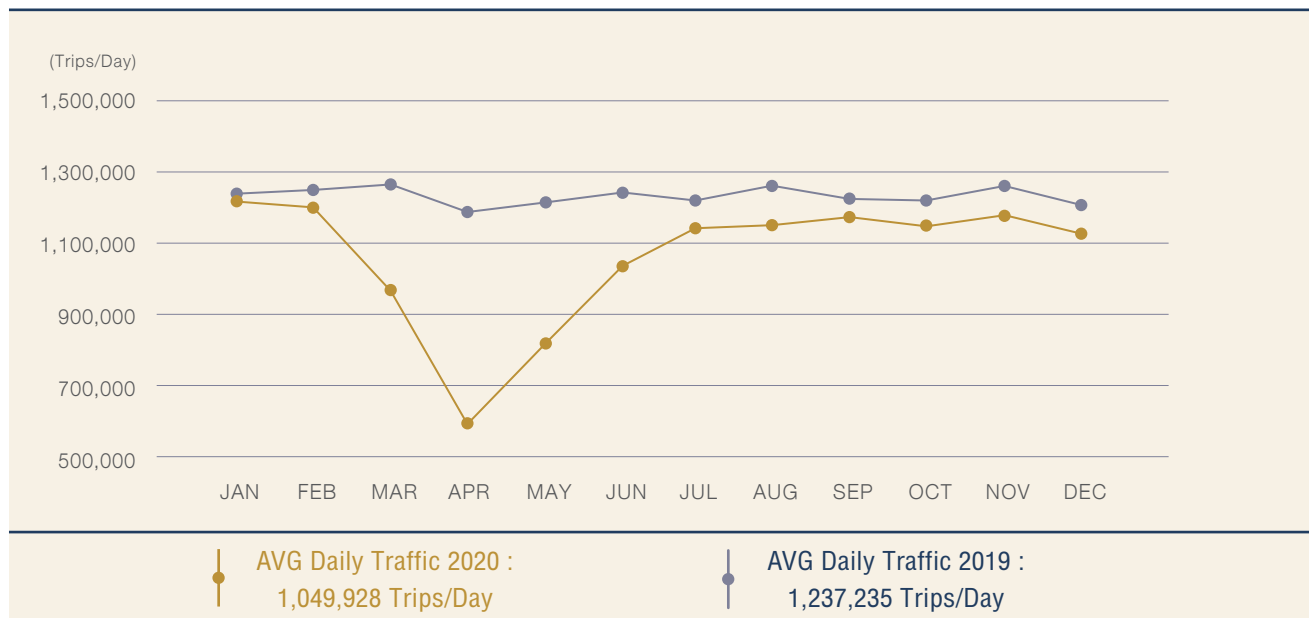
Average Daily Toll Revenue :

Chalerm Mahanakorn, Si Rat, Udon Rattaya and Si Rat - Outer Ring Road Expressway



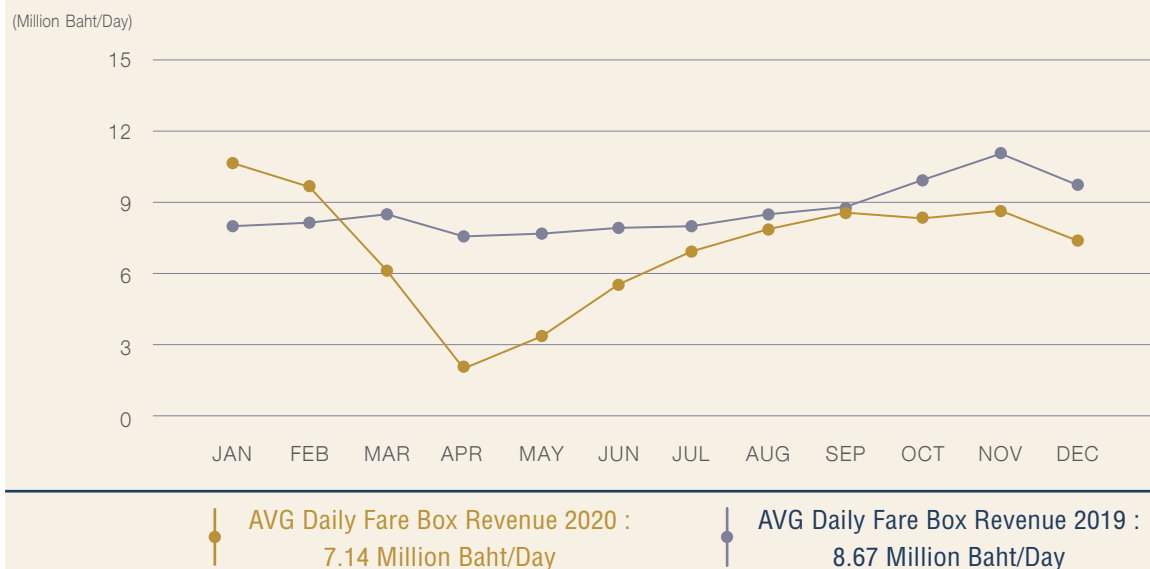
Average Daily Traffic :

Chalerm Mahanakorn, Si Rat, Udon Rattaya and Si Rat - Outer Ring Road Expressway



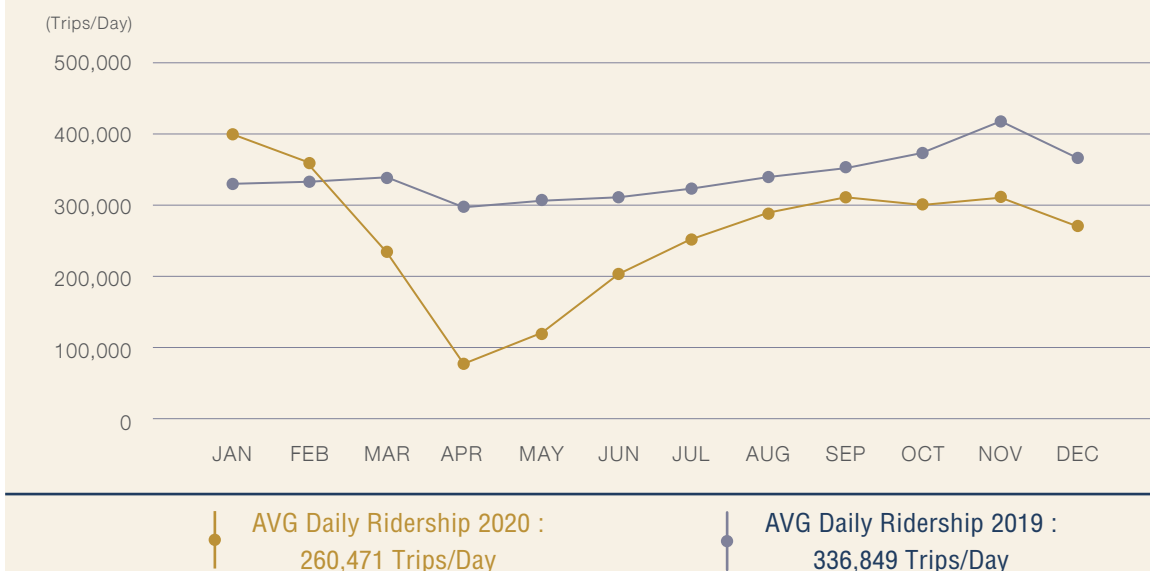
Average Daily Fare Box Revenue :

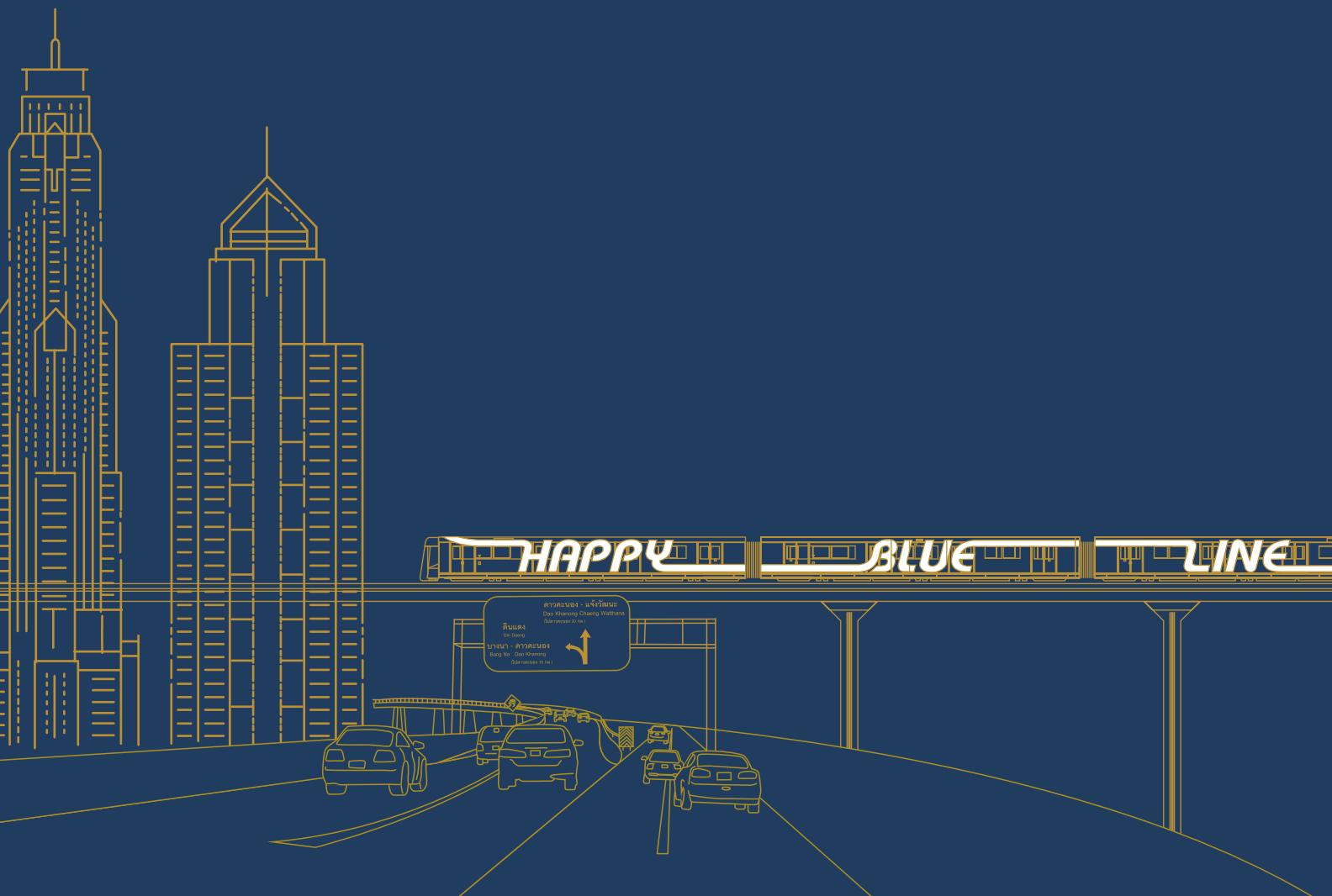
the MRT Chaloom Ratchamongkhon Line



Average Daily Ridership :

the MRT Chaloom Ratchamongkhon Line





Message from the Chairman of the Board of Directors

In 2020, Bangkok Expressway and Metro Public Company Limited or BEM has already launched the full operation of all three Sections of the MRT Blue Line to the public on March 30, 2020, with the MRT Blue Line's connected route running in a Circle Line covering the central area of Bangkok while making a connection between Bangkok and Thonburi sides. Most of all, BEM was tremendously proud that His Majesty the King and Her Majesty the Queen graciously presided over the official opening ceremony of the M.R.T. "Chaloem Ratchamongkhon" Line (MRT Blue Line), the Extension of Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, on November 14, 2020. Moreover, BEM has steadily gained confidence from the government sector in the expressway management, proved by the execution of the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) with the Expressway Authority of Thailand in a collaborative effort to settle the disputes and extend the respective concession periods until October 31, 2035.

In the context of the business operations based on corporate governance in 2020, BEM was rated as a listed company with the "Excellent CG Scoring" or Five Star Rating in Corporate Governance from the Thai Institute of Directors Association (IOD) and the Stock Exchange of Thailand (SET), and also, BEM was presented with the Thailand Sustainability Investment Award for the fourth consecutive year as a listed company engaging in business operations by taking into account environment, society and corporate governance, not to mention the Thailand's Top Corporate Brands 2020 as the organization with the highest brand value in the transportation and logistics sector from the Faculty of Commerce and Accountancy Chulalongkorn University.

The situation of the outbreak of COVID-19 last year had caused a decline in the traffic volume of both the expressway and MRT services, the Company therefore implemented the measures for cleanliness inside the MRT trains and stations for the sake of hygiene and safety of all service users, and also managed and controlled costs to ensure they were reasonable and correlated with the situation happened, with BEM supporting the government policies to curb the spread of COVID-19 through the "Healthy Journey with BEM" project to give away one million cloth face masks to the MRT service users, including communities and schools adjacent to the expressway and MRT routes.



In respect the operating results of 2020, BEM had the net profit in the total amount of Baht 2,051 Million, a decrease from the previous year due to the impact of COVID-19. Nonetheless, BEM reaffirmed the commitment to taking care of stakeholders, especially shareholders, whereby the Board of Directors resolved to propose that the Shareholders' Meeting consider approving the dividend payment for 2020 at the rate of Baht 0.10 per share.

We would like to extend our gratitude to all shareholders, expressway users, MRT passengers counterparts, public and private agencies, along with all concerned parties, for their continued support and confidence in BEM's business operations, as well as to all executives and staff for their role as the driving force behind the delivery of the efficient services to the service users in the midst of the COVID-19 crisis. In 2021, please rest assured that BEM remains committed to operating the businesses based on the good corporate governance principles, with social responsibility, as well as putting ahead with developing and designing new innovations in order to enhance the quality of travel life while bringing smiles of happiness to all expressway users and MRT passengers. Finally, BEM would like to give all Thai people encouragement to get through such tough situations together at our best.

(Mr. Plew Trivisvavet)

Acting Chairman of the Board of Directors

Report of the Audit Committee



The Audit Committee of Bangkok Expressway and Metro Public Company Limited, as appointed by the Board of Directors, comprises three independent directors, namely, Mr. Vitoon Tejatussanasoontorn, as Chairman of the Audit Committee, General Chetta Thanajaro, and Dr. Annop Tanlamai, as Audit Committee Members. The Chairman of the Audit Committee and Dr. Annop Tanlamai specialize in accounting and finance, and the General Manager of Internal Audit Office serves as secretary to the Audit Committee.

The Audit Committee has performed its duties within the scope, duties and responsibilities as assigned by the Board of Directors in line with the requirements of the Stock Exchange of Thailand, together with the suggestions on various related matters. In 2020, the Audit Committee held five meetings for discussion and sharing of opinions with the management and internal auditor, and two meetings with the auditor without the management's presence, for discussion on the essence of the audit plan, significant accounting matters, and accounting standards to be applicable, along with independence in performance of duties and expression of opinions of the auditor.

The key performance of duties of the Audit Committee can be summarized as follows:

1. Review of Financial Report: The Audit Committee reviewed the quarterly financial statements and the financial statements for 2020 of the Company and its subsidiaries, including changes in the accounting policy, significant accounting adjustments, and correct and complete disclosure of information, by receiving clarifications from the auditor, management, and internal auditor, in which the auditor was asked about the accuracy and completeness of the financial statements, accounting adjustments which had a material impact on the Company's financial statements, audit scope, to rest assured that the financial statements were prepared in accordance with the legal requirements, the generally accepted accounting standards and the financial reporting standards, with correct and sufficient disclosure of information in a timely manner for the benefit of users of the financial statements, and therefore approved such financial statements as audited and reviewed by the auditor, representing a report on an unqualified opinion.

2. Review of Internal Control System: The Audit Committee reviewed the assessment results of the internal control in respect of the operating system and the IT system by using the Internal Control Adequacy Evaluation Form under the practice guidelines as specified by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and quarterly considered the results of review in terms of operations, resource utilization, property care, prevention or minimization of mistakes, damage and fraud, compliance with relevant laws, rules and regulations, and prevention of information risk to ensure the efficient and effective performance in all work units in order to meet the specified objectives and targets, compliance with various relevant laws and requirements, and adequate ability to control and prevent corruption.

3. Supervision of Internal Audit: The Audit Committee reviewed the Internal Audit Unit to ensure its independence, with a duty to report directly to the Audit Committee, by considering and approving the annual internal audit plan, and reviewed the results of operations as per the approved work plan, considered issues as a result of the audit and useful suggestions in order to enhance the efficiency of the internal audit system, and regularly followed up the operational results under the suggestions, as well as approving the consideration for appointment, transfer, termination of employment of the Head of the Internal Audit Unit.

4. Review of Good Corporate Governance: The Audit Committee reviewed the Company's operations to ensure that its business operations were reasonably carried out under the corporate governance principles in compliance with the law on securities and exchange, rules and regulations of the Office of the Securities and Exchange Commission, requirements of the Stock Exchange of Thailand, and other laws relating to the business operations, including obligations which might arise from agreements executed with third parties, and found that the Company has duly and properly complied with the relevant laws and requirements in a timely manner.

5. Review and Provision of Opinions on Connected Transactions or Transactions which might give rise to conflicts of interest, including Disclosure of Information on such Transactions: The Audit Committee reviewed and provided opinions on execution of connected transactions or transactions which might give rise to conflicts of interest in compliance with the applicable laws and requirements of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, and found that the Company executed such transactions with transparency, justification, and benefit to the Company's business operations and shareholders as a whole, together with correct and complete disclosure of information in a timely manner.

6. Consideration for Selection, Nomination of the Auditor and Annual Remuneration for the Auditor: The Audit Committee had the duties to consider selecting, nominating, re-electing, or terminating the engagement of the auditor, and consider the remuneration for the auditor, by taking into account the auditor's independence, knowledge, capability, experience, previous audit performance, reasonableness of the auditing fee, and was of the view that the auditor from EY Office Limited was independent, knowledgeable, capable and experienced regarding the audit, provision of advice on the accounting standards, certification of the financial statements in a timely manner, and that the auditing fee was reasonable. Therefore, it resolved to propose the matter to the Board of Directors to consider and seek approval from the meeting of shareholders for appointment of the auditor from EY Office Limited as the Company's auditor for 2021, with the remuneration in an amount not exceeding Baht 4,240,000 per year.

In summary, the Audit Committee has fulfilled its duties and responsibilities under the Audit Committee Charter as approved by the Board of Directors to provide various opinions and suggestions for the fair benefit of all interested parties, with its adequate knowledge, abilities, due care, prudence, and independence, and it was of the view that the Company's reports on financial information and operations were correct, reliable, in line with the generally accepted accounting standards and the financial reporting standards; that the Company's risk management and internal control system were proper, sufficient, together with the effective internal audit and operations in line with the good corporate governance principles, as well as compliance with applicable laws, rules and requirements relating to the business operations in all respects.

(Mr. Vitoon Tejatussanasoontorn)
Chairman of the Audit Committee

Report of the Nomination and Remuneration Committee



The Board of Directors of Bangkok Expressway and Metro Public Company Limited appointed the Nomination and Remuneration Committee by having General Chetta Thanajaro as Chairman of the Nomination and Remuneration Committee, Mr. Plew Trivisvavet, Mr. Vitoon Tejatussanasoontorn and Mr. Supong Chayutsahakij as Nomination and Remuneration Committee Members, with the duties to nominate and consider remuneration for directors and Managing Directors to ensure transparency and fairness.

In 2020, there were three Nomination and Remuneration Committee's Meetings to consider various matters. The essence of the performance of its duties can be summarized as follows:

1. Considering selecting qualified persons to hold the position of the Company's directors in accordance with the Company's criteria and procedures for director nomination, per the following:

- The Board of Directors considered the qualifications and roles in the previous year's performance of duties of the six directors who retired by rotation and then proposed that the 2020 Annual Ordinary General Meeting of Shareholders re-appoint them for another term;
- The Board of Directors considered the qualifications of MRTA's representative who had knowledge in the concession agreements and had experience in the management and operating works of the mass rapid transit operation service, which were beneficial to the Company.

2. Reviewing criteria on consideration and determination of remuneration for directors for 2020

The Board of Directors considered reviewing the criteria on consideration of remuneration for directors and was of the opinion that such determined remuneration was appropriate and commensurate with the scope of assigned duties and responsibilities of each director; stayed at the same rate as that offered by other companies in the same industry to attract and retain knowledgeable, competent and qualified directors to perform duties for the Company; elements of remuneration were clear, transparent, and easy-to-understand, by proposing the remuneration for directors for 2020 to the shareholders' meeting for consideration and approval.

3. Reviewing nominating Managing Directors for appointment and determining remuneration

The Board of Directors considered the qualifications of the nominees for the positions of Managing Directors with the duty to conduct the Company's management, and determined remuneration for the Managing Directors to ensure that such remuneration remained at the long-term motivated rate; commensurate with the scope of assigned duties and responsibilities of the Managing Directors, whereby such consideration was based on the performance of the Managing Directors, together with the operational results of the Company, and then proposed that the Board of Directors' Meeting consider approval such matter.

In conclusion, the Nomination and Remuneration Committee has fulfilled their duties as specified in the Nomination and Remuneration Committee's Charter approved by the Board of Directors, by employing its knowledge and ability with due care, and having its independence as sufficient to provide the opinions and suggestions for the overall benefits of the Company.

A handwritten signature in black ink that reads "Gen. Chetta Thanajaro".

(Chetta Thanajaro)

Chairman of the Nomination and Remuneration Committee

Report of the Corporate Governance and Risk Management Committee



The Board of Directors of Bangkok Expressway and Metro Public Company Limited has realized the significance of compliance with the good corporate governance principles and risk management whereby the Board of Directors appointed the Corporate Governance and Risk Management Committee, comprising Mrs. Vallapa Assakul as Chairman of the Corporate Governance and Risk Management Committee, Mr. Phongsarit Tantisuvanitchkul, Dr. Sombat Kitjalaksana and Mrs. Payao Marittanaporn as Corporate Governance and Risk Management Committee Members, with the duties to formulate policies and directions of operations in respect of the good corporate governance of the Company to ensure performance of duties with transparency and independence in compliance with the guidelines for the good corporate

governance, consider risk management plan, risk management process, as well as monitoring, inspecting and reviewing the Company's overall risks to stay at an acceptable level.

The Corporate Governance and Risk Management Committee has performed its duties as assigned by the Board of Directors, and in 2020, convened its three meetings with the high-ranking management team to consider reviewing policies and follow up progress of compliance with the good corporate governance principles and risk management plan of the Company. The key performance of its duties can be summarized as follows:

1. Monitoring to ensure the Company's compliance with the good corporate governance principles

The Board of Directors followed up and reviewed the practical guidelines for the good corporate governance whereby such guidelines were proposed to the Board of Directors' Meeting to consider the appropriateness of the same to be adopted as guidelines for the Company's operations. In this regard, the Board of Directors considered reviewing and improving the good corporate governance policy relating to shareholders' rights; treatment towards shareholders and stakeholders; disclosure of information; and the Board of Directors' responsibility, to ensure consistency with the requirements of the Stock Exchange of Thailand. In 2020, the survey results of the Company's corporate governance were shown at the excellent level; the assessment results of the Company's Annual Ordinary General Meeting of Shareholders were shown at the excellent level; and the Company was selected as one of 124 listed companies on the Thailand Sustainability Investment for the fourth consecutive year.

2. Risk management

The Board of Directors, in association with the high-ranking management, considered compliance with the annual risk management plan, regularly reviewed and followed up the risk management as well as following up movement, tendency for review of the plan and strategies to manage risks to stay at the acceptable level in an appropriate and timely manner for the ongoing changing situations and consistent with the Company's work plan. In 2020, two risk matters no longer existed, i.e., the implementation of the MRT Blue Line Project, because its entire line was opened for service on March 30, 2020; and the legal disputes, because the Company, the Subsidiary and the EXAT settled all the legal disputes between each other and expanded the concession periods of both the Second Stage Expressway Agreement (Sectors AB, C, and D) and the Bang Pa-in - Pak Kret Expressway Project to end on October 31, 2035. Furthermore, there was a risk with a substantial change in the operations as a result of the outbreak of Coronavirus Disease 2019 (COVID-19), the Company therefore formulated a business continuity management plan in case of a severe disease outbreak, with its preparedness responding to such situation, and an action plan to accommodate any potential threatening situations.

In conclusion, the Corporate Governance and Risk Management Committee is certain that the Company has complied with the good corporate governance principles and guidelines, has continuously and efficiently conducted risk management, as well as making prudent emergency response preparedness in advance for enabling the Company to carry out operations uninterruptedly to ensure the sustainable existence.

(Mrs. Vallapa Assakul)

Chairman of the Corporate Governance
and Risk Management Committee

The Board of Directors



Mr. Plew Trivisvavet

- Acting Chairman of the Board of Directors
- Vice Chairman of the Board of Directors
- Chairman of the Executive Board
- Nomination and Remuneration Committee Member
- Authorized Signatory Director

Academic Achievement

- Honorary Doctorate (Civil Engineering), Kasetsart University
- Honorary Doctorate (Civil Engineering), Nakhon Phanom University
- Honorary Doctorate of Engineering, Civil Engineering, Rajamangala University of Technology Isan
- Honorary Doctorate of Engineering, Thai-Nichi Institute of Technology
- M.Sc. (Electrical Engineering), Osaka University, Japan
- B.Sc. (Electrical Engineering), Osaka University, Japan
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Capital Market Academy Leader Program, Capital Market Academy



Mr. Vitoon Tejatussanasoontorn

- Director
- Chairman of the Audit Committee
- Nomination and Remuneration Committee Member

Academic Achievement

- B.A. in Commerce, Thammasat University
- Director Certification Program (DCP), Thai Institute of Directors Association
- IOD Chartered Directors, Thai Institute of Directors Association
- Audit Committee Program (ACP), Thai Institute of Directors Association
- Advanced Audit Committee Program (AACP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association

The Board of Directors



General Chetta Thanajaro

- Director
- Chairman of the Nomination and Remuneration Committee
- Audit Committee Member

Academic Achievement

- Master of Arts (Political Science), Ramkhamhaeng University
- Bachelor of Science, Chulachomklao Royal Military Academy
- Infantry Basic Officer Leadership Course, United States Army Infantry School
- The Royal Thai Army Command and General Staff Course
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association



Mrs. Vallapa Assakul

- Director
- Chairman of the Corporate Governance and Risk Management Committee

Academic Achievement

- Master of Economics, University of Detroit, USA
- Bachelor of Economics, Chulalongkorn University
- Audit Committee Program (ACP), Thai Institute of Directors Association
- Director Certification Program (DCP), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association



Dr. Annop Tanlamai

- Director
- Audit Committee Member

Academic Achievement

- Ph.D. Engineering Management, University of Missouri, USA
- M.B.A (Quantitative Business Analysis), Indiana University, Bloomington, USA
- M.S. in Engineering Management, University of Missouri, USA
- Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- The Audit Committee's Role in Compliance and Ethical Culture Oversight, Thai Institute of Directors Association



M.L. Prasobchai Kasemsant

- Director

Academic Achievement

- M.S. (Civil Engineering) and M.S. (Operations Research), Stanford University, USA
- B.S. (Civil Engineering, Mathematics), Virginia Military Institute, Virginia, USA
- Thailand Energy Academy Course for Management, Thailand Energy Academy
- National Defence Course, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association

The Board of Directors



Mr. Supong Chayutsahakij

- Director
- Nomination and Remuneration Committee Member
- Executive Director
- Authorized Signatory Director

Academic Achievement

- Honorary Ph.D. (Management Science), Phranakhon Rajabhat University
- Master of Political Science (Politics and Government), Sukhothai Thammathirat Open University
- Executive Master of Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Master of Engineering (Electrical), University of Tokyo, Japan
- Bachelor of Engineering (Electrical), University of Tokyo, Japan
- Director Certification Program (DCP), Thai Institute of Directors Association
- Audit Committee Program (ACP), Thai Institute of Directors Association



Mr. Phongsarit Tantisuvanitchkul

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Authorized Signatory Director

Academic Achievement

- Master of Engineering (Construction and Management), University of Michigan - Ann Arbor, USA
- Bachelor of Engineering (Mechanical Engineering), Kasetsart University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Understanding the Fundamental of Financial Statements (UFS), Thai Institute of Directors Association



Mrs. Payao Marittanaporn

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Authorized Signatory Director

Academic Achievement

- M.B.A., Chulalongkorn University
- Higher Diploma in Auditing, Thammasat University
- Bachelor of Accountancy, Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association
- Capital Market Academy Leader Program, Capital Market Academy



Miss Arisara Dharamadhaj

- Director

Academic Achievement

- M.B.A., Roosevelt University, USA
- Bachelor of Economics Program University of the Thai Chamber of Commerce
- Director Certification Program (DCP) Thai Institute of Directors Association
- National Defence Course for the Joint State Private Sector, National Defence College

The Board of Directors



Mr. Panit Dunnvatanachit

- Director

Academic Achievement

- M.B.A. (Finance), Washington University, St. Louis, USA
- Bachelor of Arts & Science, Washington University, St. Louis, USA
- Director Certification Program (DCP), Thai Institute of Directors Association
- Capital Market Academy Leader Program, Capital Market Academy
- Broadcasting Executive Forum, Office of the National Broadcasting and Telecommunications Commission
- Thailand Energy Academy Course for Management, Thailand Energy Academy



Mr. Vithaya Punmongkol

- Director

Academic Achievement

- Master of Science in Civil Engineering, New Jersey Institute of Technology, USA
- Bachelor of Engineering (Civil Engineering), Chulalongkorn University
- Director Accreditation Program (DAP 175/2020), Thai Institute of Directors Association



Mrs. Natamon Bunnak

- Director

Academic Achievement

- Master of Economics (Business Economics), University of the Thai Chamber of Commerce
- Master of Public and Private Management Program, National Institute of Development Administration
- Bachelor of Science (Agricultural Economics), Kasetsart University
- Director Accreditation Program (DAP), Thai Institute of Directors Association



Dr. Sombat Kitjalaksana

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Managing Director
- Authorized Signatory Director

Academic Achievement

- Dr. Techn. (Soil Mechanic), University of Innsbruck, Austria
- Bachelor and Master of Engineering (Civil), Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association

Management Team

As at 1 January 2021



Dr. Sombat Kitjalaksana
Managing Director



Mr. Sanguan Kunatinun
Deputy Managing Director
Expressway Engineering



Mrs. Sudruthai Prommart
Deputy Managing Director
Expressway Operation



Miss Panan Tosuwanthaworn
Deputy Managing Director
Finance



Mr. Witoon Hatairatana
Deputy Managing Director
Railway System Operation
and Engineering



Mr. Alvin Gee
Deputy Managing Director
Operation Support



Dr. Vites Techangam
Deputy Managing Director
Technology and E-Business

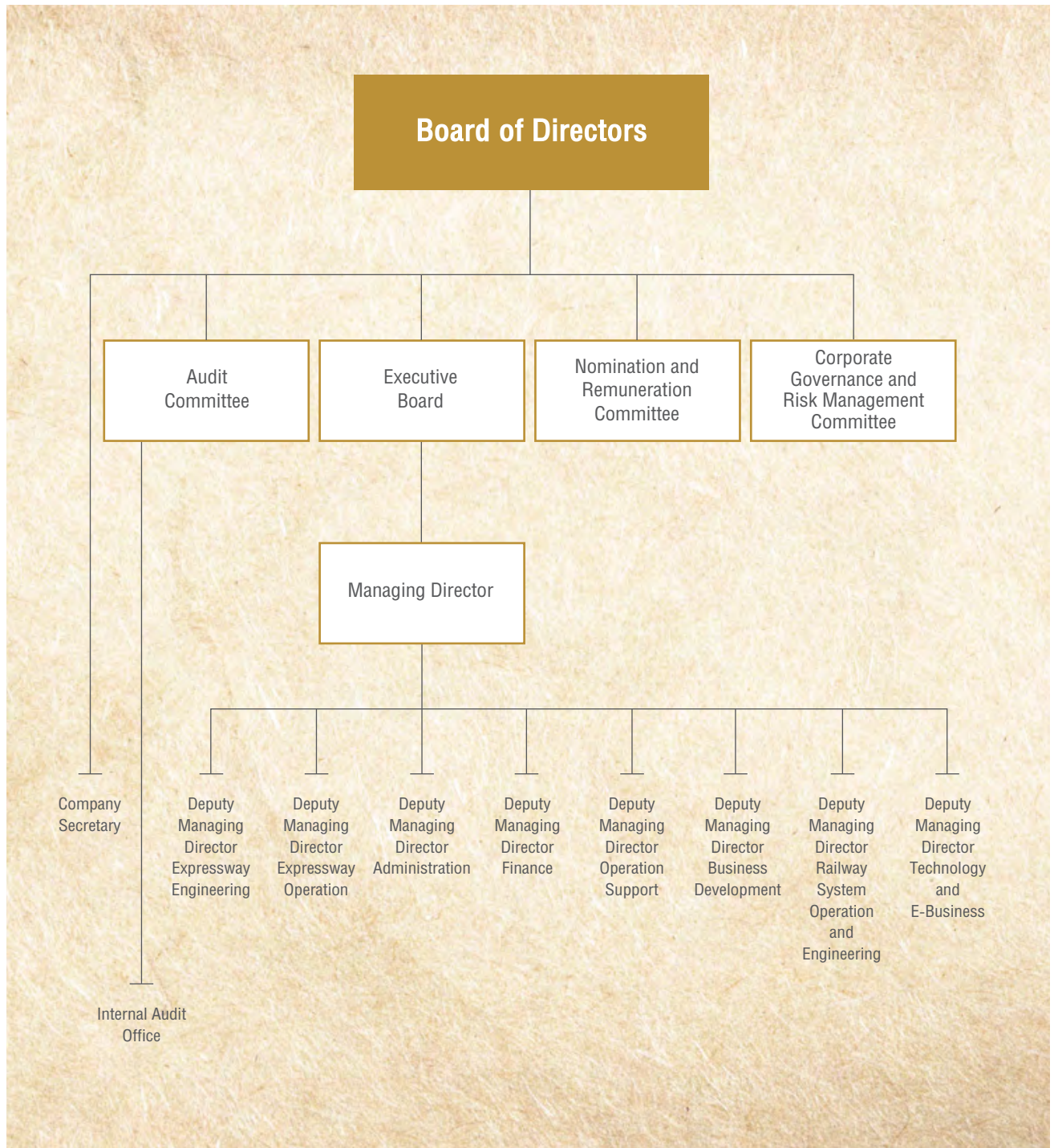


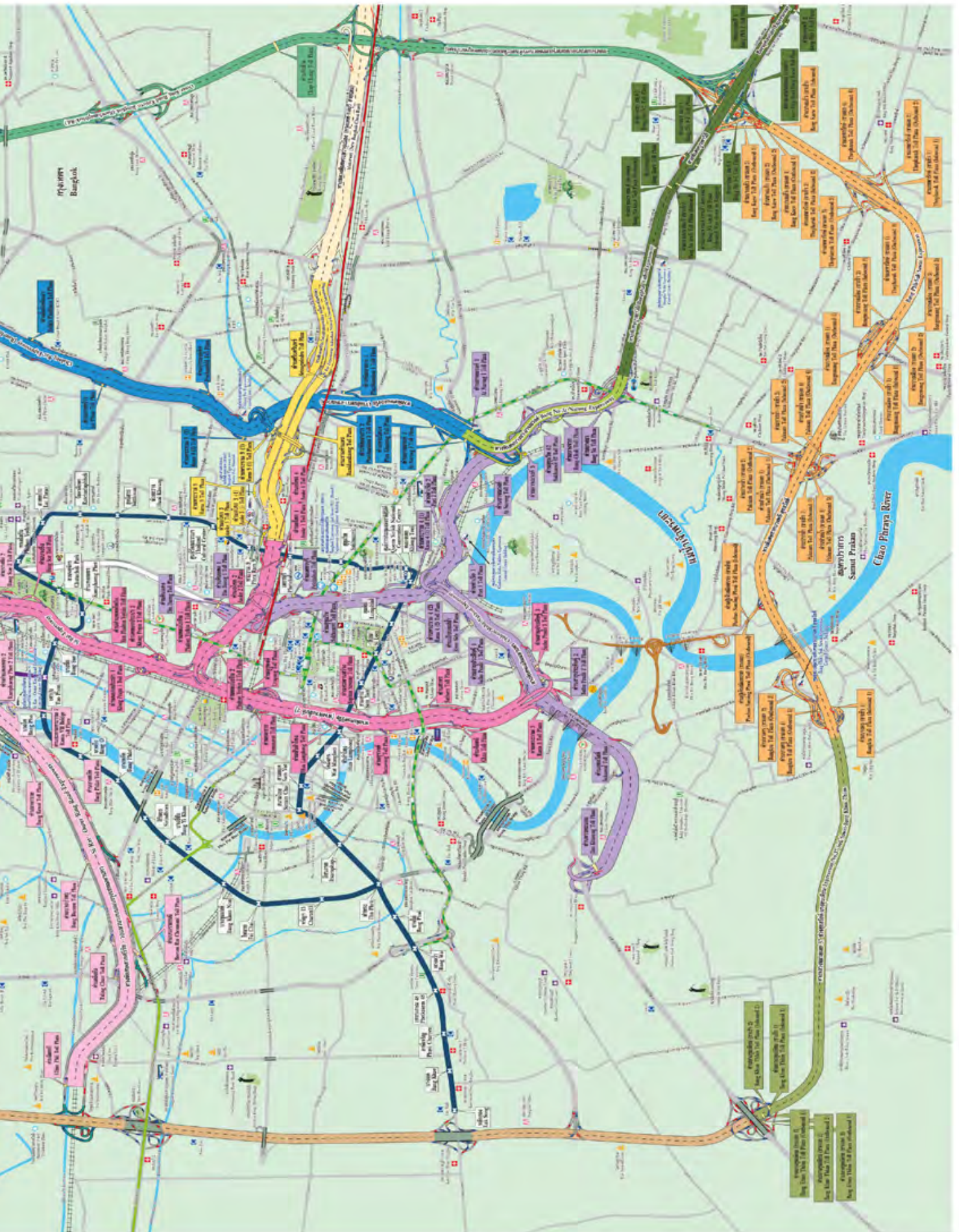
Mr. Anawash Suwanarit
Deputy Managing Director
Business Development

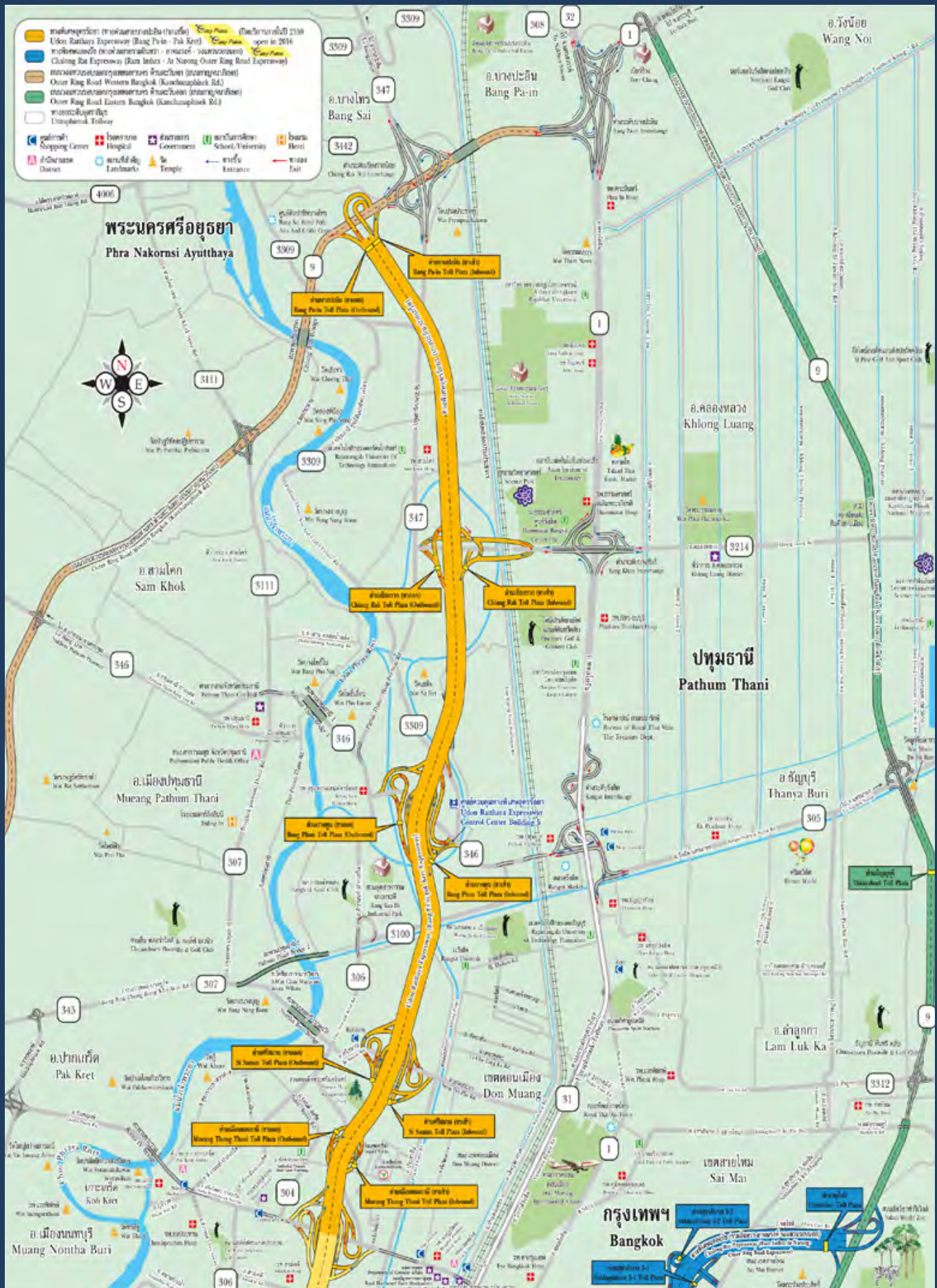


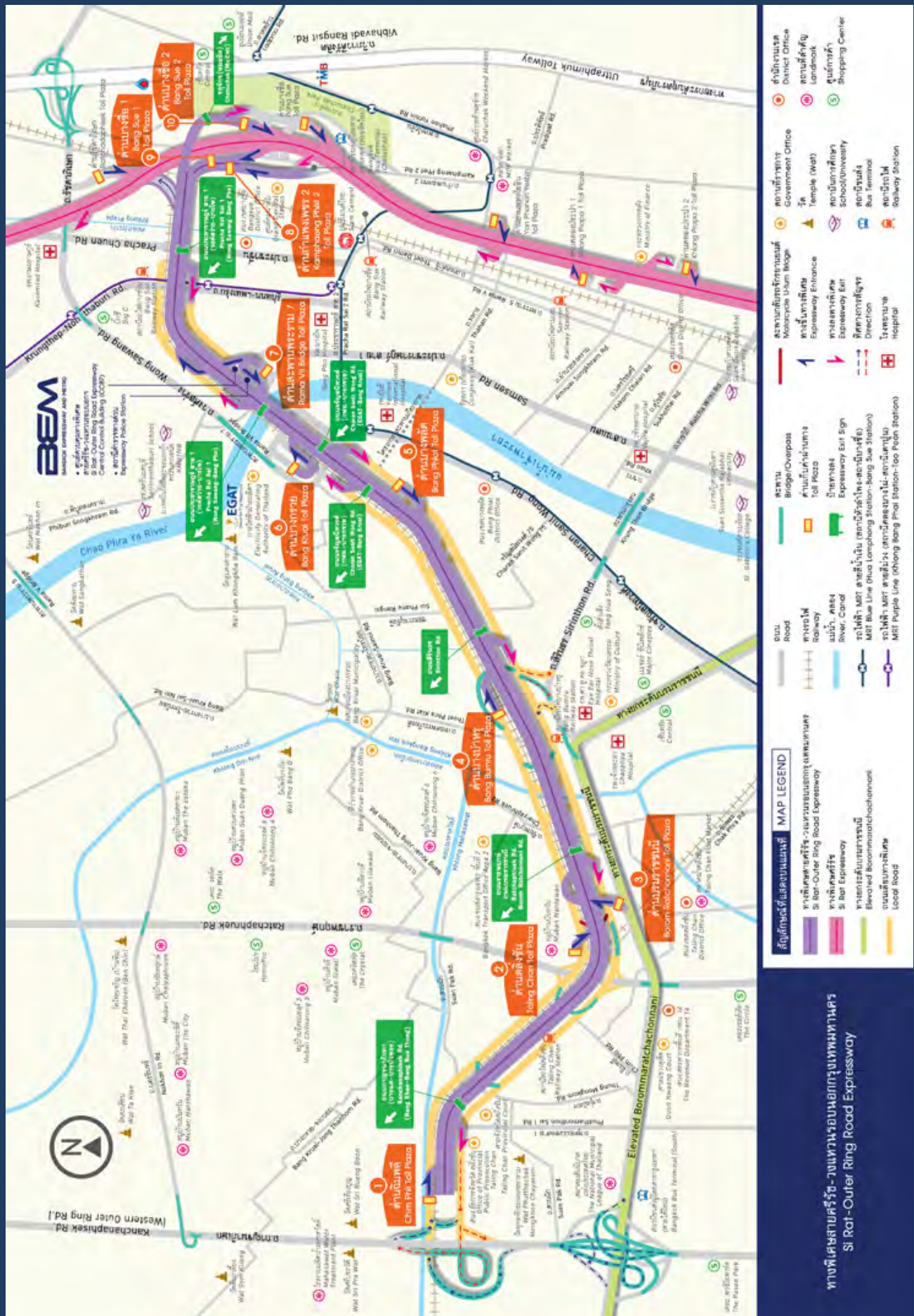
Mr. Phakpoom Thaweewittayarat
Deputy Managing Director
Administration and
Company Secretary

Organization Structure









Mass Rapid Transit & Commuter Train Network

สัญลักษณ์ Legend

- 1 รางรถไฟแห่งประเทศไทย (State Railway of Thailand)
- 2 รางสีฟ้า สายสีเขียวอ่อน (สายสีลม) (Light Green Line (Si Lom Line))
- 3 รางสีฟ้า สายสีเขียวเข้ม (สายสุขุมวิท) (Dark Green Line (Sukhumvit Line))
- 4 รางสีฟ้า สายสีน้ำเงิน (Blue Line)
- 5 รางสีฟ้า สายแอร์พอร์ต เรล ลิงก์ (Airport Rail Link)
- 6 รางสีฟ้า สายสีม่วง (Purple Line)
- 7 รางสีฟ้า สายสีทอง (Gold Line)
- 8 รางสีฟ้า สายสีแดงอ่อน (Light Red Line)
- 9 รางสีฟ้า สายสีแดงเข้ม (Dark Red Line)
- 10 รางสีฟ้า สายสีชมพู (Pink Line)
- 11 รางสีฟ้า สายสีเหลือง (Yellow Line)
- 12 รางสีฟ้า สายสีส้ม (Orange Line)

สถานีเชื่อมต่อการเดินรถ Interchange Stations



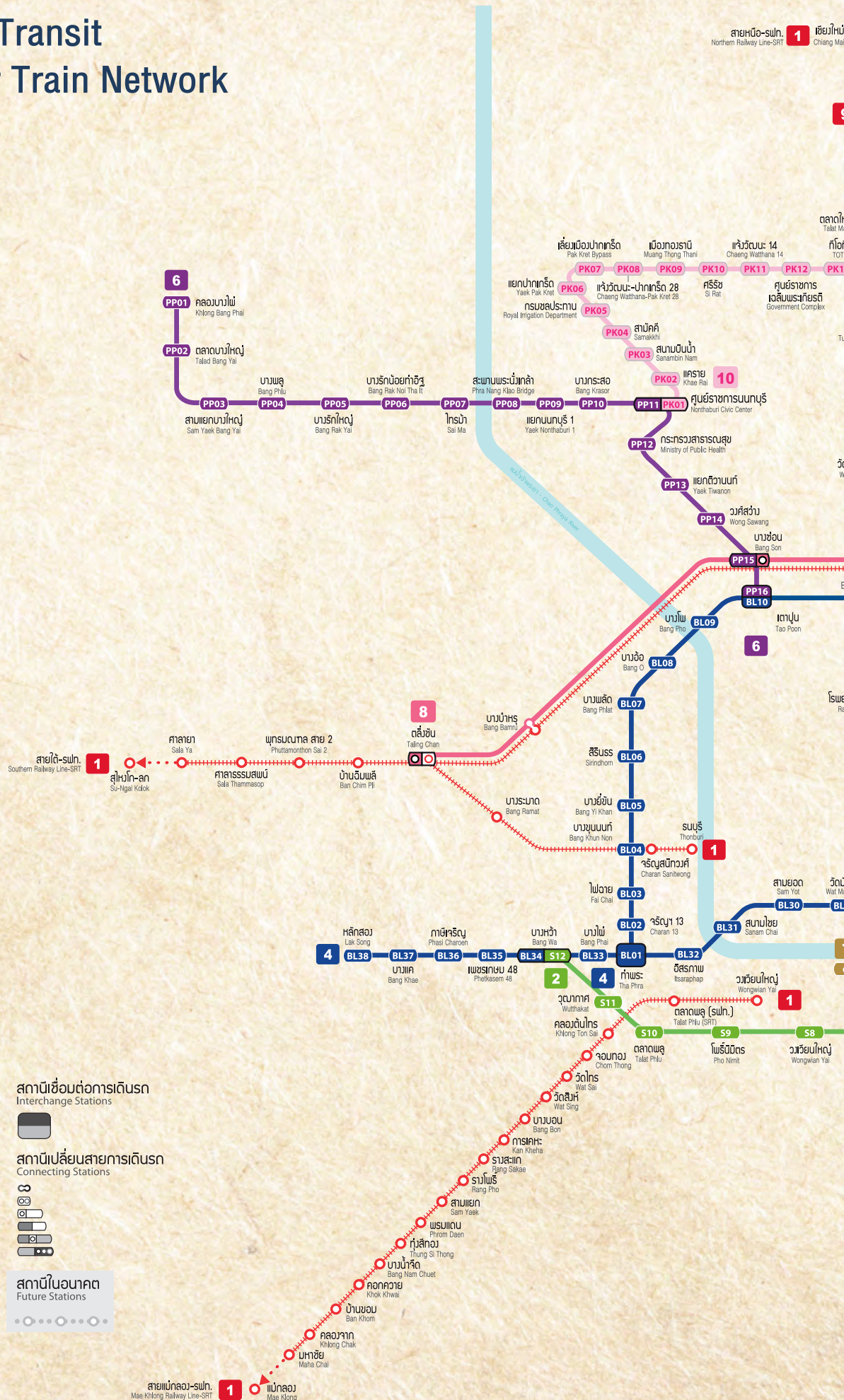
สถานีเปลี่ยนสายการเดินรถ Connecting Stations

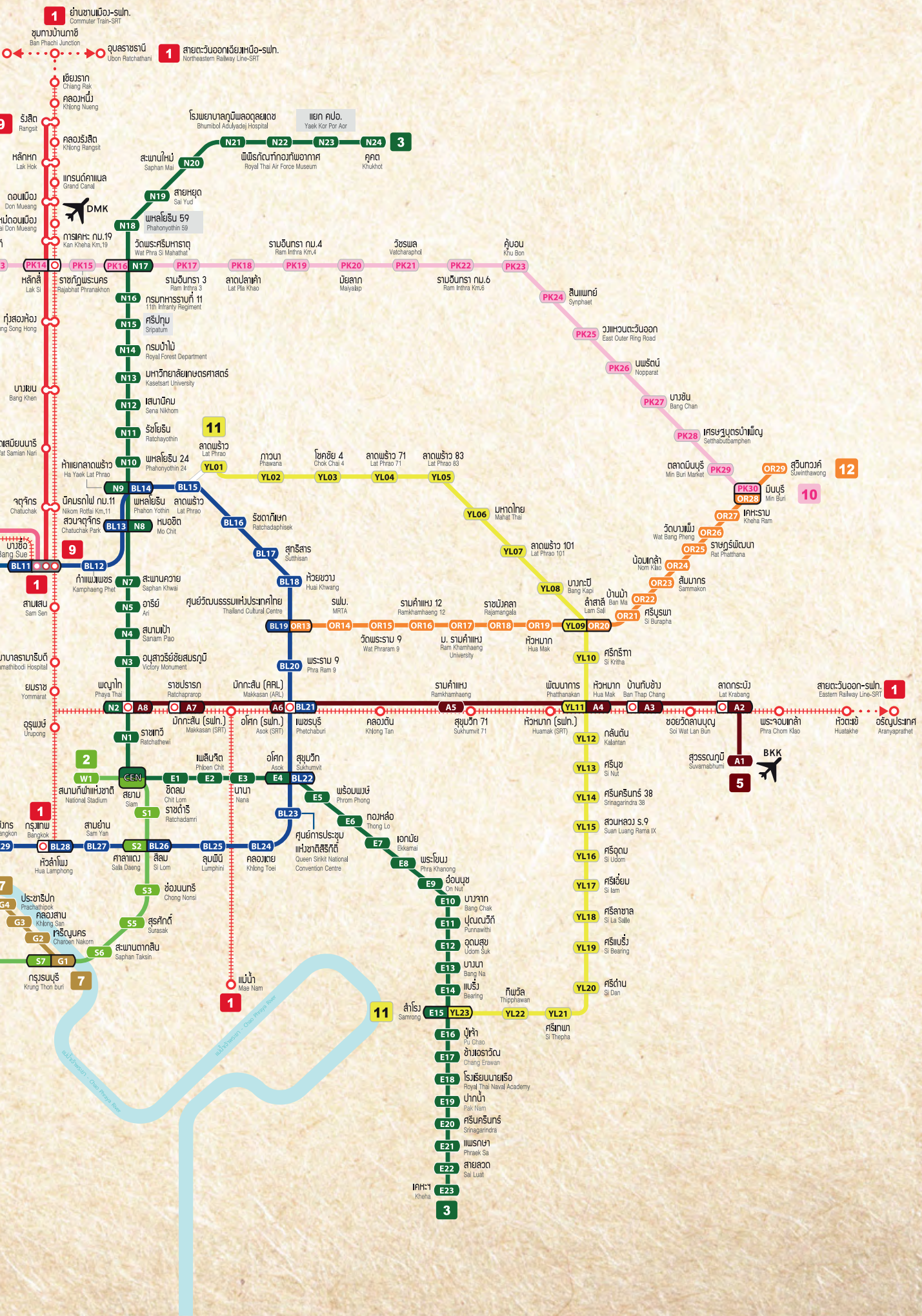


สถานีในอนาคต Future Stations



ฉบับที่ 1 : ปรับปรุงเมื่อวันที่ 15 มีนาคม 2561
Ver 1 : Updated 15-March-2018







*The Opening Ceremony of the M.R.T.
"Chaloem Ratchamongkhon"
(MRT Blue Line)*

*at Sanam Chai Station, Phra Nakhon District
- Lak Song Station, Bang Khae District
Bangkok*



On November 14, 2020, His Majesty the King and Her Majesty the Queen graciously presided over the official opening ceremony of the M.R.T. **“Chaloem Ratchamongkhon”** Line Project (MRT Blue Line Extension) at MRT Sanam Chai Station, Phra Nakhon District, Bangkok, accompanied by the Council of Ministers, the management teams of the Mass Rapid Transit Authority of Thailand and Bangkok Expressway and Metro Public Company Limited, along with the civil servants and people waiting to pay homage to their Majesties. At the ceremony, their Majesties the King and Queen proceeded to the project exhibition and kindly pressed the button to mark the official opening of the signboard of the M.R.T. **“Chaloem Ratchamongkhon”** Line Project (MRT Blue Line Extension) on the Concourse floor at MRT Sanam Chai Station, and then boarded the MRT train carriage to MRT Lak Song Station, Bang Khae District, Bangkok, covering a distance of approximately 11 kilometers, with the MRT route running underneath the Chao Phraya River between MRT Sanam Chai Station and MRT Itsaraphap Station and ascending onto the elevated structure at MRT Tha Phra Station to end at MRT Lak Song Station, where their Majesties the King and Queen proceeded to warmly greet the staff on duty as well as the people who waited to observe their royal grace on all the way from the inside area of the station to the street floor area of MRT Lak Song Station, where was filled with a great joy and happiness of the people.

The M.R.T. **“Chaloem Ratchamongkhon”** Line Project (MRT Blue Line Extension) is comprised of Hua Lamphong - Bang Khae and Bang Sue - Tha Phra Sections, signifying the complete integration of the routes of the M.R.T. **“Chaloem Ratchamongkhon”** Line Project (Existing MRT Blue Line), Hua Lamphong - Bang Sue section, which is regarded as the first underground line in Thailand, in travelling by the mass rapid transit system connecting Phra Nakhon side with Thonburi side, in order to facilitate commuters' travelling and truly alleviate traffic problems of Bangkok.



Awards of Pride 2020

BEM

was rated as the Excellent or 5 Star CG Scoring

BEM was rated as a listed company with the “Excellent or 5 Star CG Scoring” by the Thai Institute of Directors Association (IOD), with the support of the Stock Exchange of Thailand (SET), which conducted a survey on a Corporate Governance Report of Thai Listed Companies

2020 (CGR) from 692 listed companies in 2020, reflecting that the Company has continued to give priority to development of corporate governance in parallel with operation of the businesses in pursuit of the organization’s sustainable growth, thereby engendering shareholders’ confidence in the Company’s operations.



BEM

was presented with the Thailand Sustainability Investment 2020 Award for the 4th consecutive year by the Stock Exchange of Thailand

BEM was presented with the Thailand Sustainability Investment 2020 Award for the fourth consecutive year as a listed company engaging in business operations by taking into account environment, society and corporate governance, at Sukree Kaewcharoen Auditorium, the Stock Exchange of Thailand.



BEM

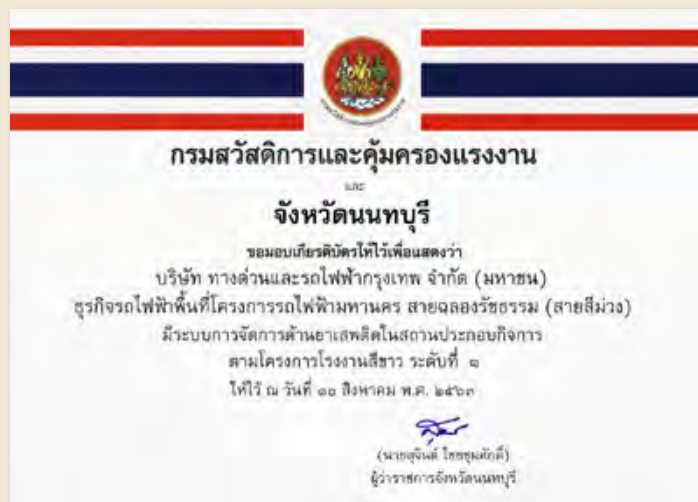
was prestigiously awarded
the Thailand's Top Corporate Brands 2020

BEM was awarded the Thailand's Top Corporate Brands 2020 by the Faculty of Commerce and Accountancy Chulalongkorn University, in its capacity as the Company with the highest brand value in the transportation and logistics sector worth Baht 92,733 Million.

BEM

was awarded a White Factory
Project Certificate

BEM was awarded the certificate in the field of electric train business for the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) which has the systematic drug management in the business premises under the White Factory Project No. 1 Ranking. As the Company has attached importance to drug problems in the business premises with the commitment of being a drug-free workplace of all types, including the aim of ensuring that staff and contractors have good health and quality of life and are able to live their life for oneself and for their families, together with society.



Measures to Prevent the Spread of the COVID-19 of MRT

BEM gave away **one million fabric masks for free!** under the **“Healthy Journey with BEM”** Project to express BEM’s concern and **heartfelt gratitude** to the MRT service users.



BEM organized the one million fabric masks giveaway to the MRT passenger activity, in association with the Mass Rapid Transit Authority of Thailand (MRTA) organized a campaign against the spread of COVID-19 and gave away fabric masks to MRT service users, with Mr. Saksiam Chitchob, Minister of Transport, Mr. Phakaphong Sirikantaramas MRTA Governor, Mr. Plew Trivisvavet, Chairman of the Executive Board of BEM, bringing the management team of the Ministry of Transport, the management team and staff

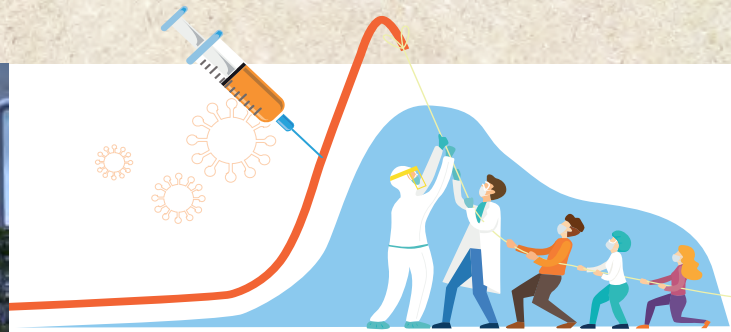


of MRTA, together with the management team and staff of BEM to give away fabric masks to MRT service passengers. This event got a lot of attention from the service passenger. Moreover, Assoc. Prof. Visit Vamvanij, Director of Siriraj Hospital, Mr. Vithaya Punmongkol, Deputy Governor of the Mass Rapid Transit Authority of Thailand together with the BEM management team gave the honor of taking part in the distribution of fabric masks to the MRT passengers. This activity also encouraged the MRT service users to wear face masks when using the MRT services for the sake of safety of both passengers and society. One million fabric masks were distributed to the MRT service users for free during June - August 2020 at 53 stations of both MRT Blue Line and Purple Line.

Moreover, BEM delivered BEM-labeled fabric marks and protective equipment for COVID-19 to government agencies, municipal offices, schools, hospitals, Ban Bang Khae Social Welfare Development Center for Older Persons, and communities surrounding the MRT Blue Line, Purple Lines and schools adjacent to the vicinities of the Si Rat Expressway and the Udon Rattaya Expressway, and the Si Rat - Outer Ring Road Expressway, in order to support government policies in campaigning for people to wear fabric or medical masks when in public areas, encourage people to take care of their health and improve the quality of life of people to ensure they have good health and keep away from germs, to be a part in preventing the reoccurrence of the COVID-19 outbreak, while strengthening good relationships and engagement among the organizations, the government agencies and communities surrounding the MRT routes and Expressway.



Measures to Prevent the Spread of the COVID-19 of MRT



BEM participated in the “Healthcare 2020 : Good Health, New Normal, Win Hearts” Fair



BEM and Matichon Group joined forces to organize the **“Healthcare 2020: Good Health, New Normal, Win Hearts”** Fair on September 3-6, 2020 at Samyan Mitrtown, with Mr. Anutin Charnvirakul, Deputy Prime Minister and Minister of Public Health, presiding over the opening ceremony. This activity was undertaken to continue the health campaign under the **“Healthy Journey with BEM”** activity, by having the attendees and MRT service users given 500 syringes for vaccination against



the different four types of influenza viruses for free! as well as distributing BEM-labeled fabric masks to booth exhibition organizers at the event to express BEM's concern and heartfelt gratitude to them. In this event, BEM still attached importance to health care of the passengers in the belief that the healthier we are, the happier society will be. In addition, other fun activities were organized at BEM booths for the participants to win many give-away souvenirs, which captured a lot of attention from the participants.

Activities under Measures to Maintain Cleanliness in MRT Stations and Trains (Big Cleaning)

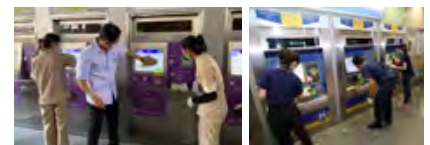


“Big Cleaning Day”

BEM's Executives and Staff jointly cleaned up the frequently touched points, both inside and outside the MRT station areas, including stair handrails, passenger elevators, doors and various automatic

machines at MRT Sanam Chai and Tha Phra Stations under the **“Healthy Journey with BEM”** project to ensure MRT passengers' safety and good hygiene in response to the measures to prevent the spread of the COVID-19, and to bolster people's confidence in the use of MRT services.

BEM joined with the RTA Chemical Department, Royal Thai Army, in spraying disinfectants against the COVID-19 in all 53 stations of the MRT Blue and Purple Lines after the service closure.



MRT Joined Force to Prevent COVID-19

This was aimed to prevent the spread of the COVID-19 and simultaneously boost confidence of the service users in various areas surrounding the MRT routes:

- In February 2020, BEM, in association with the Ratchathewi District Office and the Huai Khwang District Office, cleaned up the areas to prevent the disease epidemic at MRT Phetchaburi Station.
- In March 2020, BEM, in association with the Wattana District Office, cleaned up buildings, places at Asoke Intersection on Sukhumvit Road, in front of Terminal 21 Shopping Center, and frequently touched surfaces at MRT Sukhumvit Station.
- BEM increased a special part time employment for cleaning the areas frequently touched by passengers both the MRT stations and inside trains in order to help unemployed people suffered from layoffs in the epidemic crisis of COVID-19 to have work and income survived through this crisis together

Measures to Prevent the Spread of the COVID-19 of MRT

Various Measures to Prevent the Spread of the COVID-19

The Company has heightened measures in terms of hygiene and screening for passengers within the metro system areas while taking measures for cleanliness and health care of staff/contractors as follows:

- Arranging staff to make temperature screening for passengers with a handheld thermometer at the baggage checkpoints of the entrances to the stations.
- Requesting passengers to always wear medical or fabric masks along the journey with the MRT system.



- Providing health care advice to passengers with a fever higher than 37.5 degrees Celsius.
- Ensuring the social distancing by which the MRT has determined a one-meter standing distance at the ticket office areas in front of the ticket vending machines, platforms, passenger elevators, and inside the trains.



- Increasing the cleaning frequencies with disinfectants in all MRT stations.
- Cleaning with disinfectants inside all MRT trains during, after, and before service every day.



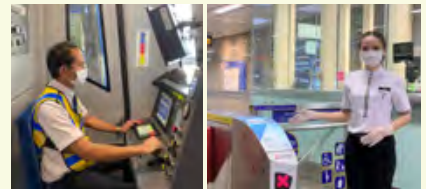
- Increasing the frequencies of cleaning with disinfectants in the areas frequently touched by passengers, such as, ticket vending machines, stair handrails, escalators, escalator handrails, fare collection gates, elevators, handrails inside the trains, seats, etc.
- Providing alcohol-based hand sanitizers at the baggage checkpoints and ticket offices in all MRT stations and at every entrance-exit of Metro Mall in all stations.



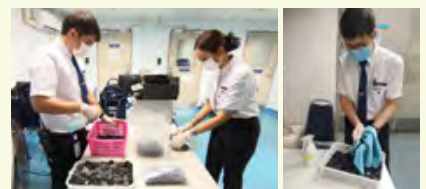
- Providing health care for staff who provide services in the stations and trains with health check-ups, body temperature measurement before on duty every time.



- Requiring staff to wear medical or fabric masks at all times on duty.



- Cleaning and disinfecting tokens before being circulated in every MRT station.



- Increasing public relations to build knowledge and understanding of self-practices to passengers to avoid the transmission of pathogens, through media, such as, billboards, digital information displays inside the stations and trains, sound public relations inside the MRT stations, and social media of the Company.
- Establishing practical guidelines for staff and contractors to prevent the transmission of pathogens, such as, a policy requiring staff to refrain from travelling to risk countries, as well as monitoring the situation and various government measures to ensure the Company's readiness to adjust various measures to be appropriate, efficient for strict compliance.



BEM, CK and TTW Granted the COVID-19 Coverage Insurance Policies to Medical Personnel all over Thailand

BEM jointly encouraged to medical personnel of Thailand by granting a total of 50,000 COVID-19 coverage insurance policies of Muang Thai Insurance Public Company Limited to physicians, nurses, and medical personnel, in the total insured sum of Baht 26,000,000,000 with Mr. Anutin Charnvirakul, Deputy Prime Minister and Minister of Public Health, serving as a delegate in receiving the delivery of the insurance policies at the Government House. This delivery of the insurance policies was aimed to help protect and secure a health insurance for Thailand's medical personnel, regarded as the greatest forces behind treatment of the patients amid the situation of the outbreak of the COVID-19. In addition, the Company Group hopes that Thailand will be able to get through this crisis together as soon as possible.



BEM, CK and TTW Donated Baht 5,000,000 to the Faculty of Medicine Ramathibodi Hospital, Mahidol University, for Education and Procurement of Medical Equipment Against the COVID-19 Crisis

BEM, CK and TTW jointly granted the donation of Baht 5,000,000 to the Fund for Education and Procurement of Medical Equipment under the Project to Prevent and Provide Assistance in the Situation of the COVID-19 Epidemic of the Faculty of Medicine Ramathibodi Hospital, with Professor Dr. Pornchai Simaroj, Assistant Dean for Special Affairs, the Faculty of Medicine Ramathibodi Hospital, Mahidol University, receiving the donation at Somdej Phratheprat Building, 4th Floor, Ramathibodi Hospital.

BEM, CK and TTW Donated Baht 5,000,000 to the Chaipattana Foundation to the Chaipattana COVID-19 Aid Fund (and Other Pandemics)

BEM, CK and TTW jointly granted the donation of Baht 5,000,000 to the Chaipattana Foundation to support the Chaipattana COVID-19 Aid Fund (and Other Pandemics) in aid of hospitals and medical personnel to purchase necessary equipment and supplies for treatment of the COVID-19 patients, with Dr. Sumet Tantivejkul, Director and Secretary-General of the Chaipattana Foundation, receiving the donation at the Chaipattana Foundation.



Measures to Prevent the Spread of the COVID-19 of Expressway

Toll Collection Operation



Toll Collection Staff must wear face mask and gloves during services for good hygiene of expressway users



Providing gel-based hand sanitizers in money-counting rooms and point of sale



Cleaning up various touch points with disinfectants



Setting up infectious waste containers as centralized disposal points for the used medical face masks



Before allowing staff to enter the worksite, temperature screening must be required and requiring any staff with a fever higher than 37.5 degrees Celcius to strictly comply with the doctor's instructions

Temperature Screening of Toll Plaza Building

Implementation measures are taken as follows:

- The body temperatures screenings requirement at the entering to the toll plaza building, and
- Each such relevant person must be given a temperature-checked sticker.

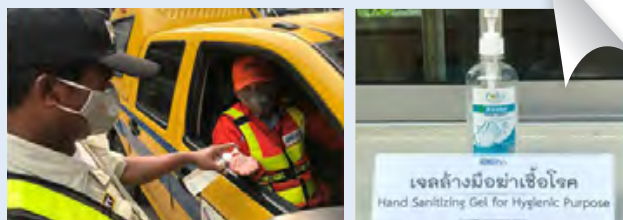




Rescue and Traffic Operations



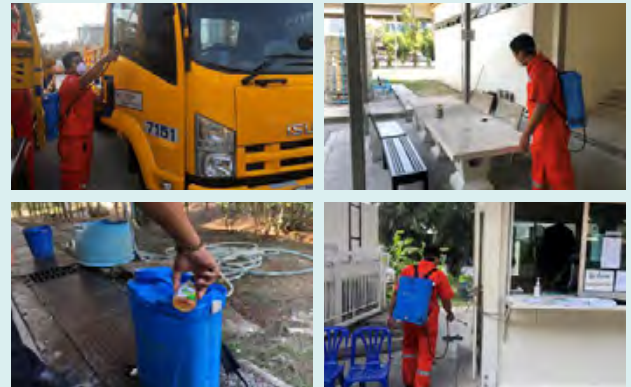
- Temperature screening requirement at the entrance to the rescue and traffic operation building, body temperature must exceed 37.5 degrees Celsius and then give them temperature checked stickers (colored sticker will be changed every day for checking) and always wearing face masks.



- Providing gel-based hand sanitizers for staffs and visitors at every touchpoints.



- Rescue staffs who were operating on rescue and facilitating Expressway users must wear face mask at all time, wash their hands with gel-based hand sanitizers and maintain social distancing from expressway users during services.



- Spraying disinfectants against the COVID-19 around rescue buildings and traffic, including both inside and outside rescue vehicles.
- Encouraging staffs and visitors to strictly comply with the measures to prevent the spread of COVID-19 as required by the Company.

** If anyone is found to have a temperature of 37.5 degrees Celsius or higher which is at risk of being infected with the COVID-19, the following process must be initially taken : Reporting the supervisors while allowing the at-risk staff and visitor to have a rest for approximately 10-15 minutes to wait for the body temperature measurement once again, and if his/her body temperature has not yet gone down, he/she is not absolutely allowed to enter the building and must to go to see the doctor immediately.

First Class Expressway Services

Services on the Expressway are the core of BEM's management, therefore, over the past period, The Company has been determined to develop and enhance the efficiency of its services so as to ensure that motorists will be impressed by the convenience, rapidity and cost-efficiency of the services. In regards to the first class services, BEM provides various services as follows:

1. Communications and Facilities

The Company established the expressway system control centers by having communication staff to coordinate with the rescue operation units as well as police officers on the expressway and at the ground level roads so as to service the motorists 24 hours a day. The communications facilities comprise:

Closed-circuit Television (CCTV)

Closed-circuit televisions are installed at intervals throughout the Expressway to monitor traffic flow and various events on the Expressway, hence, motorists can be assured of prompt assistance should there be any emergency.



Emergency Telephones (ETS)

Emergency telephones are installed at intervals of every 500 metre 1 kilometer on the Expressway so as to enable motorists to contact communication staff at the control centers by pressing the metal shaft or green button or red button to call the center, then the communication staff pans the closed-circuit television which is nearest to such SOS telephone to the location of such telephone. This enables the communication staff to monitor the calling site and simultaneously, sound and video recorders record the conversation between the motorist and the communication staff.



Variable Message Sign (VMS)

The Company publicizes various information on traffic flow and significant events to motorists by VMS which are installed prior to various intersections on the Expressway.



2. Traffic Management

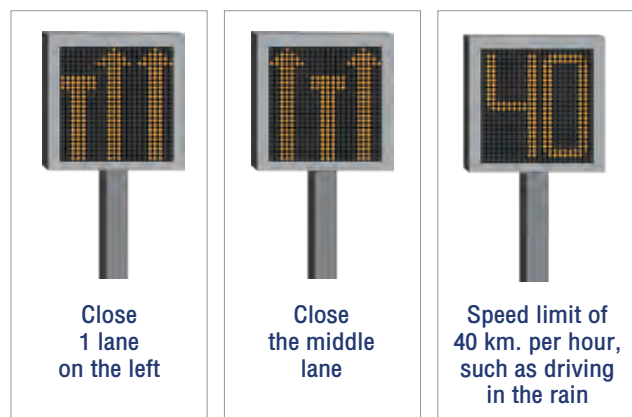
Traffic management is a routine operation that the Company coordinates with the Traffic Division, EXAT and the police officers at the Si Rat Expressway Police Station so as to ensure rapid and safe passage for motorists, especially at on-off ramps or at any areas with heavily congested traffic. The traffic management facilities comprise:

Traffic Signs

The Company has installed traffic signs to ensure the motorists' safe and careful use of the Expressway, namely, speed limits on the Expressway when it is raining or traffic direction indicators.

Weighing Stations

The Company takes into account the safety of motorists by providing weighing station so as to control the weight limits in accordance with the legal standards. Any truck loaded in excess of the weight limit will not be allowed to enter the Expressway.



3. Rescue and Trailer Services

Should any motorist encounter any accident or engine trouble on the Expressway, the rescue staff will help repair the engine to working condition or if it is unable to be repaired, the staff will help tow such vehicle on the Expressway to exit at the nearest off ramp without any expense, except for:

Fuel Cost

Should the vehicle be out of gas, the staff will refuel the vehicle to enable such vehicle to exit the Expressway and reach a gas station whereby the rate of gas to be charged at the market rate which is merely approximately Baht 100.- on average.

Chemical Powder Cost

Should any vehicle encounter any problem causing oil to leak onto the road, it is necessary for the staff to apply chemical powder to clean up such oil spill for the safety of other motorists.



Useful Telephone Numbers

Accident / Breakdown Car / Traffic Information

Tel. 1543 / 66 (0) 2664 6400

Chalerm Mahanakorn Expressway Control Center

Tel. 66 (0) 2240 0709 Fax. 66 (0) 2240 0709

Si Rat Expressway Control Center

Tel. 66 (0) 2664 6400 / 66 (0) 2248 7574-6 /
66 (0) 2641 4611 ต่อ 7007
Fax. 66 (0) 2247 1994

Si Rat - Outer Ring Road Expressway Control Center Building (CCB7)

Tel. 66 (0) 2555 0255 Fax. 66 (0) 2555 0281

Chalong Rat Expressway Control Center

Tel. 66 (0) 2319 9730-9 ต่อ 4610-11
Fax. 66 (0) 2319 9730-9 ต่อ 4623

Udon Raththaya Expressway Control Center

Tel. 66 (0) 2567 5700 ต่อ 7171 / 66 (0) 2567 5680
Fax. 66 (0) 2567 5700 ต่อ 7155

Buraphawithi Expressway Control Center

Tel. 66 (0) 2746 9800-4 ต่อ 5501 / 66 (0) 2746 9799
Fax. 66 (0) 2746 9799

Kanchanaphisek Expressway Control Center (Bang Phli Suk Sawat)

Tel. 66 (0) 2442 0876-7 Fax. 66 (0) 2442 0899

Chalerm Mahanakorn Expressway Police Station

Tel. 66 (0) 2249 8007
Fax. 66 (0) 2249 8007 / 66 (0) 2240 0147

Si Rat Expressway Police Station

Tel. 66 (0) 2248 6891-5 Fax. 66 (0) 2248 6891-5

Si Rat - Outer Ring Road Expressway Police Station

Tel. 66 (0) 2555 0275 Fax. 66 (0) 2555 0281

Udon Raththaya Expressway Police Station

Tel. 66 (0) 2567 5682-3

Bangkok Expressway and Metro Public Company Limited Branch Office (1) Expressway Business

Tel. 66 (0) 2641 4611 Fax. 66 (0) 2641 4610

Expressway Authority of Thailand

Tel. 66 (0) 2579 5380-9 / 66 (0) 2558 9800
Fax. 66 (0) 2561 2984 / 66 (0) 2579 8737

Facilities for the Expressway Users

BEM opened for trial service
the new toll payment system

by simply **Tap, Scan and Pay**

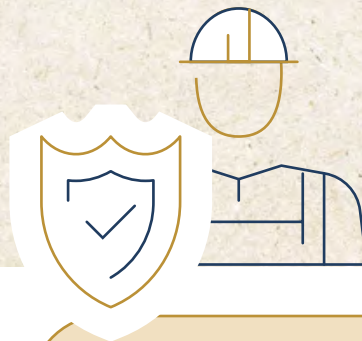
with a debit and credit card
at the Si Rat - Outer Ring Road
Expressway and the Udon Ratthaya
Expressway (Bang Pa-in - Pak Kret).



BEM has opened for the service trial the contactless toll payment system with a debit or credit card at cash payment toll (Manual Toll Collection) where the VISA PayWave and MASTERCARD Paypass symbols are shown since late-January 2021, with the pilot service starting at the Si Rat - Outer Ring Road Expressway and the Udon Ratthaya Expressway (Bang Pa-in - Pak Kret). This payment method enables the expressway service users to conveniently pay tolls by following these simple steps: drive into either cash lanes, lower the car window and tap the card, on which a WIFI signal-looking icon pointing to the right is displayed, on the contactless-enabled card reader, thereby assuring the motorists of the convenient and safe way to make toll payments, just by "tapping/scanning to pay" with the VISA PayWave and MASTERCARD Paypass debit and credit cards.



MRT Safety Promotion Activities



BEM has continued to undertake the safety activities to ensure the MRT service users' knowledge and understanding of how to use the MRT services properly and safely through communication channels and various activities of the Company. To that effect, in 2020, the Company placed the greater emphasis on enhancement of knowledge and understanding of the elderly group in order to minimize the escalator-related accident statistics, and also campaigned for taking care of each others in the groups of the service users, including promotion of public relations for the measures to prevent the spread of the COVID-19.

Activities with Internal and External Agencies



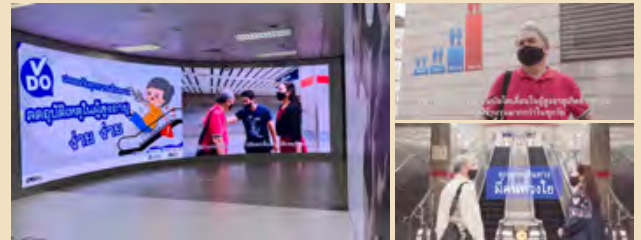
Participating in the "MRT Delivers Happiness on the National Children's Day" activity to educate children about how to safely use the MRT system in January before the outbreak of the COVID-19.



Participating in the CSR activities to educate the elderly group about how to safely use the MRT system in February.

Safety Promotion Media

via Facebook, Twitter, Passenger Information Display (PID), and Digital Media within the MRT stations and trains, particularly targeted at the elderly group and the service users to make sure they take care of each other.



PID Media and Digital Media recommending the elderly to use the passenger elevators



Dissemination Animation Clips and Sound Announcement within MRT Stations



Promotion of Public Relations for the Measures against the COVID-19



Installing public relations materials at four stations where accidents involving the elderly group happen the most in order to build awareness and give directions to passenger elevators, namely, Chatuchak Park Station, Phahon Yothin Station, Lat Phrao Station, and Wat Mangkon Station



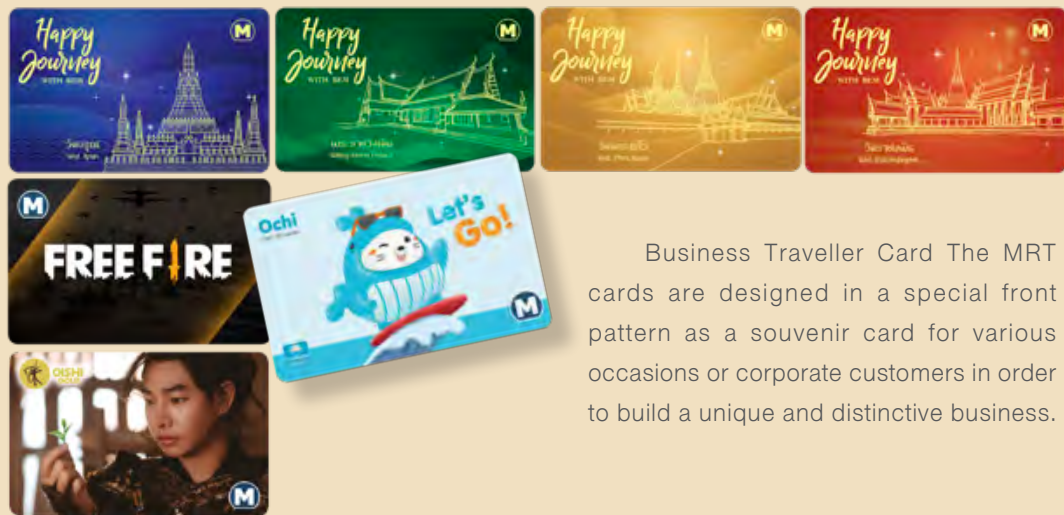
Making the Thai Chana QR Code available within MRT trains.

Facilities for MRT Passengers



MRT Smart Card

Faster and More Convenient Travelling with MRT Smart Card available for travelling by both the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line). There are four types of MRT Stored Value Card, namely, Adult Card, Student Card, Elder Card, and Child Card, at an initial price of Baht 180 for purchase of a new card (Baht 100 Travel Value; Baht 50 Deposit; and Baht 30 Issuing Fee).



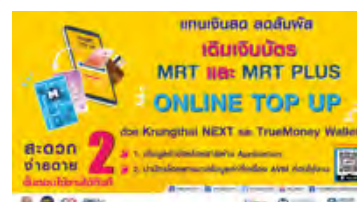
Business Traveller Card The MRT cards are designed in a special front pattern as a souvenir card for various occasions or corporate customers in order to build a unique and distinctive business.

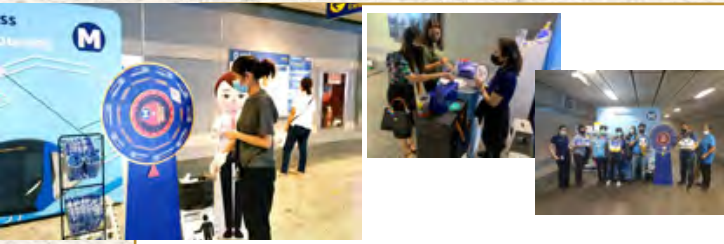
MRT Top-up



All MRT cardholders will be offered discounts on MRT top-up, which are also entitled to various privileges from shops and shopping malls surrounding the MRT routes.

“Contactless Payment with Online Top-up” For more convenience with an online top-up channel through the True Money Wallet and Krungthai Next applications, for a top-up from Baht 100 to a maximum amount of Baht 1,500.





Strengthening Relationships with MRT Passengers

Booth activities were undertaken for strengthening relationships with MRT passengers at MRT Blue Line stations by inviting them to play games to win giving-away souvenirs, thereby giving the MRT passengers smiles of happiness and impressions.



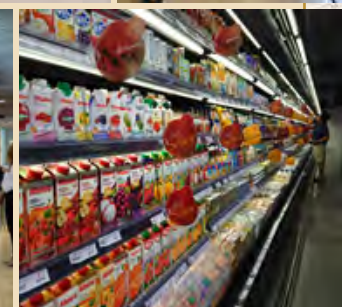
Special activities for MRT Club members, for example, M Movie Fever, MRT Club members were invited to watch a movie premiere for free, as well as enjoying activities, giving away souvenirs to create good relationships with the members

M Shop products, super cute souvenirs from the MRT for collection and as a gift for various occasions, which can be ordered via the website or Bangkok MRT Application, including at M Shop Booths at MRT stations.



Facilities Available within MRT Blue Line Stations

Metro Mall is opened for service at eight MRT Blue Line stations, Kamphaeng Phet station, Chatuchak Park station, Phahon Yothin station, Phra Ram 9 station, Thailand Cultural Centre station, Sukhumvit station, Phetchaburi station, and Khlong Toei station, every day from 6.00 a.m. - 10.00 p.m., except at Kamphaeng Phet Station, it will be opened for service only on Friday - Sunday from 7.00 a.m. - 10.00 p.m., and at the basement level of Lat Phrao Park & Ride Facility at Lat Phrao station where Gourmet Market is opened for service from 7.00 a.m. - 10.00 p.m. There are more than 150 retail shops, with wide variety of interesting products, such as, food and beverage, equipment, appliances, and special price products in various events, such as, Good Food Good Fair, Season Market Fair, Export Code Fair, etc. In addition, facilities have been made available for the MRT service users, for instance, toilets, Free Wi-Fi, waiting seats, parcel delivery service, more than 200 automatic service machines at every station, and telecommunication media services with a 5G mobile phone signal inside the MRT stations and trains. Furthermore, during the COVID-19 situation, the shop retailers and service users in the Metro Mall area are required to wear medical face masks, undergo body temperature measurement, scan the Thai Chana and Mor Chana QR Codes, with BEM increasing the frequencies of cleaning up various responsible areas, toilets, while providing alcohol gel hand sanitizers for free at checkpoints for the sake of good hygiene of the MRT service users.



Facilities for MRT Passengers

BEM is not only committed to providing the MRT services, but also giving priority to the passenger care in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) for their convenience in use of the MRT services in various aspects, as follows:

Guiding Signs for Interchanges

BEM has provided the guiding signs within MRT stations to facilitate the passengers' travelling, especially interchange stations between the MRT Blue Line and the MRT Purple Line, by installing guiding signs at clearly visible and conspicuous points on each floor of the platform and concourse levels in each station. Passengers can also check the routes of services and interchanges even more easily by downloading the Application: BANGKOK MRT.



Facilitating passengers to pay MRT fare via QR Code Payment

by adding QR Code payment channel as a bridge for online payment transaction which brought more convenience, fast for MRT passengers. Moreover, this could prevented the spread of COVID-19 risk due to avoiding touching money.



Passenger Density Reduction

BEM gives priority to convenience and safety of the MRT service users, BEM has therefore conducted management to provide the passengers with rapid and comfortable trips, particularly at crowded stations in the area of the concourse level during festivals or during special events surrounding the MRT routes, whereby the departure station will issue a passenger a ticket for paying a fare at the terminal station. In doing so, it can reduce passenger density, save queue waiting times for buying tokens, thereby enabling the passengers to reach their destinations more rapidly.





Organizing MRT Entrances-Exits during Peak Hours

BEM has organized to provide more convenient and rapid services to the MRT passengers rushing to work, with the pilot organization of the service starting at the MRT Purple Line, Tao Poon Station, during peak hours, an interchange station where there are a huge number of passengers, by organizing the routes of entrances to and exits from MRT trains by:

1. Adjusting passengers' walking directions not to cause collision with each other
2. Setting up the waiting areas before entering the trains
3. Arranging public relations staff to give advice passengers on the use of the services, thereby not only providing faster trips, but also preventing accidents from travelling in a rush.



Priority Seats

The MRT cares for and pays attention to all passengers throughout the journey, particularly groups requiring special care, including monks, novices, children, pregnant women, the elderly and persons with disabilities, so that they can join the trips with the MRT safely, by installing the outstanding public relations materials at the Priority Seats inside the trains, both the MRT Blue line and Purple lines, with the underlying aim of motivating other passengers to offer seats to those persons.

Facilities for MRT Passengers

BEM opens up an additional MRT mobile top up channel in place of cash payment to reduce touching against an infection with the COVID-19

BEM, the MRT service operator, has added a top-up channel for MRT tickets via mobile applications or MRT Mobile Top Up so that the MRT service users can top up money conveniently and rapidly anywhere and anytime to ensure convenience of the service users; fulfil their lifestyles and spending in a cashless society nowadays; and reduce their exposure to cash payments so as to prevent the spread of the COVID-19. As for top-ups of MRT tickets and MRT Plus via MRT Mobile Top Up, they can be made through the mobile application, namely, True Money Wallet, or through the mobile banking application of the participating bank, namely, Krungthai Next or its ATM machines, with 2 top-up steps consisting of 1) Topping up a ticket via either of the applications or via the bank's ATM machines; and 2) Bringing the ticket to adjust the value at an Activate Value Machine (AVM) installed at every station within 7 days, but if failure to do so within such specified period, the system will automatically refund the money to the account, with the minimum top-up starting from Baht 100 to a maximum of Baht 1,500.



แทนเงินสด ลดสัมผัส

เติมเงินบัตร

MRT และ MRT PLUS

MOBILE TOP UP

ด้วย Krungthai NEXT และ TrueMoney Wallet

สะดวก 2 ขั้นตอน

1. เติมมูลค่าบัตรโดยสารผ่าน Application
2. นำบัตรโดยสารมาปรับมูลค่าที่เครื่อง AVM ก่อนใช้งาน

ขั้นตอนใช้งานได้ทันที

BEM has provided another 44 new model Ticket Vending Machines (TVM) at 14 stations of the original MRT Blue Line for provision of services with greater convenience and rapidity to the MRT passengers. The new model TVMs are not only designed to issue tokens, but also added with new functionalities, including:

1. Up to 10 one-way tokens (with the same destination) can be issued at once;
2. Travel history can be viewed from a MRT ticket up to 16 items; and
3. Passengers can top up their MRT tickets at a new model TVM by themselves.

Moreover, all newly-opened stations of the MRT Blue Line have been equipped with these new model TVMs for the sake of convenience and rapidity of the service users.

New Model for TVMs Make Services More Convenient and Modern



MRT แจ้งผู้โดยสาร
ลงทะเบียนบัตรโดยสาร
เพื่อแสดงตัวตน

ผู้โดยสารที่ใช้บัตรโดยสาร MRT Plus กรุณาแสดงตนเพื่อแสดง (Know Your Customer หรือ KYC) ตาม พ.ร.บ. ป้องกันและปราบปรามการฟอกเงิน พ.ศ. 2542 และ พ.ร.บ. ระบบการชำระเงิน พ.ศ. 2560

ตั้งแต่วันที่ 8 สิงหาคม 2563 เป็นต้นไป

ขั้นตอนการลงทะเบียนบัตรโดยสาร MRT

1. เตรียมบัตรโดยสารรถไฟฟ้า MRT และ บัตรประชาชน หรือหนังสือเดินทางสำหรับชาวต่างชาติ
2. ติดต่อที่ออกบัตรโดยสารรถไฟฟ้า MRT ทุกสถานี หรือจุดลงทะเบียนที่ทางรถไฟ หรือแจ้งหมายเลขบัตรประชาชน
3. ลงทะเบียนเสร็จสมบูรณ์ ผู้โดยสารสามารถใช้งานได้ตามปกติ โดยไม่ต้องลงทะเบียนซ้ำอีก

▶ หากบัตรโดยสารมีค่าคงเหลืออยู่หลังจากใช้บัตรโดยสารแล้ว กรุณาแสดงบัตรโดยสารแก่เจ้าหน้าที่

▶ ผู้ที่ลงทะเบียนบัตรโดยสาร MRT จะต้องแสดงตนเพื่อแสดงตนที่สถานีออกบัตรโดยสารเท่านั้น

BEM

BEM Facilitates Passengers' Mandatory Registration for MRT Tickets for Authentication

BEM, the MRT service provider, has informed that the holders of the MRT tickets and MRT Plus of all types are required to authenticate their identities (Know Your Customer or KYC) in accordance with the Anti-Money Laundering Act B.E. 2542 (1999) and the Payment System Act B.E. 2560 (2017) from August 8, 2020 onwards.

By requesting the cooperation of passengers to take their MRT tickets and MRT Plus together ID cards (or passports in case of foreigners) to register by themselves, along with a phone number or email, upon a purchase of a new ticket or top up of value to the ticket at the MRT Ticket Offices at all 53 stations of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line). The tickets which have been already registered can be used normally, and there is no need to register again.

Promotion and Campaign Activities for Using the MRT System in 2020



National Children's Day

The "Taking Free MRT Rides for Children" activity was held on the occasion of the National Children's Day 2020 for children not taller than 140 centimeters to take the MRT ride for free on January 12, 2020 throughout the service hours.



National Mother's Day

The "12th August, Take Mom to Board MRT for Free" activity was held to provide mothers with free MRT journeys on August 12, 2020 throughout the service hours.



Car Free Day 2020

The MRT played a part in reducing global warming on the occasion of the Car Free Day 2020 whereby the Mass Transit Authority of Thailand (MRTA) and Bangkok Expressway and Metro Public Company Limited (BEM) jointly campaigned for reduction of global warming on "22nd September, Car Free Day" to help mitigate traffic problems, conserve the environment, minimize noise, air pollution, and PM 2.5 dust particles, as well as encouraging people to switch to the public transportation system, by granting a fare exemption to passengers carrying their foldable bicycles to the M.R.T. Chaloom

Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) on September 22, 2020 throughout the service hours, with free travel coupons available for the passengers at the ticketing offices of both lines.

National Father's Day

The "5th December, Take Dad to Board MRT for Free" activity was held to provide fathers with free MRT journeys on December 5, 2020 throughout the service hours.



Company Profile PR Booths



BEM Joined with CK Group to Participate in MONEY EXPO 2020

BEM in associated with CH. Karnchang Public Company Limited and its affiliated companies, participated in the booth exhibitions in the **MONEY EXPO 2020**, with Dr. Sethaput Suthiwartnarueput, Governor of the Bank of Thailand, presiding over the opening ceremony. As for CK GROUP booths, Mr. Santi Wiriyaangsarit, President of this MONEY EXPO, gave them the honor of participating in the official opening of the booth exhibition with the management team of CK GROUP. The MONEY EXPO is the most comprehensive investment finance fair in the region and continuously helps stimulate the Thai economy. This event was held during October 22-25, 2020 at IMPACT Challenger Hall 1-2, Muang Thong Thani.



BEM Participated in the Opening and Booting Ceremony of RAIL ASIA 2020 EXPO



BEM participated in the opening and booting ceremony of the 8th **RAIL Asia 2020** held on November 25-26, 2020 at the Activity Yard, Makkasan Airport Rail Link Station, which was given the honor by Mr. Pisak Jitviriyavasin, Ministry of Transport's Deputy Permanent Secretary (Chief of Highway Infrastructure Development Group) of presiding over the opening ceremony. In the event, goods displays was organized in parallel with academic seminars in the New Normal to analyze the effects of the COVID-19 on the industrial transformation; broaden individuals' horizons in new norms of communication after the situation of the COVID-19 outbreak.



Corporate Social and Environmental Activities

The Company has a policy and is determined to continuously take care of every sector of society in respect of the management of improved operational results, creation of value added to shareholders, and giving priority to nearby communities as well as taking care of both nearby and remote communities. In 2020, the Company then organized the corporate social and environmental contribution activities as follows:

Activities for Support of the Outdoor Learning Experience

National Children's Day 2020 Activities

"Wonderland AI World"

The Company undertook the 2020 National Children's Day activities in the atmosphere of "Wonderland AI World", with a lot of students from schools adjacent to the expressway vicinities, staff's descendants and children from nearby communities joining in fun activities, including AI invention, LEGO building, plaster painting, Bozo balloons, smart robot competition. The event atmosphere was filled with happiness, brightness of the children who enjoyed closely learning about Artificial Intelligence technologies at the Si Rat Expressway Control Center Building.



Outdoor experience opens up an opportunity for children to fully engage in learning by themselves, giving them a deep and clear understanding and enabling them to apply the gained knowledge to their life in the future. The Company thus organized outdoor learning experience activities as follows:



"MRT Delivers Happiness on the Children's Day 2020" Activity

On the occasion of the National Children's Day 2020, the Company, in association with Museum Siam, undertook an activity to enhance the development of ideas for children under the concept of "Thai Banjerd: Kerd Ideas" at the Activity Hall at Museum Siam, MRT Sanam Chai Station, Exit 1, where children joined in various skill-building activities, enjoyed the MRT quiz games through the knowledge station of the use of metro cards, skill-enhancing station in image link of MRT network map, flair-developing station in spellings, color separation, alphabet learning, and knowledge station about the correct and safe use of the MRT, as well as enjoying eating a wide variety of sweets, ice creams and winning prizes. Other than that, in the Museum Siam event, there were also everyday problem solving games, i.e., folding paper airplanes with secret messages inside station, drought conquest station, cooling down station, Museum Commercial station, in order to build knowledge and understanding about how to tackle different problems correctly. The event atmosphere was filled with happiness, enjoyment and smiles of more than 2,000 children and their families who joined in the activities persons.





“MRT Happy Blue Line” Activity

The Company realized the significance of the youth and communities surrounding the MRT routes, and therefore undertook an activity to promote the new route of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line Extension), Tao Poon - Tha Phra Section, for the youth, people and communities surrounding the MRT route so that they learned on how to use the MRT system correctly and safely, together with a free trial trip with the new MRT line to the four most exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, which were elaborately designed and decorated with the Thai style architectures in the Rattanakosin era perfectly reflecting the arts, cultures, and livelihoods of communities nearby. The activities were held throughout January-February 2020, as follows:

1. A group of 490 students in schools nearby participated in the MRT's trial runs with accuracy and safety, and there was a creating of awareness and public relations for the opening of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line Extension), Tao Poon - Tha Phra Section, by organizing a safety knowledge promotion activity, **“MRT Safety Share, Safety You Can Do”**, and introduction of the MRT routes through **“Bangkok MRT Application”**.



2. A group of 135 residents in communities nearby participated in the MRT's trial runs with accuracy and safety and continuously travelled to important cultural attractions, learned how to correctly use the MRT system, elevators, escalators, and minimize travel accidents for the elderly, along with enjoying the free trial trip with the new MRT line to visit the spectacular architecture within the stations and continued to Wat Mangkon Kammawat (Leng Nei Yi Temple) to pay homage to Buddha images. Such activities were considered a part of promoting people's travelling with the MRT system and promoting the cultural tourism around the MRT routes.

Activities for Support of the Outdoor Learning Experience

“Share 2 Child” Activity

With the Company's commitment to contributing to promoting educational development for children and youth through learning and trial of the trial of the MRT system as well as enhancing their outdoor learning experiences, the Company therefore continued to undertake the “Share 2 Child” activity. In 2020, activities were organized for children to join in a field trip to visit learning centers surrounding the MRT Blue Line, namely:



1. Study Tour of Museum Siam: By bringing a group of more than 100 teachers and students from Wat Chat Kaew Chongkolnee School (located near MRT Bang O Station) and Wat Paolohit School (located near MRT Sirindhorn Station) to do a study tour for outdoor learning experience around the MRT Blue Line, Tao Poon Station - Tha Phra Station, learn how to ride the MRT correctly and safely, along with learning how to issue tokens through the Ticket Vending Machines (TVM), as well as taking the students to visit the Decoding Thainess exhibition at Museum Siam: Discovery Museum, and enjoy the magnificent Thai architecture of the MRT Sanam Chai Station, regarded as one of the most exquisite underground stations, all of which received the children's great attention. The children gained a lot of knowledge and experience from these activities.



2. Study Tour of Energy Learning Center:

By bringing a group of 80 teachers and students from Wat Samakkhi Sutthawat School (located near MRT Bang Phlat Station) to do a study tour for outdoor learning experience around the MRT Blue Line, Bang Phlat Station - Bang O Station, learn how to ride the MRT correctly and safely, along with learning how to issue tokens through the Ticket Vending Machines (TVM), as well as taking the children to go on a study tour of the EGAT Learning Center, a learning center of Thailand's energy and a learning center of energy conservation buildings of international standard, encouraging the youth to realize the efficient energy use. This study tour activity provided the children with the overwhelming impression and broadened their knowledge of energy.



“MRT Bring Nong to Conquer TCAS Year 12”

The Company has valued the youth who are a driving force of the nation, and therefore, in association with the Mass Rapid Transit Authority of Thailand (MRTA) and Bangkok Metro Networks Company Limited (BMN), organized the giving back to society activities in terms of improving the quality of life in education, by providing opportunities for high school students nationwide



to participate in the activity under the name of **“MRT Bring Nong to Conquer TCAS”** Year 12 to enable them to apply the knowledge so gained for the higher education entrance examination, which was given a great honor by three highly qualified tutors to share knowledge, provide free intensive tutorials about TCAS exams, namely, Teacher Somsri Thammasarn Sophon in English, Teacher P'Wiset Keesukphan (Teacher P'Ae) in PAT1 Mathematics, and Teacher Surachet Pichitphongphao (Teacher P'Yu) in GAT, at C ASEAN, 10th Floor, CW TOWER. Such activity attracted the attention of students nationwide, by receiving feedbacks from over 200 students from 54 schools to participate in the live learning activity and over 10,000 students for the online learning activity. Moreover, BEM continued to further the activity, by passing on knowledge to secondary school students in Bangkok under the **“MRT Jaidee Give Away TCAS Exam Preparation Books”** activity at the MRT Chatuchak Station, between October 9-10, 2020, with more than 300 students providing attention to the activity and travelling to receive the books in person, and BEM also provided opportunities to students of all regions who missed out on free tutorial courses to gain knowledge, by delivering TCAS exam preparation books for all the three subjects, together with VDOs, to more than 70 schools via the mail channels for enabling students to have prepared for the examination for entrance to universities of dream with confidence, and grow up to become a major force of the nation.



Activities for Support of the Outdoor Learning Experience



“Making Dream Come True with Learning Center for Kids by BEM” Activity

The Company remained committed to continuing the policy to promote and develop the quality of life in education for children and youth in educational institutions/communities surrounding the MRT routes of the M.R.T. Chaloem Ratchamongkhon Line and the M.R.T. Chalong Ratchadham Line, by undertaking a **“Making Dream Come True with Learning Center for Kids by BEM”** activity for educational institutions or little child development centers to ensure their greater competency and readiness as a modern learning center, in order to promote Thai



children's reading habits, strengthen physical development to ensure they would grow up to become a driving force of the nation, by granting educational materials, scholarships, and a set of playground equipment for child development. Meanwhile, the Company's executives and staff volunteered to participate in recreational activities, activities for learning and skill practice station, and provided free lunch for children, with representatives from the Bangkok Yai District Office, Director of Wat Pradu Chimplee School giving a welcome at Wat Pradu Chimplee School in Bangkok, located adjacent to the MRT Blue Line (Tha Phra Station).



Activities for Good Relationships with Related Authorities

“Thai Farmer Lifestyle Learning in Suphan Buri Province with BEM”

The management and staff of the toll collection division of EXAT and the toll collection division of the Company participated in an activity to strengthen relationships with each other at the Lifestyle and Spirit of Thai Farmers-Na Here Chai Learning Center in Suphan Buri Province, one of the important tourist attractions in Suphan Buri Province, where had compiled fascinating stories and new knowledge about the valuable way of life of Thai farmers for study and learning.



The youth are the vital force of the nation. Education is the cornerstone of the youth's sustainable development of knowledge, abilities, perspectives, and virtues to ensure that they become good and quality citizens of the society. The Company has then continued to encourage and support the youth's education every year through various activities as follows:

Activities for Promotion of Youth Learning

“Scholarships for Students of Adjacent Schools”

The Company undertook activities to grant scholarships to students with good academic records, together with school development scholarships, to 9 schools adjacent to the Si Rat Expressway, the Udon Rattaya Expressway and the Si Rat - Outer Ring Road Expressway, to provide the youth educational opportunities and foster good relationships with communities nearby, and to provide educational support to the youth.



“Scholarships for Children of the Expressway Police Station 2's Police Officers”

The Company granted scholarships to children of the Expressway Police Station 2's police officers, who collaborated with the Company to ensuring convenience and safety of the expressway users.





Activities for Moral and Ethical Awareness for Corporate Social Responsibility

“Blood Donating”

It is to give blood to give life as the greatest giving. The Company, in association with the Faculty of Medicine Vajira Hospital, Navamindradhiraj University, then held a blood donation activity at the Si Rat - Outer Ring Road Expressway Control Center, two times, (usually held 3 times a year, but this year the activity was suspended in April 2020 due to the situation of the epidemic of the COVID-19), with active cooperation of a lot of executives, staff and residents nearby.



“Listening to Dhamma with BEM”

To create a positive work environment in the organization by applying Dharma or the principles of Buddhism to promote the proper fulfillment of an individual's role with all's mutual cooperation in order to bring workers happiness and efficient performance, and to that effect, the Company invited Phra Bai Dika Worawat Worawattano, Assistant Abbot of Tanot Temple, to deliver them a Buddhist sermon on the “**Happy People Happy Work**” topic.





"Thot Kathin Ceremony 2020"



The Company has upheld the good culture and tradition, and maintained while fostering the Buddhism by regularly organizing a Thot Kathin ceremony every year, which in 2020, it was held at Wat Samakkhi Sutthawat, Bang Phlat District, Bangkok, adjacent to the MRT Bang Phlat Station, by collecting donated money from executives, staff, service users of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line) to fund the restoration of the sermon hall of Wat Samakkhi Sutthawat for upholding the Buddhism, together with contribution of scholarships to Wat Samakkhi Sutthawat School, located adjacent to the MRT Bang Plat Station, as scholarships for the underprivileged students.



“BEM’s Felicitation Activities in Honor of the Monarch and His Royal Family Members”



To express the Company's unwavering loyalty to the Monarch and his royal family members on auspicious occasions of their birthday anniversaries, the Company set up celebratory arches and blessing books to provide opportunities executives, staff, MRT passengers, together the general public, to join in the blessings on various occasions, as follows:

1. On the auspicious occasion of Her Majesty the Queen's birthday anniversary on June 3, 2020 at the Company's office building and MRT Phahon Yothin Station and Sam Yan Station;

2. On the auspicious occasion of His Majesty the King's birthday anniversary on July 28, 2020 at the Company's office building and MRT Sanam Chai, Sam Yan, Chatuchak and Tao Poon Stations;

3. On the auspicious occasion of Her Majesty Queen Sirikit the Queen Mother's birthday anniversary on August 12, 2020 at the Company's office building and MRT Sanam Chai, Sam Yan, Chatuchak and Tao Poon Stations.

“Activities in Commemoration of the Royal Grace of His Majesty the late King Rama IX”

1. On the occasion of His Majesty King Bhumibol Adulyadej The Great's death anniversary on October 13, 2020, the altar tables where the pictures of the late King were positioned, together with royal worship, were set up at the Company's office building and MRT Sam Yan station;

2. On the occasion of His Majesty King Bhumibol Adulyadej The Great's birthday anniversary, the National Father Day, on December 5, 2020, the altar tables where the pictures of the late King were positioned, together with royal worship, were set up at the Company's office building and MRT Sam Yan station.



1. Business Policy and Overview

Bangkok Expressway and Metro Public Company Limited (the “Company”) was incorporated from the amalgamation, pursuant to the Public Limited Company Act, between Bangkok Expressway Public Company Limited (“BECL”) and Bangkok Metro Public Company Limited (“BMCL”) on December 30, 2015, and the Company has assumed all assets, rights, duties and responsibilities of both companies by operation of law. As of December 31, 2020, the Company’s registered and paid-up capital amounted to Baht 15,285,000,000 divided into a total of 15,285,000,000 ordinary shares, at the par value of Baht 1 per share.

The Company’s main businesses are the provision of the expressway and metro services, including commercial development relating to the expressway and metro systems, which will lay a foundation for business expansion through future extension of the routes and the service network, both in the expressway and metro systems, thereby enabling the Company to be a leading mass rapid transit and transportation service operator in Thailand and in the region. Moreover, the Company may extend its businesses to other fast-growing businesses with good returns, such as other infrastructure projects, commercial development or real estate development, both at home and abroad, etc.

1.1 Vision, Mission, Goals, Business Strategies and Business Overview



Vision

The Company’s vision is to become a leading, fully-integrated transportation service provider in Thailand and ASEAN.



Mission

The Company is committed to:

1. Providing services of the expressway and metro systems with safety, convenience, rapidity, reliability, punctuality, and efficiency, in order to improve the quality of people’s lives;
2. Improving the quality and efficiency of the modern and full-service transportation network in order to alleviate traffic problems, preserve the environment, and improve society and the country;
3. Creating value-added and utmost benefit to shareholders based on fairness to all stakeholders.



Goals and Business Strategies

To achieve the Company’s objectives and mission, the Company has formulated major strategies in its business operations, as follows:

1. To invest in the transportation system projects, expressway and connecting road projects, metro system projects, and related projects under the government policy for public-private partnership (PPP) in respect of infrastructure, including related business, such as, various commercial development, taking into consideration the projects which are beneficial to society and the country, with reasonable business yields;
2. To strengthen the businesses by generating revenues for continued growth, and managing costs and expenses efficiently, in order to maintain good financial standing;
3. To build relationships with stakeholders through the corporate social responsibility process and communicate with internal and external personnel about it;
4. To develop personnel ready for the provision of quality services of the expressway and metro systems;
5. To build social recognition of the corporate good image.

Business Overview of the Company

The Company is committed to being a leading, fully-integrated transportation service provider, which builds up a good journey for a better living. The Company's businesses comprise the provision of the expressway and metro services, including commercial development directly related to the main businesses. The Company's business overview is as follows:

1.1.1 Expressway Business

The Company and one of its subsidiaries, namely, Northern Bangkok Expressway Company Limited ("NECL"), have obtained concessions from the Expressway Authority of Thailand ("EXAT") for construction and operation of a total of three expressways, namely:

1) The Si Rat Expressway (Sectors AB, C, and D)

The Si Rat Expressway (Second Stage Expressway) is the first large-scale construction project in Thailand on the basis of public private partnership. This project is implemented on a BTO (Build Transfer Operate) basis, namely, the Company (formerly BECL) invested in the design, construction and operation of the Si Rat Expressway. In this regard, the title to various permanent constructions pertaining to or use of the Si Rat Expressway shall be vested in EXAT. The Company has the right to receive toll revenues as specified in the Agreement, with the Second Stage Expressway Agreement (Amendment) being signed on February 20, 2020 for an extension of the concession period until October 31, 2035.

The Si Rat Expressway is comprised of three Sectors, covering a total distance of 38.5 kilometers, as follows:

- Sector AB (starts from Ratchadapisek Road southward to Payathai Interchange eastward to Rama 9 Road and from Phayathai Interchange heading southward to Bangkhlo Interchange;
- Sector C (starts from Ratchadapisek Road northward up to Chaeng Watthana Road); and
- Sector D (starts from Rama 9 Road eastward to end at Srinakharindra Road).

2) The Si Rat - Outer Ring Road Expressway

The Si Rat - Outer Ring Road Expressway under the Concession Agreement for Investment, Design, Construction, Operation, Service, and Maintenance of the Si Rat - Outer Ring Road Expressway Project is implemented on a BTO basis. The route starts from the Outer Ring Road (Kanjapisek Road around Mahasawat Water Treatment Plant) heading eastbound along the right of way of the existing Southern railway, crossing the Chao Phraya River around the Rama VII Bridge, ending around Bang Sue Grand Station (Chatuchak), connecting with the Si Rat Expressway around the Bus Terminal (Mo Chit 2), running down to at-grade level around Kamphaeng Phet 2 Road, and connecting northward heading to Chaeng Watthana, covering a total distance of 16.7 kilometers. The concession period is 30 years and ends on December 14, 2042.

3) The Udon Ratthaya Expressway

The Udon Ratthaya Expressway (Bang Pa-in - Pak Kret Expressway), operated by NECL under the Bang Pa-in - Pak Kret Expressway Agreement is implemented on a BTO basis, with its Amendment being signed on February 20, 2020 for an extension of the concession period until October 31, 2035. The Udon Ratthaya Expressway is comprised of 2 Stages, namely, Stage 1, Chaeng Watthana - Chiang Rak, and Stage 2, Chiang Rak - Bang Sai, connecting to the Si Rat Expressway around Chaeng Watthana Road northward heading to Bang Pa-in around Kanjanapisek Road (Western Outer Ring Road), covering a total distance of 32 kilometers.

1.1.2 Rail Business

The Company has obtained concessions for the operation of two mass rapid transit rail system projects from the Mass Rapid Transit Authority of Thailand (“MRTA”), namely:

- 1) The M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line), by investment on a PPP Net Cost basis, whereby MRTA invests in all civil works and the Company shall supply, install the M&E Equipment, and provide the operation and maintenance services. The Company is entitled to farebox revenue and undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains of the MRT Blue Line. The MRT Blue Line Project is comprised of the following:
 - Hua Lamphong - Bang Sue Section, which is the first underground metro project of Thailand, covering a total distance of 20 kilometers, with 18 underground stations, opened for train operation service on July 3, 2004;
 - Hua Lamphong - Bang Khae Section, which is the underground and elevated route, covering a total distance of 16 kilometers, with 11 stations; and Bang Sue - Tha Phra Section, which is the entire elevated route, covering a total distance of 12 kilometers, with 9 stations, divided into 3 phases during the installation of the M&E Equipment for service opening, namely, Phase 1: Bang Sue Station - Tao Poon Station, opened for service on August 11, 2017; Phase 2: Hua Lamphong Station - Lak Song Station, opened for service on September 29, 2019; and Phase 3: Tao Poon Station - Tha Phra Station, opened for service on March 30, 2020, for the concession period of 30 years from the date of service opening of the entire route.

The M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line) has connected to the M.R.T. Chaloe Ratchadham Line Project (MRT Purple Line) at Tao Poon Station.

- 2) The M.R.T. Chaloe Ratchadham Line Project or the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Klong Bang Phai Station - Tao Poon Station), Contract 4: Concession for Supply of M&E Systems and O&M Services, on a PPP Gross Cost basis, whereby MRTA invests in all civil works and the Company invests in the M&E Systems and the rolling stocks, as well as provides the operation and maintenance services in accordance with the specified service standards. MRTA is entitled to all farebox revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and MRTA shall make a gradual repayment of the M&E Equipment to the Company on a monthly basis for a period of 10 years, and shall engage the Company for the O&M Services throughout the concession period of 30 years from September 4, 2013.

The M.R.T. Chaloe Ratchadham Line Project (MRT Purple Line) is an elevated metro project, for a distance of 23 kilometers, with 16 stations and a connection to the M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line) at Tao Poon Station, whereby the M.R.T. Chaloe Ratchadham Line Project (MRT Purple Line), was opened for service on August 6, 2016.

1.1.3 Commercial Development Business

The Company and one of its subsidiaries, namely, Bangkok Metro Networks Limited (“BMN”), operate the commercial development business of the MRT Blue Line Project, as follows:

- 1) Procurement and/or production of advertising media of various forms in the trains and metro stations;
- 2) Lease of retail spaces in the MRT Blue Line stations and spaces in the basement level of the Lat Phrao park and ride facility;
- 3) Provision of service and maintenance of telecommunications system equipment inside the metro stations.

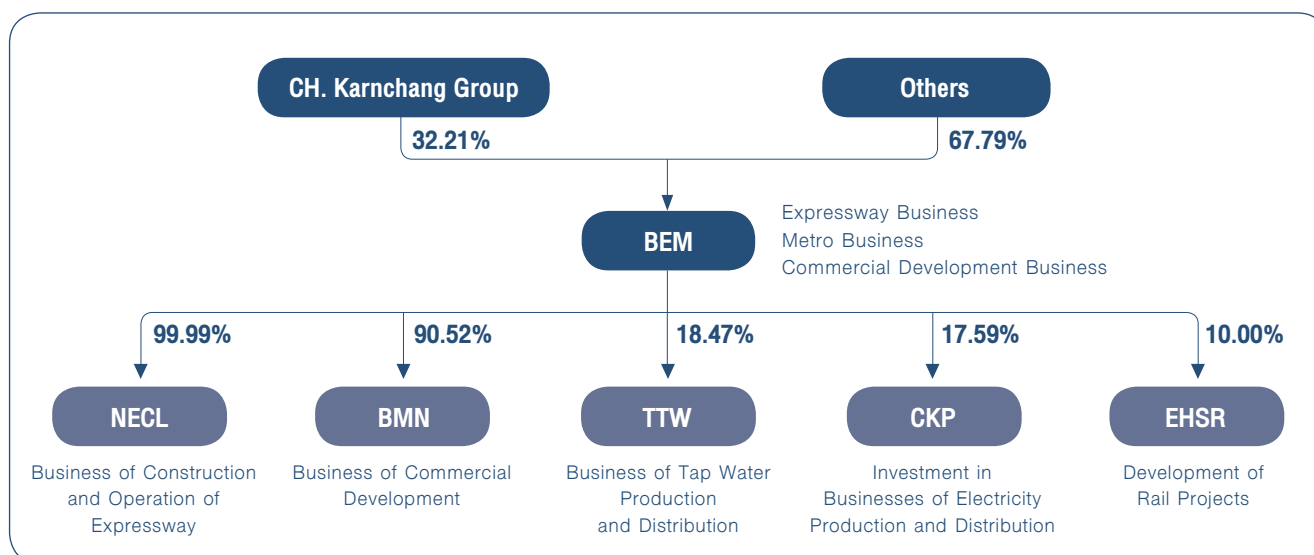
In addition, as for the expressways, the Company and NECL have allowed private entities and individuals to use spaces for commercial operation for installation of Intelligent Traffic Signs and various advertising boards, including retail spaces around toll plazas, and other business activities, such as the use of the expressway areas for the installation of the 3G signal distribution system, etc.

1.2 Significant Changes and Developments of the Company in 2020

February 15, 2020	The Company extended the period of time for the public's free travel during the trial run of the MRT Blue Line Extension, Tao Poon - Tha Phra Section (Bang Pho Station - Charan 13 Station) from 10:00 hrs. - 16:00 hrs. to 06:00 hrs. - 24:00 hrs.
February 20, 2020	The Company/the subsidiaries and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) for settlement of the disputes and extension of the respective concession periods until October 31, 2035.
March 10, 2020	As a result of the situation of the pandemic of Coronavirus Disease 2019 (COVID-19) in Thailand, the Company has heightened the anti-pandemic measures and has placed the emphasis firmly on keeping clean inside of the MRT stations, trains, and the MRT system until present in order to prevent the spread of such disease until the situation of the pandemic would have been ameliorated.
March 30, 2020	The Company opened the full service of the MRT Blue Line Extension Project (Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section) and charged fares. The project's connected alignment features a Circle Line covering the central area of Bangkok, including a connection of travelling between Bangkok and Thonburi sides, and the rolling stocks have been adding to the service from 19 to 54, as well as providing connections to other lines, namely, the MRT Green Line, the MRT Purple Line, the MRT Orange Line, the MRT Red Line, and the Airport Rail Link, thereby making the people's journeys more convenient and rapid.
May 28, 2020	TRIS Rating Co., Ltd. affirmed the Company's credit rating at "A", with a "Negative" outlook.
June 10, 2020	The Company issued and offered for sale debentures No. 1/2020, with a 4-12-year maturity, in the total amount of Baht 3,000 Million, at the fixed interest rates ranging from 2.88 percent to 3.78 percent per annum, for the existing debt repayment of the Company.
July 1, 2020	The Company has provided a discount on toll fees at "At Narong 1 Toll Plaza", from the Chalong Rat Expressway access to the First Stage Expressway to Bang Na, at the rate of Baht 25 per trip for all types of vehicles for one year, effective from July 1, 2020 to June 30, 2021.
July 2, 2020	The Company maintained the fares for the MRT "Blue Line" at the same rates, namely, starting from Baht 16 up to Baht 42, until December 31, 2020, despite the revision of the fares scheduled for July 2, 2020 in accordance with the MRT Blue Line Concession Agreement.
September 1, 2020	The U-turn bridge on the road along the railway around the intersection of Ratchaphruek Road was opened for service, in which the Company invested for design and construction on the area licensed by the State Railway of Thailand to facilitate the general public and users of the Si Rat - Outer Ring Road Expressway.
September 21, 2020	The Company was awarded a White Factory Project certificate by the Department of Labor Protection and Welfare in Nonthaburi Province, for the reason that the Company attached importance to drug problems in the business premises to be free from drugs of all types.
November 14, 2020	His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua and Her Majesty Queen Suthida Bajrasudhabimalalakshana graciously presided over the official opening ceremony of the M.R.T. Chaloem Ratchamongkhon Line Extension Project (MRT Blue Line) at the MRT Sanam Chai Station.
November 27, 2020	The Company was awarded Thailand's Top Corporate Brand 2020 as one of the organizations realized the significance of development of its corporate brand to ensure greater strength for the country's social and economic sustainability, with the highest brand value in the transportation and logistics sector in 2020, by the Faculty of Commerce and Accountancy Chulalongkorn University.
November 27, 2020	The Company opened the Underground Museum or so-called Site Museum, the first new-model museum in the public space inside the electric train station of Thailand, i.e., which was located inside the MRT Sanam Chai station, and served a point of exhibitions and displays of objects which were found during the construction of the MRT station.

1.3 Shareholding Structure of Company Group

Chart of Shareholding Structure and the Company's Shareholding Percentage as of December 31, 2020



Remark: CH. Karnchang Group comprises

- 1) CH. Karnchang Public Company Limited; and
- 2) CH. Karnchang-Tokyu Construction Company Limited.

Investment in Subsidiaries and Other Companies

The Company has a policy on investment in infrastructure businesses or supporting businesses conducive to the Company's operations and creating opportunities and long-term yields for the Company, as well as providing the sources of investment for future projects. The Company's investment as of December 31, 2020 was as follows:

1) Names of Companies invested in by the Company and its Shareholding Percentage

(Unit: Million Baht)

Names of Companies	Nature of Business	Registered Capital	Paid-up Capital	Shareholding Percentage	Investment Value at Cost
Subsidiaries					
Northern Bangkok Expressway Company Limited (NECL)	Construction and operation of the Udon Rattaya Expressway	6,000	5,250	99.99%	2,604
Bangkok Metro Networks Limited (BMN)	Operation of the commercial development business	254	254	90.52%	507
Other Companies					
CK Power Public Company Limited (CKP)	Investment by holding shares in other companies (Holding Company) operating business of electricity production and distribution	9,240	8,129	17.59%	3,340
TTW Public Company Limited (TTW)	Tap water production and distribution	3,990	3,990	18.47%	4,061
Eastern High-Speed Rail Linking Three Airports Company Limited (EHSR)	Development of rail projects	4,000	4,000	10.00%	400

2) Details of Companies Invested in by the Company

Expressway Business

- Northern Bangkok Expressway Company Limited (“NECL”)

NECL's registered capital amounts to Baht 6,000 Million, divided into 294 million ordinary shares and 306 million preferred shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 5,250 Million. As of December 31, 2020, the Company's shareholding was 99.99 percent of its registered capital. NECL entered into the Bang Pa-in - Pak Kret Expressway Agreement with EXAT for construction and operation of the Udon Rattaya Expressway, with its alignment running northbound continuing from the Si Rat Expressway around Chaeng Watthana Road and passing Bang Phun, Chiang Rak and ending at Bang Pa-in around Kanjanapisek Road (Western Outer Ring Road). Subsequently on February 20, 2020, NECL and EXAT signed the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) under which the concession period was extended until October 31, 2035.

Commercial Development Business

- Bangkok Metro Networks Limited (“BMN”)

BMN has a total registered capital of Baht 254 Million, divided into 25.4 million ordinary shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 254 Million. As of December 31, 2020, the Company's shareholding in BMN was 90.52 percent of its registered capital.

The Company currently engages BMN to serve as its sole management representative for commercial development in the MRT Blue Line Project as operated by the Company and also entitles BMN to be its management representative for commercial development, namely, procurement and production of advertising media of various forms in the metro stations and trains, lease of retail spaces in stations of the M.R.T. Chaloem Ratchamongkhon Line Project and at the basement level of the park and ride facility at the Lat Phrao Station, as well as providing service and maintenance of telecommunications system equipment in the stations and tunnels.

Other Infrastructure Businesses

- CK Power Public Company Limited (“CKP”)

CKP is a listed company on the Stock Exchange, operating its main business by investing in other companies (Holding Company) which operate the business of electricity production and distribution. CKP has a total registered capital of Baht 9,240 Million, divided into 8,129,382,729 ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 8,129,382,729. As of December 31, 2020, the Company's shareholding was 17.59 percent of its paid-up capital. CKP invests in companies operating the business of electricity production and distribution from three types of energy, namely, hydropower business, by investing in SouthEast Asia Energy Limited and Xayaburi Power Company Limited; thermal power business (cogeneration system), by investing in Bangpa-in Cogeneration Limited; and solar power business, by investing in Bangkhenchai Company Limited, Nakhon Ratchasima Solar Limited, and Chiangrai Solar Limited.

- TTW Public Company Limited (“TTW”)

TTW is a listed company on the Stock Exchange, having a total registered capital of Baht 3,990 Million, divided into 3,990 million ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 3,990 Million. As of December 31, 2020, the Company's shareholding was 18.47 percent of its registered capital. TTW operates the business of production and distribution of tap water to the Provincial Waterworks Authority in the areas of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 30 years from July 21, 2004. In addition, TTW invests in Pathum Thani Water Co., Ltd., representing 98 percent of its registered capital, which operates the business of tap water production and distribution in the areas of Pathum Thani and Rangsit, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 25 years from October 15, 1998, and also invests in Thai Water Operations Company Limited, which operates the business of management and operation of tap water production and distribution systems and water treatment system, as well as invests in the energy business by holding shares in CKP representing approximately 25 percent of its registered capital.

3. Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)

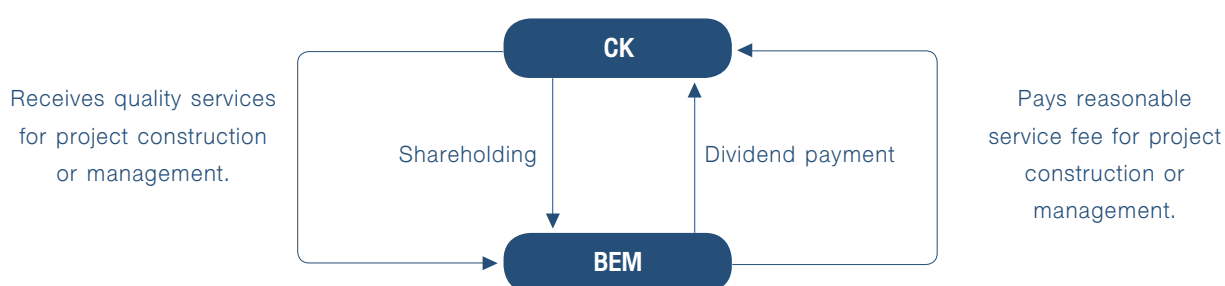
EHSR is a company established by CPH Group, with its registered capital of Baht 4,000 Million, divided into 40 million ordinary shares, at the par value of Baht 100 per share. As of December 31, 2020, the Company’s shareholding was 10 percent of its registered capital. EHSR carries out development of rail projects, design and construction works, civil work, in association with other projects, supply of the M&E Systems and rolling stocks, including provision of train operation and maintenance services, and development of areas supporting the rail services of the project for a period of 50 years (with the construction period of 5 years and operation period of 45 years).

1.4 Relationship with Business Alliance of Major Shareholder

The Company’s major shareholder was CH. Karnchang Public Company Limited (“CK”), as of December 31, 2020, whereby CK was holding 4,787,121,829 shares in the Company, representing 31.32 percent of the Company’s paid-up capital. From the past until the present, the Company has engaged CK to conduct construction and operation of various projects, as CK is a large construction company in Thailand, which has potential, knowledge, and expertise, and is thoroughly familiar with the civil infrastructure of the expressway and metro projects, including M&E Equipment. In addition, CK is experienced in the contractual operations on a Lump Sum Turnkey basis, and can deliver quality works on schedules, and is also the Company’s strategic investment partner. As a result, CK has taken on responsibility for and commitment to great success in the projects.

Therefore, in the future, it is possible that the Company will further engage CK to conduct project construction or management. However, in execution of transactions with CK, which is considered a person which may have a conflict of interest with the Company, the Company will have complied with its policy on execution of connected transactions per details as disclosed in Item 12: Connected Transactions.

Chart of Relationship with Business Alliance of Major Shareholder



2. Nature of Business Operations

The Company and its subsidiaries have operated the businesses as concessionaires awarded by the government sector, as follows: 1) concessionaires for the expressway construction and operation, namely, the Si Rat Expressway (Sectors AB, C and D), the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway; 2) concessionaires for operation of the M.R.T. Chaloom Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line). Other than serving as the concessionaire, the Company has also operated the commercial development business pursuant to the relevant Concession Agreements. Currently, the revenue structure of the Company and its subsidiaries is set forth below.

(Unit: Million Baht)

Total Revenue Structure	Operated by	Shareholding Percentage of the Company	Consolidated Financial Information					
			For Year Ended December 31, 2020		For Year Ended December 31, 2019		For Year Ended December 31, 2018	
			Million Baht	%	Million Baht	%	Million Baht	%
Revenue from expressway business			8,145	56.9 %	10,302	60.6 %	10,174	61.3 %
Toll revenue	Company		6,942	48.5 %	8,852	52.1 %	8,718	52.5 %
Toll revenue	Subsidiary	99.99	1,203	8.4 %	1,450	8.5 %	1,456	8.8 %
Revenue from rail business			4,520	31.5 %	5,022	29.5 %	4,736	28.6 %
Farebox revenue and metro operation service charges	Company		4,520	31.5 %	5,022	29.5 %	4,736	28.6 %
Revenue from commercial development business			825	5.8 %	783	4.6 %	705	4.2 %
Commercial development revenue	Company		724	5.1 %	720	4.2 %	240	1.4 %
Commercial development revenue	Subsidiary	90.52	101	0.7 %	63	0.4 %	465	2.8 %
Gains on sale of investments ⁽¹⁾			4	0.0 %	181	1.1 %	499	3.0 %
Other income ⁽²⁾			829	5.8 %	707	4.2 %	477	2.9 %
Total revenues ⁽³⁾			14,323	100 %	16,995	100 %	16,591	100 %

Remarks: ⁽¹⁾ Gains on sale of investments are gains on sales of other current investments, and only in 2019 and 2018, gains on sale of investments in CKP, XPCL, and TTW are included.

⁽²⁾ Other income comprises interest income, dividend income, and gain on fair value adjustment of current investments.

⁽³⁾ Exclusive of gains on reclassification of investments in TTW and CKP in 2019 and 2018, respectively.

2.1 Nature of Business Operations of the Company

The Company is committed to becoming a leading, fully-integrated transportation service provider, which builds up convenient, rapid, reliable and safe journeys for a better living. The Company's businesses are composed of the expressway and metro system services, including commercial development business directly related to the main businesses. The Company's overall businesses are divided into three main sectors, as follows:

2.1.1 Expressway Business

1) Nature of Services

The Company and one of its subsidiaries, i.e., Northern Bangkok Expressway Company Limited ("NECL"), have been granted concessions for construction and operation of a total of three expressways, namely, the Si Rat Expressway (Sectors AB, C and D), the Si Rat - Outer Ring Road Expressway, and the Udon Raththaya Expressway, as per the following details:

1) The Si Rat Expressway (Sectors AB, C and D)

The Si Rat Expressway (Second Stage Expressway) is under the Second Stage Expressway Agreement (Amendment) with the Expressway Authority of Thailand ("EXAT"), with the expiration of the concession period on October 31, 2035, while the Si Rat Expressway (Sector D) may extended for another 11 years and six months from the expiration date of the existing Agreement, namely, April 22, 2027.

The Si Rat Expressway is the first large-scale construction project in Thailand on the basis of public private partnership. This project is implemented on a BTO (Build Transfer Operate) basis, namely, the Company (formerly BECL) invested in the design, construction and operation of the Si Rat Expressway. In this regard, the title to various permanent constructions pertaining to or use of the Si Rat Expressway shall be vested in EXAT. The Si Rat Expressway is comprised of three Sectors, covering a total distance of 38.5 kilometers, namely:

- Sector AB (from Ratchadapisek Road southward to Payathai Interchange eastward to Rama 9 Road and from Phayathai Interchange heading southward to Bangkhlo Interchange;
- Sector C (from Ratchadapisek Road northward up to Chaeng Watthana Road); and
- Sector D (from Rama 9 Road eastward to end at Srinakharindra Road).

As for tolls, EXAT has authorized the Company to collect tolls for the Si Rat Expressway, with the Company having the right to receive toll revenue sharing of the Chalmern Mahanakorn Expressway and the Si Rat Expressway (Sector AB) and receive all toll revenues of the Si Rat Expressway (Sectors C and D). The revenue sharing between the Company and EXAT shall be specified in the Agreement, i.e., the Company and EXAT shall receive the revenue sharing from the Chalmern Mahanakorn Expressway and the Si Rat Expressway (Sector AB) at 40 percent and 60 percent, respectively, and meanwhile, all toll revenues of the Si Rat Expressway (Sectors C and D) shall belong to the Company.

2) The Si Rat-Outer Ring Road Expressway Project

The Si Rat-Outer Ring Road Expressway is under the Concession Agreement for Investment, Design, Construction, Operation, Service, and Maintenance of the Si Rat-Outer Ring Road Expressway Project, with EXAT, with its concession period ending on December 14, 2042.

The Company has the duties to carry out design and construction, supply and installation of various relevant equipment and systems, together with operation and maintenance of the expressway, including toll collection, in consideration of the right to receive toll revenue and other revenues (if any). The project is an elevated six-traffic lane expressway, for a distance of 16.7 kilometers, with 9 toll plazas. The project's route starts from the Outer Ring Road (Kanjapisek Road around Mahasawat Water Treatment Plant) heading eastbound along the right of way of the existing Southern railway, crossing the Chao Phraya River around the Rama VII Bridge, ending around Bang Sue Grand Station (Chatuchak),

connecting with the Si Rat Expressway to the north of the Mo Chit 2 Bus Terminal, and running down to at-grade level around Kamphaeng Phet 2 Road. Moreover, the Company opened the connection of the Si Rat - Outer Ring Road Expressway with the northern part of the Si Rat Expressway (heading to Chaeng Watthana) for service on September 30, 2018, in order to ensure the greater convenience in travelling to Chaeng Watthana and continuing along the Udon Ratthaya Expressway. In this regard, the Company is responsible for investment and all operating expenses, as well as sharing returns with or providing benefits to EXAT as specified in the Agreement.

In management of this project, the Company is responsible for collecting tolls and shall have the right to receive all toll revenue and other revenues (if any) throughout the concession period, whereby the toll rates and revisions shall be agreed upon in the Agreement.

3) The Udon Ratthaya Expressway

The Udon Ratthaya Expressway (Bang Pa-in - Pak Kret Expressway) is operated by NECL under the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) with EXAT, with its concession period ending on October 31, 2035, whereby such Agreement may be extended for another 10 years and 11 months from the expiration date of the existing Agreement, namely, September 27, 2026.

The Udon Ratthaya Expressway is implemented on a BTO (Build Transfer Operate) basis like the Si Rat Expressway, namely, NECL invested in the design, construction, and operation of the Udon Ratthaya Expressway, whereby the title to various permanent constructions pertaining to or use of the expressway shall be vested in EXAT, and EXAT is responsible for collecting and delivering all tolls to NECL as specified in the Agreement. The Udon Ratthaya Expressway comprises 2 Stages, namely, Stage 1, Chaeng Watthana - Chiang Rak, and Stage 2, Chiang Rak - Bang Sai, connecting to the Si Rat Expressway around Chaeng Watthana Road, covering a total distance of 32 kilometers. As for the inbound route, expressway users shall pay tolls at the booths around the on-ramps of the expressway while in respect of the outbound route, expressway users shall pay tolls at the off-ramps of the expressway. EXAT is responsible for collecting and delivering all tolls to NECL. All toll revenues in respect of the Udon Ratthaya Expressway shall belong to NECL.

2) The details of the expressway linking networks are as follows:

Expressway Systems	Length (km.)	Constructed and Operated by
1. Chalerm Mahanakorn Expressway (First Stage Expressway) (Bang Na - Din Daeng - Dao Khanong)	27.1	EXAT
2. Si Rat Expressway (Second Stage Expressway)		
2.1 Urban Network (Sector AB) (Prachachuen - Phayathai - Bangkhlo - Asoke)		
2.2 Suburban Network (Sector C) (Prachachuen - Chaeng Watthana)		
2.3 Suburban Network (Sector D) (Rama - Srinagarindra)	38.5	Company
3. Udon Ratthaya Expressway (Bang Pa-in - Pak Kret)	32.0	NECL
4. Si Rat - Outer Ring Road Expressway	16.7	Company
5. Uttaraphimuk Elevated Way (Don Muang Tollway)	28.0	Don Muang Tollway Public Company Limited
6. Chalong Rat Expressway including its Extension (Ramindra - At Narong and Ramindra - Outer Ring Road)	32.9	EXAT
7. Burapha Withi Expressway (Bang Na - Chonburi)	55.0	EXAT
8. Kanjanapisek Expressway (Bang Pli - Suksawad) and Highway No. 37 (Suksawad - Bang Khun Thien Section) including a connecting road to Bhumibol Bridge 1 and Bhumibol Bridge 2	37.8	EXAT
Total Length	268.0	

3) Toll Revenue Sharing

The Company and EXAT have received the toll revenue sharing in respect of the urban expressways (the Chalm Mahanakorn Expressway and the Si Rat Expressway (Sector AB)) at 40 percent and 60 percent, respectively.

While the Company has received all toll revenues for the suburban expressways (the Si Rat Expressway (Sectors C and D), the Si Rat - Outer Ring Road Expressway, and the Udon Rattaya Expressway), in accordance with the terms of the respective Agreements.

Expressway	Length (km.)	Revenue	Revenue Sharing Company : EXAT
Chalerm Mahanakorn Expressway			
Din Daeng - Port	8.9	Company and EXAT	40 : 60
Bang Na - Port	7.9		
Port - Dao Khanong	10.3		
Si Rat Expressway			
Sector AB:		Company and EXAT	40 : 60
(Rama 9 - Ratchadapisek)	21.8		
(Phayathai - Bangkhlo)			
Sector C: (Ratchadapisek - Chaeng Watthana)	8.0	Company	100 : 0
Sector D: (Rama 9 - Srinagarindra)	8.7	Company	100 : 0
Si Rat - Outer Ring Road Expressway	16.7	Company	100 : 0
Udon Rattaya Expressway			
Chaeng Watthana - Chiang Rak	22.0	NECL	100 : 0
Chiang Rak - Bang Sai	10.0		

4) Toll Rates

Expressway/Toll Plaza	Toll Rates (Baht/Trip)		
	4 wheels	6-10 wheels	More than 10 wheels
Chalerm Mahanakorn Expressway (First Stage Expressway)	50	75	110
Except:			
At Narong 1 Toll Plaza (to Bang Na)	25 ⁽¹⁾	50 ⁽¹⁾	85 ⁽¹⁾
Si Rat Expressway (Sector AB) (Second Stage Expressway)	50	75	110
Except:			
Prachachuen Toll Plaza (inbound)	60 ⁽²⁾	90 ⁽²⁾	140 ⁽²⁾
Prachachuen Toll Plaza (outbound)	10 ⁽²⁾	15 ⁽²⁾	30 ⁽²⁾
Si Rat Expressway (Sector C) (Second Stage Expressway)	15	20	35
Prachachuen 1 Toll Plaza (from Prachachuen Road)	15	20	35
Prachachuen 2 Toll Plaza (to Prachachuen Road)			
Ngam Wong Wan 1 Toll Plaza (outbound)			
Ngam Wong Wan 2 Toll Plaza (inbound)			
Si Rat Expressway (Sector D)	25	55	75
Si Rat - Outer Ring Road Expressway	50	80	115
Udon Ratthaya Expressway	45	100	150
Except:			
Muang Thong Thani Toll Plaza	35 ⁽³⁾	90 ⁽³⁾	140 ⁽³⁾
Bang Pa-in Toll Plaza	55	120	180

Remarks: ⁽¹⁾ These rates are after deduction of Baht 25 discount for all types of vehicles (from July 1, 2020 to June 30, 2021).

⁽²⁾ In case of the motorists' service use of the Second Stage Expressway continuing from Sector AB to Sector C at Prachachuen Toll Plaza (outbound) or from Sector C to Sector AB at Prachachuen Toll Plaza (inbound), the tolls of the Second Stage Expressway for all types of vehicles will be at a discount of Baht 5 throughout the contract period.

⁽³⁾ These rates are after deduction of Baht 10 discount for all types of vehicles.

Revisions to Toll Rates under the Agreements

- The Chalerm Mahanakorn Expressway and the Si Rat Expressway are subject to a revision to their respective toll rates every 10 years, with their next revision taking place on September 1, 2028;
- The Si Rat - Outer Ring Road Expressway is subject to a revision to its toll rates every 5 years from the date of service operation of the project at the rates of Baht 15, Baht 25 and Baht 35 for four-wheeled vehicles, six-wheeled to ten-wheeled vehicles; and more than ten-wheeled vehicles, respectively, as specified in the Agreement, with the first revision taking place on December 15, 2021; and
- The Udon Ratthaya Expressway is subject to a revision to its toll rates on the 1st day of November every 10 years, with the next revision taking place on November 1, 2028.

5) Marketing and Competition of Expressway Business

• Customer Characteristics and Target Customers of Expressway Business

Target customers of the expressway users refer to those motorists who desire a convenient and rapid transportation or who desire to shorten the travelling distance to their destinations as well as to avoid the traffic congestion along the congested normal roads in Bangkok and its vicinity. The customers by the types of vehicles using the expressways may be divided into four-wheeled vehicles; six-wheeled to ten-wheeled vehicles; and more than ten-wheeled vehicles, which in 2020, accounted for 98.21 percent, 1.49 percent, and 0.30 percent, respectively. The traffic volume from January 1 to December 31, 2020, using the expressways can be described by areas as follows:

Expressway System	Average Traffic Volume (trips/day)	%
1. Chalerm Mahanakorn Expressway (First Stage Expressway) (Bang Na - Din Daeng - Dao Khanong)	318,697	30.35
2. Si Rat Expressway (Second Stage Expressway)	266,545	25.39
• Sector AB (Prachachuen - Phayathai - Bangkhlo - Asoke)		
• Sector C (Prachachuen - Chaeng Watthana)	165,163	15.73
• Sector D (Asoke - Srinagarindra)	161,668	15.40
3. Udon Rattaya Expressway (Bang Pa-in - Pak Kret)	78,956	7.52
4. Si Rat - Outer Ring Road Expressway	58,898	5.61
Total Average Traffic Volume	1,049,927	100.00

Given the fact that the expressway service is considered a form of provision of public utilities service to motorists who desire a convenient, rapid and safe travelling, which are regarded as target customers of the expressway systems, the group of consumers are then broad depending on their destinations, residences, and workplaces. Therefore, the revenues of the expressway systems will not depend on any particular group of customers.

6) Marketing Policy and Strategies of Expressway Business

• Marketing Strategies of Expressway Business

The marketing highlight is that the Si Rat Expressway is designed to respond to the transportation needs through the expressway network which connects to and covers major areas in Bangkok, whether from the Chalerm Mahanakorn Expressway and the Si Rat Expressway, as well as the Chalong Rat Expressway (Ramindra-At Narong) which cover the areas from the North to the South and from the West to the East of Bangkok. Motorists may use the expressway to connect to the Burapha Withi Expressway (Bang Na-Chonburi), and the Chalerm Mahanakorn Expressway and the Chalong Rat Expressway, thereby rendering the service of the expressway systems to become more complete for users to reach their destinations more conveniently and rapidly than using at-grade roads.

The Si Rat - Outer Ring Road Expressway, a route connecting between the Bangkok-Thonburi sides, has its route crossing the Chao Phraya River at the Rama VII Bridge, continuing along in parallel to the Southern railway via the districts of Bang Phlat, Bang Bamru, Taling Chan, passing Ratchaphruek Road, and ending at the Outer Ring Road (the West), thereby enabling motorists to conveniently and rapidly commute from and to Bangkok-Thonburi sides. On the inbound side, there is a connection point from the Boromarajonani overpass in Taling Chan area to the Si Rat - Outer Ring Road Expressway, at Km.5 + 200, and a connection point with the Si Rat Expressway in Mo Chit area, Chatuchak, turning right southward to Phaya Thai - Silom and turning left to the northern part of the Si Rat Expressway, to ensure the greater convenience in the motorists' travelling to Ratchadaphisek, Prachachuen, Chaeng Watthana, and Bang Pa-in, by using the Udon Rattaya Expressway.

The marketing disadvantage is the physical limitation which prevents the release of traffic around the expressway exits during the peak hours, which depends on the traffic on at-grade roads, representing an uncertain factor beyond the Company's control. However, the Company continuously coordinates with traffic police in police stations of such areas, including linking video signal from CCTVs on the expressways to police stations of such areas, to provide assistance in releasing and facilitating traffic flow in the expressway systems by improving various on- and off-ramps for motorists to save time and facilitate motorists with more convenience and better quality of living in their commute in the downtown. Motorists should then appreciate these benefits over the price factor.

In view of various marketing strategies, the Company has proceeded as follows:

o Service and Product Strategies of Expressway Business

- The prime location and connections to major roads in the city allow the expressway network to respond to the transportation needs of motorists to reach their desired destinations. In this regard, the Company has improved the quality of the routes and its services and given priority to the customers' needs, which will be integrated as key strategies to efficiently accommodate the traffic volume flowing in the system.
- The feasibility study on improvement of the on- and off-ramps of the expressways serves as another measure to facilitate the travelling and to continually maintain the quality of the expressways in terms of engineering safety to meet international standards.
- The traffic volume statistics have been continuously monitored to enhance the efficiency of its Easy Pass service as appropriate in order to improve the service provision and accommodate the increased volume of expressway users. The Company has added Easy Pass lanes at various Toll Plazas on the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway to accommodate the increased volume of Easy Pass users. In addition, the Company has moved the Easy Pass lanes for more convenience and safety of the Easy Pass service users and to minimize the cross traffic between the cash lanes and the Easy Pass lanes, which will mitigate the traffic congestion at the front of the toll plazas.
- The study on new routes in response to the urbanization in the future, particularly in Bangkok, as well as the study on travelling behavior of motorists, are conducted to prepare for the expansion of the scope of the expressway services, and serve well as additional channels of services in response to needs of the motorists in the future.
- The communication channels on traffic information via Smart Traffic and Variable Message Signs (VMS) are added to keep motorists informed of the traffic conditions on expressways, as well as suggesting routes on expressways for more convenience and rapidity.
- The expressway guide signs on at-grade main roads and alleys in Bangkok and its vicinity have been continuously improved so as to facilitate motorists' travelling to destinations and boost their confidence to access and use the expressways. To this effect, the emphasis is given to provision of information relating to landmarks adjacent to the on- and off-ramps of the expressways via the websites, various public relations media, including social media to ensure greater convenience and rapidity in travelling of customers, as the expressway users.
- The public relations activities about the Si Rat - Outer Ring Road Expressway are undertaken at the places located along the Si Rat - Outer Ring Road Expressways and Chaeng Watthana in order to guide the expressway users on how to use the routes, and to accept needs and suggestions directly from the expressway users. Moreover, the Company has given directions to restaurants and tourist attractions via the Facebook fanpage: Club Chim Tiew, with a great number of followers.
- Satisfaction surveys on toll collection services of the Si Rat-Outer Ring Road Expressway are conducted, with the result staying at the "Very Good" level.

- More Easy Pass lanes were added in response to the increased traffic volume in the Easy Pass lanes and after EXAT's policy on cancellation of the Easy Pass card deposit, the use of Easy Pass service then increased, thereby necessitating more Easy Pass lanes to accommodate the increased traffic volume, and as a result, motorists can save their commute time and fuels.
- Easy Pass lanes at Asoke 4 Toll Plaza, Prachachuen Toll Plazas (inbound) and (outbound), were relocated to the farthest right lane for motorists to have more efficient and rapid access to the Easy Pass lanes.
- Easy Pass guide signs were improved for expressway motorists' convenient and rapid passage through the Easy Pass lanes.
- All Easy Pass lanes on the Si Rat Expressway were improved as fast lanes to accommodate more rapid passage and minimize slow traffic in front of the Easy Pass lanes.
- The project to optimize efficiency of Easy Pass lanes was set up through the Company's installation of the second antennas at Easy Pass lanes to suit the convenience of the Easy Pass users in case the barrier at the toll gate is not opened despite the fact that the reserved money in the account is adequate for passing through, in which case, the system will then have the barrier gate opened without waiting staff to open it, making it possible to facilitate motorists' faster passage, save time waiting in a queue and mitigate traffic congestion in front of the toll plazas while minimizing air pollution.
- The project to top up reserve via Easy Pass account with credit card, debit card and Thai QR Payment was set up by the Company in collaboration with EXAT, and Krung Thai Bank to develop the top-up service, at the customer service center, the Si Rat Expressway Control Center Building, to accommodate top ups via credit, debit cards or Thailand QR Payment.
- The project to reduce the minimum top-up of Easy Pass account from Baht 500 to Baht 300 to promote the use of the Easy Pass was carried out by the Company in association with EXAT from June 16, 2020.
- The project for toll payment via EMV (Europay Master Visa) card at the toll lanes was set up by the Company in association with EXAT, and Krung Thai Bank, to develop the toll payment system with contactless-enabled credit or debit cards under the EMV standard for the motorists' convenience, with its trial service starting on the Si Rat - Outer Ring Road Expressway from June 2020 and its official service opening in the Si Rat - Outer Ring Road Expressway and the Udon Ratthaya Expressway on January 26, 2021; and it was expected to open for service for the Si Rat Expressway by April 2021.

o Price Strategies of Expressway Business

- Toll rates, including the calculation for revisions of the toll rates, are agreed upon and specified in the Agreements ahead of time. It is mutually agreed that the rates are considered reasonable and based on the feasibility study for the investment of each project. Under the Second Stage Expressway Agreement (Amendment), and the Bang Pa-in - Pak Kret Agreement (Amendment), toll rates shall be revised every 10 years at the rates as specified in the respective Agreements. Furthermore, the revision of the toll rates of the Si Rat - Outer Ring Road Expressway is in accordance with the Concession Agreement, which shall be made every five years from the date of service operation of the project at the rates specified therein.
- The Company continues to provide a discount on tolls on certain routes for a limited period of time to attract motorists to increasingly use the expressway services, especially such routes with connections between the expressway systems, e.g., At Narong 1 Toll Plaza (from the Chalongsatong Expressway to enter the Chalerm Mahanakhon Expressway around Bang Na), and Muang Thong Thani Toll Plaza of the Udon Ratthaya Expressway, which the Company, together with EXAT, continued to provide the discount.

o Distribution and Distribution Channel Strategies of Expressway Business

• Payment of Tolls

The service users can pay tolls in three ways: by cash, pay through the Automatic Toll Collection System (Easy Pass) or pay by EMV card (starting by 2021).

- Users of the Chalerm Mahanakorn Expressway and the Si Rat Expressway may choose to use the expressway services from various on- and off-ramps covering major areas in Bangkok throughout the total distance of 65.6 kilometers. Expressway users shall pay tolls at the on-ramps of toll plazas, totaling 52 locations, 20 toll plazas of the Chalerm Mahanakorn Expressway (e.g., Din Daeng, Bang Na, Dao Khanong, Sukhumvit, Rama 4 Toll Plazas, etc.) and 32 toll plazas of the Si Rat Expressway (e.g., Asoke, Rama 9, Srinagarindra, Yommaraj, Surawong, Hua Lamphong, Khlong Prapa, Yan Phahon Yothin, Prachachuen, Rama 3, etc.)
- Users of the Udon Ratthaya Expressway which connects to the expressway system towards the North of Bangkok has a total distance of 32 kilometers, with 10 toll plazas, shall pay tolls at the on-ramps for the inbound direction and at the off-ramps for the outbound direction. There are five on-ramps and five off-ramps.
- Users of the Si Rat - Outer Ring Road Expressway which connects to the Si Rat Expressway System towards the West of Bangkok has a total distance of 16.7 kilometers, with 9 toll plazas, shall pay tolls at the on-ramps.

• Electronic Toll Collection System

The Company, in association with EXAT, introduces the Electronic Toll Collection system in the toll collection, in order to serve as an alternative channel for motorists and facilitate and speed up the toll payment at the front of the Toll Plazas during the peak hours, as well as accommodating the increasing traffic volume in the future. Currently, there are Easy Pass users representing approximately 46.10 percent.

In the interest of convenience to the Easy Pass users, the Company has arranged for the Easy Pass Fast Service, including film cutting service for Easy Pass installation and testing, whereby the expressway users are able to bring their cars to use the services at the Easy Pass Fast Service, free of charge, at the Si Rat Expressway Control Center, Asoke - Dindaeng Road, every day during the office hours from 09.00 - 17.00 hrs., and at Prachachuen Toll Plaza (outbound) on business days from 07.30 - 22.00 hrs., on holidays from 09.00-22.00 hrs. Moreover, the Company, in collaboration with EXAT and the Department of Highways, carried out integration between the Easy Pass system and the M-Pass system to enable the service users to pay tolls with only one pass for seven expressway routes and two of the Intercity Motorways (Motorways) of the Department of Highways.

o Marketing Promotion and Communication Strategies of Expressway Business

The Company has provided a discount on tolls on certain routes within a limited period of time, aimed at attracting target customers to continue to use the expressway services and eventually become regular customers. In 2020, the Company continued to provide a discount on tolls for the service users of the Udon Ratthaya Expressway, operated by the Company's subsidiary (NECL), at Muang Thong Thani Toll Plaza.

Furthermore, during the remarkable festivals, such as, New Year's days, the Company, in cooperation with EXAT, undertook activities to promote the use of the expressways for the motorists by distributing souvenirs as giveaways to motorists, as well as providing the service points for motorists in order to create a feeling of close bond with customers to ensure good relationship under the theme that we provide the best services to customers throughout the routes, on the occasion of the previous New Year's Eve celebrations.

The Company canceled the Easy Pass top-up service at the respective toll booths of the Chalerm Mahanakorn Expressway, the Si Rat Expressway, and the Chalong Rat Expressway, in a total of 149 Easy Pass lanes, from Tuesday, June 16, 2020 onwards, with EXAT reducing the Easy Pass application fee and minimum top up from Baht 500 to a minimum of Baht 300, in order to resolve traffic congestion in front of the expressway toll plazas. In this regard, Easy Pass card users still can fill in the reserved money at the toll plaza building (One Stop Service) and the Easy Pass Fast Service Center, as normal, and also can top up the reserved money for tolls through various channels, whether by online means, through a bank or at the counter service.

The Company, as a private company that provides the expressway services, implemented in response to the government policy by participating in the drive safety campaign known as "Driving Slowly, Daytime Headlight Switching on, Seat Belt Fastening", for the motorists' facility and safety during the New Year Festival, by setting up the expressway user screening points before accessing the service, with the Company's aim of being a part in preventing the spread of Coronavirus Disease 2019 ("COVID-19"). The Company also promoted the drive safety campaign via social media on the expressways and traffic radio station to the target customers to raise their awareness of safe journey, and to assure them of the quality service on the expressways and various service promotion activities of the Company.

Other than that, the Company also offered toll discounts; disseminated the expressway network maps, including connections of the expressways with various routes in order to facilitate the expressway users' travelling.

The channels of public relations used by the Company to disseminate information comprise documentary programs on radio and television, radio spot, leaflets, Variable Message Signs (VMS), and the Company's website: www.bemplc.co.th, as well as social media: the Company's Facebook (www.facebook.com/bangkokexpresswayandmetro) and the Facebook fanpage: Club Chim Tiew (www.facebook.com/clubchimtiew); public relations for the use of the Si Rat - Outer Ring Road Expressway, including the connection of the Si Rat Expressway heading to Chaeng Watthana, serving as a channel for publicizing information such as giving directions to restaurants and tourist attractions via the special routes; recommendations on how to use cars safely, how to maintain cars; direct acknowledgment of needs and suggestions from the expressway users, as well as undertaking activities to strengthen relationships with followers of the Company's fanpage: Club Chim Tiew, including publication of the bimonthly BEM Magazine as a medium for sharing information and news between the Company and motorists, together with enhancement of knowledge, satisfaction and attraction of new customers to use the services more, as well as continuing the social contribution activities throughout the year to ensure the positive attitude of our services towards customers and society.

7) Industrial Outlook and Competition of Expressway Business

The country's economy in 2020 was another year of its low growth, mainly due to the COVID-19 epidemic, droughts, the US-China trade war, including the delayed budget act and exports which failed to achieve the set targets, let alone the growing household debt problem, in which the government implemented various assistance measures to stimulate the economy but in a short-term. Upon the expiration of the measures, expenditures fell into a state of slowdown; people put off their spending and chose to spend money on necessary items and save money. All of these factors had an impact on the manufacturing, distribution, export, tourism and automobile industries. (Sources: BOT MACAZINE January 2021, GSB Research Center February 2021)

The automotive industry in 2020 faced challenges from the COVID-19 epidemic when volume of vehicles produced in April seemed to be at the lowest level over the past 30 years, due to 1) production shutdowns, 2) economic contraction, and 3) lockdown, a measure to contain the spread of such virus. These factors resulted in a decrease in automobile production by 86.4 percent year-on-year, coupled with a contraction in demand for new cars both at home and abroad since the beginning of 2020, reflecting the slowdown in unnecessary spending, along with the announcement of postponement of the Motor Show from the original schedule in April, thereby fading the demand for cars in the first four months of the year out (source: GSB Research Center February 2021). Moreover, the purchasing power was weakened by the business closure, droughts which affected consumers, and besides, various financial institutions intensified their credit facilities extension, not to mention car manufacturers' postponement of their new car launches, as such, marketing opportunities to stimulate consumers were then lost. (Sources: Business/Industry Outlook 2020 - 2022: Automobile Industry, Bank of Ayudhya Public Company Limited, January 2021)

However, in the third and fourth quarters of 2020, the COVID-19 outbreak had eased and the government sector unlocked various measures while issuing various measures to help stimulate the economy, particularly in the tourism sector, which was considerably shrunk, resulting from the absence of foreign tourists, therefore, measures to promote tourism in the country were formulated. Such measures were given the positive feedbacks in the third quarter of the year onwards, resulting in a rising travel which caused an increase in vehicle use, as such, traffic congestion started returning to normal. According to the report of the Bureau of Transport and Traffic Policy and Planning (OTP), the survey results of the average speed of personal cars on various main roads in Bangkok, exclusive of the Inner Ring Road (Ratchadaphisek), in 2020, were found that the average speed during the morning peak hours was at 17.6 km./hr., while the average speed during the evening peak hours was at 21.8 km./hr., compared with the same period in 2019, it was found that the average speed during the morning peak hours increased by 1.9 km./hr. or representing a percentage of 11.8 km./hr., while the average speed during the evening peak hours increased by 0.2 km./hr. or representing 0.8 percent. (Source: Daily News, February 2, 2021) Despite the fact that the auto sales had been improving due to the postponement of the Motor Show to July 2020 and the organization of the 2020 Auto Expo from late November to early December 2020, together with the launch of new car models at such event, the auto sales could not return to normal, in line with the report on red-label new car registration statistics nationwide in 2020 from the Department of Land Transport that it declined by 14 percent (totaling 2.64 million vehicles). (Source: Department of Land Transport, January 2021)

With the automobile industry in a shrinking phase as well as the problem of traffic congestion from the construction of various utilities, working from home, the number of foreign tourists who were unable to travel to visit Thailand, the overall growth of traffic volume on the expressways was affected. Nonetheless, if the spread of COVID-19 situation had been defused, the traffic volume and economic conditions would improve and return to normal.

8) Procurement of Products and Services of Expressway Business

• Nature of Procurement of Products of Expressway Business

EXAT is an authority responsible for the construction of expressways to provide service for convenient, rapid and safe traffic, as well as to mitigate traffic problems. EXAT invited interested parties to submit investment proposals; the Company then conducted a feasibility study and submitted its proposals for investment in projects with appropriate returns and conditions.

The expressway projects under the Second Stage Expressway Agreement, the Bang Pa-in - Pak Kret Expressway Agreement, and the Concession Agreement for the Si Rat - Outer Ring Road Expressway Project are implemented on a BTO basis. According to the essence of the Agreements, EXAT shall have the duty to determine the characteristics of the expressways, expressway routes and areas to be used for construction and arrange for land expropriation for delivery to the Company for construction within the time specified in the Agreements. Thereafter, the Company would carry out construction in accordance with the designs approved by EXAT, subject to the supervision of the quality of construction work by EXAT's Consulting Engineer, Independent Certification Engineer, and Independent Design Checker. Upon completion of the construction, the Independent Certification Engineer shall inspect the work and issue Certificate of Completion to evidence that the construction work is completed in accordance with the specified standards and is ready for service, at which time, the Company shall be entitled to obtain toll revenue under the conditions of the Agreements. In the previous constructions, the Company engaged project managers to carry out construction and operate the Expressway Projects on a lump sum turnkey basis. This was due to the fact that the expressway projects are large-scale projects, which may sustain cost overrun issues and delayed completion of the construction. The lump sum turnkey engagement is intended to prevent such risk. In the engagement of project managers, the Company will select specialists with experience to act as project managers and construction contractor to ensure the accomplishment of quality work on time.

9) Environmental Impact (Expressway Business)

The Company and NECL have always operated the construction and expressway business with environmental responsibility, by adhering to the business guidelines which can be summarized as follows:

In the construction phase of the expressways, the Company and NECL complied with the measures to prevent pollution in accordance with the regulations of the National Environment Committee and other relevant laws, which form an integral part of the Agreements. The Company and NECL implemented the measures and procedures as appropriate for the construction carried out in the urban areas with high populations. In so doing, the Company employed the Segmental Box Girder construction technique, which allowed it to complete the construction faster than other techniques in those days, so as to prevent any impact to nearby communities and affect the at-grade traffic at the least possible extent during the construction. Furthermore, the Company had no records of committing any environment-related offenses.

Even during the course of the operation of the expressway systems, the Company remained concerned about the eco-friendly business operations affecting the quality of life of staff, motorists and communities surrounding the expressways, including all groups of stakeholders. The Company improved and reviewed its internal procedures to conform to the environmental requirements for applying for the Certificate of ISO 14001 Environmental Management System. The Company has its commitment to ensuring environmental management in line with the following guidelines:

- To give priority to pollution prevention and control by managing and maintaining the expressways to meet international standards and keeping in mind the environmental impact on motorists, staff, and communities;
- To instill and encourage our staff with an awareness of efficient use of energy and natural resources;
- To comply with the environment-related laws and regulations;
- To review the purposes and goals for continued improvement of the environmental management system;
- To communicate our environmental policy to the public and all parties concerned.

Besides, the Company obtained certification from SGS (Thailand) Limited as follows:

- ISO 9001: 2015 Quality Management System; and
- ISO 14001: 2015 Environmental Management System.

In 2020, the Company continued to maintain the ISO 14001 Environmental Management System, by monitoring important environmental concerns, as well as optimizing the use of natural resources through its continued energy management measures, for example, change of the air conditioning systems of the Si Rat Expressway Control Center Building, on the 1st and 2nd Floors, from AHU (Air Handling Unit) and Split Type air conditioning systems to VRV (Variable Refrigerant Volume) type air conditioning system, thereby reducing the consumption of electricity from the Metropolitan Electricity Authority by approximately 15 percent from the existing air conditioning systems.

With respect to safety management, the Company had an engineering analysis agency comprising knowledgeable and skilled personnel in traffic engineering and safety on the expressways to conduct studies on impacts from various factors. A traffic simulation was made for study of the suitability in the improvement of physical characteristics at the front areas of toll plazas, as well as inspection of road safety; analysis of risk areas on expressways; study of features and patterns in the installation of safety equipment, in order to improve the expressways to ensure the maximum safety for motorists, as well as to minimize environmental impact. The Company then put such study results into practices, by means of improving the safety on expressways, inspecting and assessing the safety of the gore areas and installing safety equipment, e.g., crash cushions, cushion tanks, flexible guide posts, red-colored cold plastic road paint to alert for high accident risk areas.

The Company continued to provide training for staff and executives on know-how and techniques for environmental management in accordance with the ISO 14001 Environmental Management System, as well as undertaking various activities to raise an enterprise-wide awareness, and environmental conservation activities in association with the communities nearby.

2.1.2 Rail Business

1) Nature of Services

The Company has been granted concessions for two mass rapid transit rail system projects by the Mass Rapid Transit Authority of Thailand ("MRTA"), as per the following details:

(1) The M.R.T. Chaloe M Ratchamongkhon Line Project ("MRT Blue Line Project"): the Company executed the Concession Agreement with MRTA on March 31, 2017, for a concession period of 33 years from MRTA's Notice to Proceed (NTP), under which the Company shall be responsible for supply, installation, testing and commissioning of M&E Equipment, provision of services to ensure a continuous operation as a single network (Through Operation), and the Company is entitled to farebox revenue as well as undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and trains throughout the concession period of 30 years from the date of the service opening of the entire route. In this regard, the M.R.T. Chaloe M Ratchamongkhon Line Project is consisted of Hua Lamphong-Bang Sue Section (the existing MRT Blue Line), and Hua Lamphong-Bang Khae Section, Bang Sue-Tha Phra Section (the MRT Blue Line Extension), per the details below:

- o Hua Lamphong - Bang Sue Section (the existing MRT Blue Line), the first underground metro system of Thailand, covering the distance of 20 kilometers, with 18 stations, which was opened for service on July 3, 2004. The Company is entitled to farebox revenue as well as undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and trains.
- o Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section (the MRT Blue Line Extension), the underground and elevated route, with a total of 20 stations, divided into 4 underground stations and 16 elevated stations, having a connection with the M.R.T. Chaloe M Ratchamongkhon Line Project (the existing MRT Blue Line) at Hua Lamphong Station and Bang Sue Station, as well as connecting with the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) at Tao Poon Station. The Company is responsible for investment, supply, installation, testing and commissioning of the M&E Equipment, and trial running, including the O&M Services by ensuring the continuous train operation (Through Operation). The supply and installation of the M&E Equipment for opening for service are divided into three sections, namely:
 - Section 1: Bang Sue Station - Tao Poon Station, opened for service on August 11, 2017;
 - Section 2: Hua Lamphong Station - Lak Song Station, opened for service on September 29, 2019;
 - Section 3: Tao Poon Station - Tha Phra Station, opened for service on March 30, 2020 thereby ensuring the train operation in the MRT Blue Line Project as a single network (Through Operation), by having Tha Phra Station as the main common and interchange station, which would enable the passengers to change their destinations from Tha Phra Station to travel to the suburban area westward via Bang Phai Station to Lak Song Station or travel to the urban area via Itsaraphap Station to Hua Lamphong Station, as well as travelling to Tao Poon Station connecting with the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line).

In this regard, the M.R.T. Chaloe M Ratchamongkhon Line Project (MRT Blue Line) was opened for full service, covering the total distance of 48 kilometers, with 38 stations and a total of 54 trains available for service every day from 06.00 - 24.00 hours.

(2) The M.R.T. Chalong Ratchadham Line Project ("MRT Purple Line Project"), Bang Yai - Bang Sue Section (Klong Bang Phai Station - Tao Poon Station), covering a distance of 23 kilometers, with a total of 16 elevated stations, where Tao Poon Station is located as an interchange station with Bang Sue Station of the M.R.T. Chaloe M Ratchamongkhon Line (MRT Blue Line), which would make it possible for passengers' interchange from the MRT Purple Line to the MRT Blue Line at Tao Poon Station, which in the future, would be connected with the MRT Purple Line (Tao Poon - Rat Burana Section).

The Company has been granted the concession for investment, the supply of M&E Systems and O&M Services, on a PPP Gross Cost basis. That is, MRTA invests in all civil works and the Company invests in the M&E Systems and the rolling stocks, including provision of the O&M Services in accordance with the service standards defined in the conditions of the Agreement. MRTA is entitled to all farebox revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and MRTA shall make gradual repayment for the M&E Systems to the Company on a monthly basis for a period of 10 years, and engage the Company to conduct the operation and maintenance throughout the concession period of 30 years from September 4, 2013.

There is a total of 21 trains available every day without holiday, from 5.30 - 24.00 hours on Mondays - Fridays, and from 6.00 - 24.00 hours on Saturdays - Sundays and public holidays.

Projects	Chaloem Ratchamongkhon Line (MRT Blue Line)		Chalong Ratchadham Line (MRT Purple Line)
	(Hua Lamphong Station - Bang Sue Station)	(Hua Lamphong Station - Lak Song Station and Bang Sue Station - Tha Phra Station)	(Khlom Bang Phai Station - Tao Poon Station)
Concession Type	PPP Net Cost	PPP Net Cost	PPP Gross Cost
Concession Period	33 years (2017-2050)		30 years (2013-2043)
Number of Stations	18 stations	20 stations	16 stations
Distance	20 kilometers	28 kilometers	23 kilometers

2) Revenue

The Company's revenues from the rail business can be divided into two categories, comprising farebox revenue and revenue from O&M services.

- Farebox revenue**

Pursuant to the Concession Agreement for the MRT Blue Line Project between the Company and MRTA, the Company has the right to operate the train and collect farebox revenue and undertake commercial development throughout the concession period. The Company is obliged to make payment of remuneration from fares and commercial development to MRTA at the rates as mentioned in the Concession Agreement.

The fare rates of the metro as of the commencement date would be in accordance with the basic reference fare rates in force at the time of the revenue service commencement date. Under the Concession Agreement, the reference fare rates would be adjusted every 24 months based on the actual changes of the Bangkok Non-Food Consumer Price Index compared to the basic reference fare rates.

- Revenue from O&M Services**

The Company receives service fees for train operation and maintenance from the MRT Purple Line Project Concession Agreement, Contract 4, Concession for Supply of M&E Systems and O&M Services (Khlom Bang Yai Station-Tao Poon Station), Phase 2 (for a period of approximately 27 years). The service opening commenced on August 6, 2016.

3) Marketing and Competition of Rail Business

- **Customer Characteristics and Target Customers**

The Company's target customers can be divided into two groups, namely, residents nearby the metro routes and those who need to pass or head for other destinations along the metro routes, and categorized by purposes of journeys as follows:

1. Commute for work;
2. Commute to schools/educational institutes;
3. Commute for tourism/ leisure;
4. Commute for special activities, e.g., seminars or conferences; and
5. Commute for other purposes, e.g., business dealings.

4) Marketing Policy and Strategies of Rail Business

- **Service and Product Strategies of Rail Business**

- o Creativity and Development of Convenient Services for MRT Passengers

The M.R.T. Chaloen Ratchamongkhon Line (MRT Blue Line) has the service route passing through central business districts (CBD), residential areas, and connecting with other significant mass rapid transit systems which would result in an increase in the number of passengers, for example:

- A connecting point for the M.R.T. Chalong Ratchadham Line (MRT Purple Line) at Tao Poon Station;
- A connecting point for the BTS Skytrain (Green Line) at Chatuchak Park Station, Phahon Yothin Station, Sukhumvit Station, Silom Station, and Bang Wa Station;
- A connecting point for ARL (Airport Rail Link) (Red Line) at Phetchaburi Station, as a connection with Suvarnabhumi Airport;
- A connecting point with Thai Railway Station at Hua Lamphong Station, Phetchaburi Station, Bang Sue Station, and Bang Khun Non Station;
- A connecting point with the Port at Bang Pho Station, Phetchaburi Station, Bang Wa Station, and Sanam Chai Station.

As for transit connections between the metro stations and buildings, there are currently seven points, namely:

- Sam Yan Station connected to Chamchuri Square and Samyan Mitrtown (residential buildings, office buildings, and entertainment and education centers);
- Phahon Yothin Station connected to Union Mall Shopping Center;
- Sukhumvit Station connected to Terminal 21 Tower (shopping center, hotel, office building, and residential building) and Interchange 21 Tower (office building);
- Phra Rama 9 Station connected to Central Plaza Grand Rama 9 and G Tower (office building);
- Phasi Charoen Station connected to Seacon Bangkhae Department Store;
- Lak Song Station connected to The Mall Bangkhae Shopping Center;
- Phetchaburi Station connected to Singha Complex.

Most of the travel behaviors of the service users were for work purpose, followed by for education purpose, while in respect of travel for tourism purpose, the rising number of service users could still be accommodated. The Company thus strategically established a travel promotion strategy for tourism, by signing a cooperation agreement with the Tourism Authority of Thailand (TAT) together with the Mass Rapid Transit Authority of Thailand (MRTA) in the project "Happy Journey with MRT" to promote and support extensive travel by the MRT.

And due to the ongoing COVID-19 situation, the Company added a strategy to build confidence among passengers in the use of the MRT services under the “Healthy Journey with BEM” project, such as, tightening up measures for cleanliness, spraying disinfectants, campaign for wearing cloth face masks, ensuring social distancing, providing disaster relief assistance to those who were affected by such situation, both the entrepreneur sector and the people sector, by providing for cloth mask sale areas without charges, together with hiring of part-time staff and giving away one million cloth face masks to passengers.

In addition, the Company strategically increased the number of the service users travelling with metro cards to ensure the convenience of their travelling, save time the service users take within the stations, and to increase revenues for the Company, by way of provision of additional privileges in the metro cards, making cooperation with business alliances to give a discount on fees for a metro card issuance or top up, or provision of special benefits for the metro cardholders.

o Quality Services

The Company focuses on quality services on the motto “Service above all else” so that the MRT service becomes “lifestyle of Bangkok residents” under the Company’s professional operations. Various activities have been undertaken to promote the image of the current MRT services and create value added to Bangkok residents’ lifestyle. Based on this policy, the Company sets out the following signs for quality services:

- Safety: The MRT passengers’ life and property safety is the Company’s top priority. All staff must be well aware of and expected to strictly follow the Company’s safety requirements. In the past, the Company conducted regular training on safety and supervised to ensure that the Company’s services meet Thailand’s safety standard requirements and comparable to those of the world’s leading mass rapid transit operators.
- Convenience: The Company takes care of all equipment and facilities in the MRT system to function properly, and proactively facilitates the passengers’ convenient commute during high seasons, such as festival events and activities or exhibitions along the routes, by arranging for more ticketing points to best serve the passengers.
- Fast: The Company keeps the average train speed aligned with the timetable in response to passengers’ needs during different periods.
- Reliability: The Company maintains the trains and signaling systems in good conditions without any impact on its services.
- Punctuality: The Company keeps the timetable and stops time at every station punctual with the least possible deviations.

o Metro Cards for Everyone

The Company analyzes the customer characteristics and target customers, both regular and non-regular passengers, and then plans for and produces various styles of metro cards to suit every group of customers and to attract non-regular passengers to increasingly use the MRT cards in travelling. These arrangements comprise keeping styles of metro cards modern to ensure conformity with technology and increase in efficiency of metro cards to ensure that metro cards can be commonly used with the MRT Blue Line and the MRT Purple Line; cooperation with financial institutions in issuing co-branded cards for financial transactions and travelling on the MRT system, namely, in alliance with KASIKORNBANK Public Company Limited to make cards for Chulalongkorn University and Chulalongkorn Hospital; to make co-branded cards with other institutions or agencies. Moreover, there was the launch of a product in a form of top up voucher for interested organizations, for instance, Ananda Development Public Company Limited to distribute as welfare for its staff to top up their metro cards.

- **Price Strategy of Rail Business**

The Company collects distance-related fares in fairness to passengers according to different distance of their journeys and provides discounts to school/college students, and children/elderly, by taking into account the fare rate collection of other mass rapid transit systems. The fare rates are adjusted in accordance with the relevant Concession Agreements.

- **Marketing Promotion Strategies of Rail Business**

The Company's classification of target customers is intended to draw up a strategy on sales promotion to effectively cover all target customer groups. As such, the Company's sales promotion and marketing plans based on target customers' lifestyle and settings are described as follows:

- o To promote the park and ride facilities to encourage more passengers to park their personal cars at the service locations and use the MRT service to commute to such business districts as Sukhumvit Road, Silom Road, Ratchadaphisek Road, in order to help alleviate traffic congestion and minimize global warming.
- o To organize sales promotion programs in association with leading companies and banks to create value added to the MRT services and offer privileges to metro card holders, with the underlying aim of encouraging passengers to change their behavior from using tokens to using more metro cards, by which customers would receive more convenient and rapid services with various privileges as follows:
 - Offering top-up discounts on the metro cards in association with Advanced Wireless Network Public Company Limited, Muang Thai Life Assurance Public Company Limited, FWD Life Insurance Public Company Limited, Ocean Life Insurance Public Company Limited, and Boon Rawd Trading Co., Ltd.;
 - Offering cash back, including redemption of credit card points in association with Krungthai Card Public Company Limited, Citibank, UOB Bank Public Company Limited, and Krungsriyudhya Card Company Limited;
 - Offering privileges in the form of offering discounts at shops, restaurants, theaters or events around the MRT routes.
- o To increase the number of passengers or trips in the system through information services on highlighted events along the MRT routes, and offer various types of customized metro cards bearing specific logos or signs of agencies, organizations, office buildings or hotels both along and beyond the routes, for public relations and sales promotion, in order to distribute the metro cards to both current and new target customers.
- o To create and manage customer relationships (Customer Relation Management), as a building of good relationships and constant interactions with customers, to customers' satisfaction and to ensure brand loyalty, as well as to maintain the existing customer base, such as, managing the passenger information system in the form of the MRT Club membership system, creating a good network and relationship with general service users through social medial channels and public relations within the stations, including booth activities, both inside and outside the MRT routes.
- o To develop the electronic payment system for online top-up via mobile phones with TrueMoney Wallet Application and Krungthai Bank Application, with a plan to develop the electronic payment system for retail shops within Metro Mall to make it more convenient and rapid for the MRT passengers.
- o To encourage people to use government welfare smart cards in travelling with the MRT system, by improving the automatic fare collection systems (AFC) of the M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) to accommodate usage of their government welfare smart cards.

- **Marketing Communication Strategies of Rail Business**

- o To select effective channels of communication and public relations which are accessible to target groups of different marketing events through management of space and flows in the MRT system, e.g., standees within the stations, visual display on the token machines, visual display within the stations and trains, online social network media, including external public relations media from business alliances to provide the MRT service users with journey information. The Company also has emphasized development of the Mobile Application system titled Bangkok MRT Application to accommodate travelling plans of the passengers.
- o To focus on publicizing news and information to current service users, including new customers, via booths presenting the use of the service, both inside and outside the routes, with provision of useful advice and information, such as, information on privileges of the metro cards, application for the MRT club system membership, follow-up channels via social media and Bangkok MRT Application, with the aim of stimulating provision of information on services and privileges to the service users, by emphasizing the punctuality, convenience, rapidity in journeys with the MRT system, making it possible to spend more time with families from using the services and to set a definite travelling timetable.
- o To create destinations via regular communication, public relations and journey information along the MRT routes via preparation of event calendar, route maps with attractive destinations, e.g., office buildings, schools, hotels, shopping centers, tourist attractions and other landmarks, information relating to convenient and rapid links to other mass rapid transit systems, which can be searched via the website, Bangkok MRT Application and BEM Magazine.
- o To assure the passengers and people of the safety in travelling and service provision through public relations via television, radio and other media, and organize activities for public relations of service provision and safety-related activities at various venues, e.g., educational institutions, office buildings, to present the safety of the MRT system to the passengers and people for their understanding and confidence in the services.

- **Development Strategy of Rail Business**

The Company adopts a strategy for regular development of quality and its services to ensure service users' utmost satisfaction with convenience, rapidity, and safety, which would attract more service users of the MRT system. At present, the Company collaborates with financial institutions to make it possible to hold a single co-branded card for entering into multi-transactions.

- **Distribution Strategies and Channels of Rail Business**

The Company provides more sales outlets in addition to the ticket vending machines and ticket offices in the stations, for example, by presenting to various agencies such as organizations, banks, educational institutions, hotels, private companies, special metro card pages so that they would be used by such organizations on various occasions, for instance, as gifts for staff to build their morale, for customers to express the Company's appreciation of their support, or even for brand promotion, and as public relations materials, thereby making the MRT cards more precious than being used as a travelling ticket.

5) Industrial Outlook and Competition of Rail Business

Mass Rapid Transit Systems in Bangkok and its Vicinity

Bangkok is a large capital city with a dense population, and is the economic center, giving rise to a rate of rapid growth and expansion. As a result, Bangkok today has been extremely facing traffic problems, which have accumulated over many years, along with an ongoing increase in population, number of cars, motorcycles and other vehicles in Bangkok every year, without any declining tendency, not to mention the demand for travel of the people which was rising, while the traffic areas and public transport systems could not adequately accommodate such rising demand, which was considered the main problem occurring in other densely populated capital cities worldwide. From such problems, the government has therefore implemented a policy to emphasize the development of various public transport networks to resolve the traffic problems in order to accommodate an increase in the population, including the economic growth of the country.

In this regard, travelling by residents in Bangkok can be divided into two modes of transport systems, namely, personal transport system and public transport system.

- **Personal Transport System**

As a result of the people's residences in Bangkok and its vicinity which are spread all over, travelling, including the growing number of highly-paid population, coupled with the inadequacy of the existing mass transit systems, travelling by personal cars then remains popular, if comparing the expenses spent on travelling with personal cars, together with service quality and safety, as a result, the use of a personal car is still necessary and comfortable to travel. On the contrary, the expansion of traffic areas in Bangkok still remains limited and inadequate to accommodate the increasing number of vehicles.

- **Public Transport System**

As a result of the traffic congestion problem, particularly during peak hours, and the growth of the real estate projects, particularly the real estate surrounding the electric train routes, consumers' demand for the public transportation system of certain types was considerably high, especially for the electric train system which was significantly expanding by reason of change in the urban people's behaviors of selection of residences and travelling by significantly focusing attention to convenience, rapidity, punctuality and shortened time in travelling.

- o **Public Bus Service**

At present, there are various types of public buses for service at different service rates, but the number of public buses in service in Bangkok and its vicinity remained inadequate, owing to the fact that a certain number of buses were undergoing improvement and rearrangement of bus routes was made, even if there was currently a total of 18,914 buses in service, let alone more than 2,836 passenger vans which became enormously popular among the people because of provision of its convenient and rapid service in travelling. Furthermore, the Bangkok Mass Transit Authority (BMTA) has also applied technologies, i.e., E-Ticket system or payment via QR-Code Mobile Banking, to improve its service quality to ensure conformity to the current situations affected by the outbreak of COVID-19, in which people have to use the bus service in new normal, therefore, adjusted the operating guidelines under the concept of "New BMTA New Normal" which passengers have to always wear medical face masks while on board, clean their hands with gel hand sanitizers, ensure a social distancing, and scan QR Code via Thai Chana Application, for the greater safety in the services. But due to the continuing traffic congestion problems on roads as whole, especially during the morning peak hours from 6.30-8.30 hrs. and the evening peaks hours from 16.30-18.30 hrs. and during the rainy season, travelling is then time-consuming. (Source: Bangkok Mass Transit Authority, information as at November 2020)

- o Trains

Over the past years, the government sector has implemented a policy to provide relief assistance to the low-income earners to enable them to spend through the government welfare smart cards, whereby the cardholders can use the service for both public service buses (bus), passenger vehicles served by The Transport Co., Ltd., trains and electric trains, free of charge in the amount not exceeding Baht 500 per system per month. However, the train system service still lacks the facilities and the safety for the service users, due to the fact that the conditions of the trains in use are currently not comfortable, not to the service users' satisfaction, and it takes quite a long time to travel, let alone the limited routes not covering the entire city. As a result, the State Railway of Thailand (SRT) expedited additional dual track rail system construction projects on many routes, together with the new depot construction project, in order to enhance the capacity and accommodate the maintenance of the rising number of trains and to develop the Thai railway system in accordance with Thailand's transportation infrastructure development strategy. In this regard, the SRT's train service is not considered the Company's direct competitor owing to different service routes, namely, the SRT mainly aims to provide the service to suburban areas.

- o BTS

BTS Skytrain is Thailand's first mass rapid transit rail system on the elevated dual tracks in separate directions, with its first service opening on December 5, 1999 on 2 lines, namely, Sukhumvit Line and Silom Line; and in 2020, the line extension project of Mo Chit - Saphan Mai - Khu Khot Section was gradually opened for the people's trial, covering a total service distance of 68 km., with 59 stations. As such, travelling by BTS Skytrain is another option which facilitates commuters' travelling, and with the BTS Skytrain's route running to the heart of the city, it then becomes massively popular among people, and it also contributes to a factor in continuously increasing the service users.

- o ARL

The Suvarnabhumi Airport Rail Link or Airport Rail Link is a special mass rapid transit rail system project, as part of the projects for construction of suburban rail system, carried out and operated by the State Railway of Thailand (SRT). The Suvarnabhumi Airport Rail Link is the electric train system which has both underground and elevated structures, with the alignment running to accommodate journeys from the eastern and northern outskirts, and passengers from the Suvarnabhumi Airport, to the center of Bangkok at Phaya Thai Station, covering a total of 8 stations, with a distance of 28.6 kilometers. Airport Link was opened for service on August 23, 2010. For the current service provision, a plan was set up to develop, improve the service, and enhance the service capacity of a total of 9 Airport Rail Link trains to ensure the service stability, thereby satisfying the growing needs of the passengers.

As a result of an ongoing increase in a number of the public transport system service users, it reflected the change in travel behavior of residents in Bangkok and its surrounding provinces from using personal car to use the public transport system. This indicated the development in terms of convenience, rapidity, safety and the extended coverage areas of travelling to ensure transit in the through operation system at present. However, owing to the traffic congestion, air and noise pollution, and potential accidents, the transit rail system is then regarded as a significant milestone for change and development of the mass rapid transit systems in Bangkok and its vicinity, which will help alleviate traffic problems, ensure safe, convenient, rapid and shortened journeys of service users, and result in a positive effect on the economy and environment. Therefore, the mass rapid transit system becomes an important variable of a travelling mode which helps improve the quality of travelling life of urban people and minimize the usage of fuels and national resources.

6) Industrial Outlook and Government Policy of Rail Business

Thailand's overall economic outlook in 2020 declined by 6.1 percent as compared to that during the same period in the previous year, mainly due to the situation of the outbreak of the COVID-19 which had occurred since the end of 2019 and in the second quarter of 2020, it was then severely affected by the stringent measures to contain the spread of the COVID-19, both at home and abroad, including an occurrence of a new wave of the spread of COVID-19 in late 2020, which was a factor in putting pressure on and affecting all sectors. But when compared with the third quarter of 2020, Thailand's overall economy had improved, mainly resulting from the relaxation of lockdown measures and various remedial measures of the government sector which helped stimulate the economy from the situation which began to ease and be able to cope with the first wave of the outbreak of the disease, before its new wave has occurred all over the country in late 2020 until present, thereby possibly causing a slowdown in the economy once again. (Source: Office of the National Economic and Social Development Board: The Bank of Thailand)

In terms of transportation system development, the Ministry of Transport has strived to develop the transportation systems of Thailand to serve as a mechanism to drive the country's economy to achieve balanced and stable growth. The infrastructure development for transportation would cover areas across the country, accommodate constant transportation and travelling which are connected together in a variety of modes, whether it be primary, secondary, and sub-tours, within the area, especially the mass transit system by electric train, one of the strategic plans for transportation development and as another important instrumental in driving the economy and reviving the country. In this regard, the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line Extension), Hua Lamphong - Bang Khae Section (Lak Song Station), and Bang Sue - Tha Phra Section, one of the projects to which the government had given priority in the implementation of each project, could be opened for service within the respective specified timeframes, namely, the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line Extension), Hua Lamphong - Bang Khae Section (Lak Song Station), and the M.R.T. Chaloem Ratchamongkhon Line, Bang Sue - Tha Phra Section, were officially opened for service on September 29, 2019 and on March 30, 2020, respectively, as a result, the entire route of the MRT Blue Line Project was opened for full service as a single network (Through Operation), thereby alleviating traffic problems in Bangkok from where is the center of all activities to the center of transport and travelling network. Moreover, the BTS Gold Line Project, Phase 1, was opened for the people's trial on December 16, 2020, as well as the MRT Green Line Extension Project, Mo Chit - Saphan Mai - Khu Khot Section, which was gradually opened for the people's trial in 2020. In addition, the government sector has expedited the construction of a variety of metro projects, including the MRT Orange Line, Thailand Cultural Centre - Min Buri Section (Suwinthawong), which was planned to open for service in 2024; and the Bang Khun Non - Thailand Cultural Centre to open for service in 2026; the MRT Yellow Line, Lat Phrao - Samrong to open for service in 2022; MRT Pink Line, Khae Rai - Min Buri to open for service in 2022. Moreover, many other major metro projects are pushed forward, namely, the MRT Purple Line (South), Tao Poon - Rat Burana (Kanchanaphisek Outer Ring Road); the MRT Yellow Line Extension, Yaek Ratchada - Lat Phrao - Yaek Ratchayothin; the MRT Pink Line Extension, Si Rat - Mueang Thong Thani; and the MRT Brown Line, Khae Rai - Lam Sali (Bueng Kum); the MRT Grey Line, Section 1: Watcharaphon - Thong Lor; the MRT Grey Line, Section 2: Phra Ram 3 - Tha Phra; and the Bangna-Suvarnabhumi Line Project. Currently, they are in the process of proposing a budget for study and review of project details, including investment format, all the projects have been accelerated by the government sector to ensure compliance with the strategic plans for infrastructure development for transportation of the country, in order to build a metro network which covers more areas, and to be another option for travelling which can schedule easily, rapidly and safely, as well as to help diminish environmental problems, improve the quality of life of the people in the pursuit of the country's continual development and sustainability.

Real estate development around the metro routes

The economic recession which had continued from the beginning of 2020 due to the outbreak of the COVID-19 made the real estate market during the first half of the year undesirable to investors, thereby directly affecting Thai people's purchasing power in that their purchasing power was weakened and they chose to spend less, therefore, it might not be the right time to purchase residences. However, in the second half of 2020, the real estate development had continued but at a lower rate than the previous year. After the country began to loosen the lockdown measures from the situation of the first wave of the COVID-19 epidemic which had been defused, entrepreneurs adjusted themselves by implementing the marketing strategies to stimulate purchasing power of consumers and investors, offering the goods price reduction to meet the purchasing power available in the market, affecting the decisions of consumers and investors with the purchasing power to start spending continuously, together with the demand for real estate, in particular the real estate market surrounding the metro routes which still remained in great demand from consumers and investors, and it was one of the main factors in selection of residences, including the full service opening of the MRT Blue Line Project (M.R.T. Chaloem Ratchamongkhon Line); the service opening of the MRT Green Line Extension Project; and the plan for the service opening of other metro projects.

Moreover, a real estate development new trend, the "Mixed Use Projects", under which the real estate developer has the concept in urban development in another format, focuses on mixed use of real estate of different types for the maximum benefits. This was due to the restrictions on land use in Bangkok which allowed for real estate development for a single use or project development only for residential or commercial purpose may no longer ensure the optimum use of land. For that reason, the mixed use projects started to play a role and become enormously popular among the big real estate entrepreneurs and are also spread along the route alignment of the MRT Blue Line (M.R.T. Chaloem Ratchamongkhon Line), for example, Singha Complex, the Luxury Mixed Use Complex, on Asoke-Phetchaburi Road, connecting to MRT Phetchaburi Station, regarded as the potential landmark and major business center, launched on December 13, 2018; Samyan Mitrtown, the mixed use project launched on September 20, 2019 connecting to the BTS Sam Yan Station; and The PARK Life Project, a new retail lifestyle of urban people, located in the intersection area of Rama IV and Ratchadaphisek Road, adjacent to the Queen Sirikit National Convention Centre Station, which was launched on August 28, 2020. These mixed use projects become the destinations in demand among entrepreneurs, investors, tourists, and residents. Therefore, the development of the rail system provides the network which covers the wide-areas of Bangkok and its vicinity and becomes a key factor in real estate development in various forms, such as, condominiums, office buildings, shopping centers, flea markets, famous tourist attractions, hotels, apartments, restaurants and supermarkets, to ensure that they are rapidly growing together.

7) Progress of Development of the Mass Rapid Transit Systems under the Government Policy

Project	Current Status of Project
<p>SRT Red Line, suburban railway system:</p> <ul style="list-style-type: none"> - North: Bang Sue-Rangsit - South: Bang Sue-Hua Lamphong-Mahachai - East: Bang Sue-Makkasan-Chachoengsao - West: Bang Sue-Taling Chan-Salaya, <p>All of the routes start at the Bang Sue Grand Station.</p>	<p>Bang Sue-Rang Sit, with a distance of 26.30 km.</p> <p><u>Contract 1:</u> Civil Work for Bang Sue Station and Depot, SRT executed the agreement for engagement of SU Joint Venture (Sino-Thai Engineering & Construction Public Company Limited and Unique Engineering and Construction Public Company Limited) on January 18, 2013.</p> <p><u>Contract 2:</u> Civil Work for Bang Sue - Rang Sit Section, SRT executed the agreement for engagement of Italian-Thai Development Public Company Limited on January 31, 2013.</p> <p><u>Contract 3:</u> M&E System, including the supply of carriages, SRT executed the agreement for engagement of MHSC Joint Venture (MITSUBISHI Heavy Industrial Ltd., Hitachi and Sumitomo Corporation) on March 29, 2016.</p> <ul style="list-style-type: none"> - It was expected to open for service in and around 2023. <p>Taling Chan-Salaya, with a distance of 14.8 km.</p> <ul style="list-style-type: none"> - The project was already approved on February 26, 2019. Currently, it is in the process of bid preparation. <p>Taling Chan-Siriraj, with a distance of 5.7 km.</p> <ul style="list-style-type: none"> - The project was already approved by the Council of Ministers on March 5, 2019. - Currently, it is under construction, which was expected to be completed in 2022. <p>Hua Lamphong-Mahachai, with a distance of 37 km.</p> <ul style="list-style-type: none"> - SRT reviewed the detailed design. <p>Rangsit-Thammasat University (Rangsit Campus), with a distance of 8.84 km.</p> <ul style="list-style-type: none"> - The project was already approved on February 26, 2019. - Currently, it is in the process of preparing a Royal Decree on Land Expropriation. <p>Bang Sue-Taling Chan, with a distance of 15 km.</p> <ul style="list-style-type: none"> - SRT engaged Unique - Chun Wo Joint Venture to carry out the construction. The construction was 100% completed. It is in the process of trial run and it was expected to open for service in late 2021.

Project	Current Status of Project
MRT Blue Line	<p>Bang Sue-Tha Phra and Hua Lamphong-Bang Khae, with a distance of 27 km.</p> <ul style="list-style-type: none"> - Section 1: Bang Sue-Tha Phra was officially opened for service on August 11, 2017. - Section 2: Hua Lamphong-Bang Khae (Lak Song Station): <ul style="list-style-type: none"> • Opened for the people's trials from Hua Lamphong Station - Tha Phra Station on July 29, 2019. • Opened for the people's trials from Hua Lamphong Station - Bang Wa Station on August 24, 2019. • Opened for the people's trials from Hua Lamphong - Bang Wa Station, without any interchange at Hua Lamphong Station on September 7, 2019. • Opened for the people's trials from Hua Lamphong Station - Lak Song Station on September 21, 2019. • Officially opened for service on September 29, 2019. - Section 3: Bang Sue-Tha Phra, with its official service and entire network opening on March 30, 2020. <p>Bang Khae - Phutthamonthon Sai 4 (with a distance of 8 km.) It is in the process of consideration and review of passenger volume and justification of the project by the Ministry of Transport.</p>
<p>MRT Green Line Mo Chit-Saphan Mai-Khu Kot and Bearing- Samut Prakan, with a total distance of approximately 25 km.</p>	<p>Mo Chit-Saphan Mai-Khu Kot, with a distance of 19 km.</p> <ul style="list-style-type: none"> - MRTA executed the civil work contracts, Contracts 1-4, on April 3, 2015, as follows: <p><u>Contract 1:</u> (Civil Works), Mo Chit - Saphan Mai, with a distance of 12 kilometers, operated by Italian-Thai Development Public Company Limited;</p> <p><u>Contract 2:</u> (Civil Work), Saphan Mai - Khu Kot, with a distance of 7.5 kilometers, operated by UN-SH-CH Joint Venture (Unique Engineering and Construction Public Company Limited, Sinohydro Corporation Limited, and China Harbour Engineering Company Limited);</p> <p><u>Contract 3:</u> (Depot and Park & Ride Facilities) operated by STEC-AS-3 Joint Venture (SINO-Thai Engineering and Construction Public Company Limited, A.S. Associated Engineering (1964) Co., Ltd.);</p> <p><u>Contract 4:</u> (Design and Construction of Trackwork) operated by STEC-AS-3 Joint Venture (SINO-Thai Engineering and Construction Public Company Limited, A.S. Associated Engineering (1964) Co., Ltd.).</p>

Project	Current Status of Project
	<ul style="list-style-type: none"> - On August 9, 2019, one station, namely, Ha Yaek Lat Phrao Station, was opened for service. - On December 4, 2019, another four stations were opened for service, namely, Phahonyothin 24 Station, Ratchayothin Station, Sena Nikhom Station, and Kasetsart University Station. - On June 5, 2020, another four stations were opened for the people's trials, namely, Royal Forest Department Station, Bang Bua Station, 11th Infantry Regiment Station, and Wat Phra Si Mahathat Station. - On December 16, 2020, another seven stations were opened for service, namely, Wat Phra Si Mahathat Station, Phahonyothin 59 Station, Sai Yud Station, Saphan Mai Station, Bhumibol Adulyadej Hospital Station, Royal Thai Air Force Museum Station, Yaek Kor Por Aor Station, and Khu Khot Station. <p>Bearing-Samut Prakan, with a distance of 13 km.</p> <ul style="list-style-type: none"> - On April 3, 2017, one station, namely, Samrong Station, was opened for service. - On December 6, 2018, another nine stations were opened for the people's trials from Samrong Station to Kheha Samut Prakan Station.
<p>MRT Orange Line Bang Khun Non-Min Buri (Suwinthawong), with the total distance of 35.9 km.</p>	<p>The West Section: Taling Chan-Thailand Cultural Centre, with a distance of 27 km., and the East Section: Thailand Cultural Centre-Min Buri (Suwinthawong), with a distance of 22.57 km.</p> <ul style="list-style-type: none"> - On December 9, 2016, MRTA received an approval by the Council of Ministers' resolution to carry out the construction of the MRT Orange Line Project, Thailand Cultural Centre-Min Buri (Suwinthawong). - On February 9, 2017, the contract signing ceremony was held for the civil work construction of the MRT Orange Line Project between MRTA and contractors as winning bidders in Contracts 1, 2, 3, 4, 5 and 6, as follows: <p><u>Contract 1:</u> (Civil Work), Thailand Cultural Centre - Soi Ramkhamhaeng 12, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering & Construction Public Company Limited);</p> <p><u>Contract 2:</u> (Civil Work), Soi Ramkhamhaeng 12 - Hua Mak, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering & Construction Public Company Limited);</p> <p><u>Contract 3:</u> (Civil Work), Hua Mak - Khlong Banma, operated by Italian-Thai Development Public Company Limited;</p> <p><u>Contract 4:</u> (Civil Work), Si Yaek Banma - Suwinthawong, operated by Unique Engineering and Construction Public Company Limited;</p> <p><u>Contract 5:</u> (Civil Work), Depot and Park & Ride Facilities, in the area of MRTA's office, Phra Ram 9 Road, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering & Construction Public Company Limited);</p> <p><u>Contract 6:</u> Design and Construction of Trackwork, operated by Unique Engineering and Construction Public Company Limited.</p>

Project	Current Status of Project
	<ul style="list-style-type: none"> - On January 28, 2020, the Council Ministers passed a resolution approving the MRT Orange Line Project, Bang Khun Non-Min Buri (Suwinthawong) on a PPP Net Cost basis, for a period of 30 years from the commencement of service for the MRT Orange Line Project. - On July 10-24, 2020, MRTA issued an announcement inviting interested private entities to purchase a request for proposal for investment in the MRT Orange Line Project, Bang Khun Non-Min Buri (Suwinthawong). - On November 9, 2020, MRTA opened for the private entities to submit their requests for quotation for the MRT Orange Line Project, Bang Khun Non-Min Buri (Suwinthawong).
MRT Yellow Line	<p>Lat Phrao-Samrong, with a distance of 30.4 km.</p> <ul style="list-style-type: none"> - On May 30, 2017, the Council of Ministers resolved to approve the results of selection of the private entity and draft Concession Agreement for the MRT Yellow Line Project, in collaboration with BSR Joint Venture (comprising BTS Group Holdings Public Company Limited, Ratchaburi Electricity Generating Public Company Limited and Sino-Thai Engineering & Construction Public Company Limited). - On June 16, 2017, MRTA signed the Concession Agreement with Eastern Bangkok Monorail Company Limited (EBM). - On August 27, 2018, the construction of the project officially commenced, which would take a period of 39 months (3 years and 3 months). It was expected to be completed and ready for service in 2022. <p>MRT Yellow Line Extension: Ratchada-Lat Phrao Intersection to Ratchayothin Intersection, with a distance of 2.6 km., with 2 stations:</p> <ul style="list-style-type: none"> - On October 17, 2018, the Commission for the Management of Land Traffic System Management Committee (CMLT) resolved to approve that the project be incorporated in the Mass Rapid Transit Master Plan in Bangkok Metropolitan and its vicinity. Currently, MRTA is in the process of complying with procedures and laws in relation to amendment of the Joint Venture Agreement.
MRT Pink Line	<p>Khae Rai-Min Buri, with a distance of 34.5 km.</p> <ul style="list-style-type: none"> - On May 30, 2017, the Council of Ministers resolved to approve the results of selection of the private entity and draft Concession Agreement for the MRT Pink Line Project, in collaboration with BSR Joint Venture (comprising BTS Group Holdings Public Company Limited, Ratchaburi Electricity Generating Public Company Limited and Sino-Thai Engineering & Construction Public Company Limited). - On June 16, 2017, MRTA signed the Concession Agreement with Northern Bangkok Monorail Company Limited (NBM). - On August 27, 2018, the construction of the project official commenced, which would take a period of 39 months (3 years and 3 months). But there was a problem lying in moving the station in the front area of Nonthaburi Government Center and Nopparat Station, with the environmental impact analysis report (EIA) requiring to be revised, as such, the service opening was then postponed from the original target to occur at the end of 2021 for another one year, i.e., in and around 2022. <p>MRT Pink Line Extension, Si Rat Station-Mueang Thong Thani:</p> <ul style="list-style-type: none"> - On October 17, 2018, the Commission for the Management of Land Traffic System Management Committee (CMLT) resolved to approve that the project be incorporated in the Mass Rapid Transit Master Plan in Bangkok Metropolitan and its vicinity. Currently, MRTA is in the process of complying with procedures and laws in relation to amendment of the Joint Venture Agreement.

Project	Current Status of Project
MRT Brown Line	<p>Khae Rai - Lam Sali (Bueng Kum), with a distance of 22.1 km.</p> <ul style="list-style-type: none"> - January 3, 2019, the Commission for the Management of Land Traffic System Management Committee (CMLT) resolved to assign the OTP to incorporate the development plan for the MRT Brown Line Project, Khae Rai-Lam Sali (Bueng Kum) into the Mass Rapid Transit Master Plan in Bangkok Metropolitan and its vicinity, Phase 1. - Currently, MRTA is in the process of designing a foundation for the project located on Prasert Manukit Road overlapping the Third Stage Expressway, Northern Section (N2), before delivery of the same to ETA for a simultaneous use in bidding and construction.
MRT Purple Line	<p>Tao Poon-Rat Burana (Kanchanaphisek Outer Ring Road), with a distance of 23.6 km.</p> <ul style="list-style-type: none"> - On July 25, 2017, the Council of Ministers passed a resolution granting approval for MRTA to carry out the construction of civil works for the MRT Purple Line Project, Tao Poon-Rat Burana Section (Kanchanaphisek Outer Ring Road). - Currently, the project is in the process of preparing for land expropriation survey and assessing remuneration for land expropriation, which would be carried out by MRTA simultaneously with the process of price estimation to make a bid preparation for seeking a private partnership.

Sources: www.railway.co.th, www.mrta.co.th, www.otp.go.th, www.bts.co.th, www.bkkmrt.com, www.mrta-orangelineeast.com, www.mrta-yellowline.com, and information collected by the Company.

8) Procurement of Products or Services of Rail Business

• Nature of Procurement of Products

The mass rapid transit system projects were awarded to the Company by the way of concessions from MRTA, a state agency established and existing under the “Mass Rapid Transit Authority of Thailand Act B.E. 2543 (2000)” to operate the mass rapid transit systems in Bangkok and its vicinity, including other designated provinces, with safety and efficiency. MRTA is a state enterprise under the supervision of the Minister of Transport. The Company specializes in the metro business, conducts the project feasibility studies, and submits its investment proposals for such projects with appropriate returns and conditions. The existing concession projects were awarded for investment, supply of rolling stocks, operation and maintenance, whereby the government sector invests in all civil infrastructure, namely, stations and facilities, tunnels, ventilation systems and trackwork, etc., while the Company invests in the railway systems, namely, rolling stocks, signaling and operation systems, communications and SCADA systems, power supply, automatic fare collection, platform screen door, and depot workshop systems, etc.

The M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line)

The Company engaged Joint Venture CKET as the MRT project manager (Project Manager) for the MRT Blue Line, Bang Sue - Hua Lamphong Section (from August 2000 to July 2009) to manage technical operations, such as procurement of the M&E Equipment as ordered from manufacturers and liaison with contractors and relevant authorities regarding the installation of the M&E Equipment. Upon expiration of the engagement agreement of CKET for project management, the Company was able to efficiently administer and manage the MRT Project, as well as improve and develop the efficient service provision on its own. In regard to the supply and maintenance of the M&E Equipment, the Company engaged Lincas and Siemens to manufacture the M&E Equipment. Lincas and Siemens are responsible for the design, manufacture, supply, installation, testing, and commissioning of the M&E Equipment. The Company also engaged Siemens as a contractor for maintaining the M&E Equipment. In respect of the MRT Blue Line Extension Project, Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, the Company engaged CH. Karnchang Public Company Limited as Project Manager, with Siemens having the duty to supply rolling stocks, power supply equipment, signaling system, control, and communications system. Moreover, the Company engaged Siemens as a contractor for maintaining the M&E Equipment of the MRT Blue Line Project for the whole route.

The M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Rat Burana, Bang Yai - Bang Sue Section, (Khleng Bang Phai Station - Tao Poon Station)

The Company executed the Concession Agreement for the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section, (Khleng Bang Phai Station - Tao Poon Station), with MRTA, on a PPP Gross Cost basis, namely, the government sector invests in all civil works and the Company invests in the M&E Systems and the rolling stocks, including the O&M Services in accordance with the service standards as defined in the conditions of the Agreement. The government sector shall make repayment in installments to the Company for the costs of the M&E Systems after the delivery of the ownership. In this regard, the Company will provide the O&M Services in accordance with the service standards as defined in the Agreement. In addition, the government sector is entitled to all farebox revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and the government sector shall make repayment to the Company in the form of service fee for the O&M Services, for a contractual period of 30 years, divided into two phases, namely, Works under Phase 1: Design, supply, installation, testing of the M&E Systems and other related systems, including trial run to ensure its readiness for public service until the commencement of the Operation Service; and Phase 2: O&M Services. The Company engaged CH. Karnchang Public Company Limited as Project Manager for the implementation of Works under Phase 1 of the Concession Agreement. The Company and CH. Karnchang Public Company Limited engaged MTJV (Marubeni-Toshiba Joint Venture) for the supply of rolling stocks, power supply equipment, signaling system, control, and communications systems, as well as maintenance service.

9) Environmental Impact of Rail Business

According to the Company's energy conservation policy, the Company will regularly devise new guidelines for improving, changing and implementing energy-saving projects every year to ensure the efficient use of energy while minimizing environmental pollutions, as well as reducing the electricity cost for the Company. The electricity consumption of the business in management of the mass rapid transit system projects constitutes the majority of costs of the Company; therefore, the Company formulated measures for energy saving management in 2020 to reduce energy consumption and to conserve the environment by reducing Carbon dioxide (CO₂) emissions.

The Company attaches importance to reduction of energy consumption for the purpose of environmental conservation because the environment is everything around us, comprising water, air, sunlight, including assorted resources, e.g., forests, soils and minerals, etc., all of which have an influence on human life. The Company then realizes the significance of and the engagement with nature conservation to ensure the availability of the country's nature. To that end, the sustainable and continuous guidelines have been implemented by the Company, as follows:

- Reasonably reaping the benefits from the nature, such as, planting trees around buildings to reduce the heat temperature of natural light shining off buildings, thereby functioning the air conditioners in a more economical way;
- Sparingly using energy generated from natural resources, such as, helping save electricity by turning it on when it is needed only and focusing on use of natural daylight, saving oil fuel, using tap water wisely by watering the plants with the used water, and campaigning for turning faucets off when not in use, etc.
- Helping preserve the air environment by reducing air pollution, such as, not burning garbage or not taking any other action causing air pollution, and inspecting the engine condition of the Company's vehicles to make sure they are in a normal condition so as not to release toxic fumes into the air, etc.
- Helping conserve natural resources because natural resources are all beneficial to human beings in terms of consumption and utilization, therefore, helping conserve our nature by using other materials in place of using natural resources, such as, reducing the use of foam as much as possible, the use of cloth bags instead of plastic bags and not littering and not discharging wastewater into natural canals, etc.

The Company also prioritizes and has implemented various measures on the organization, for example, promotion and public relations measures, control measure, and technical change measures, etc. In addition, the Company has continuously studied and developed for the purpose of efficient energy use. Over the past years, the Company had replaced the existing light bulbs with efficient light bulbs inside the MRT train stations and the Phra Ram 9 Depot, thereby having a profound effect on the Company and reducing Carbon dioxide (CO₂) emissions. In 2020, the Company organized the energy saving projects relating to the use of more efficient light bulbs, including expansion of the scope of operations in the parts of the stations and Kanlapaphruek Depot, the MRT Blue Line Extension, to cover all areas of the Company.

Here are the activities and measures implemented in 2020:

- Measure for replacing the existing light bulbs with efficient light bulbs (LED bulbs) in the Phra Ram 9 Depot, the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line);
- Measure for controlling turning on and off the lighting system, the seasonal air conditioning system so that the use of electric power is according to the actual use and the seasons, to ensure the efficient energy use on the parts of the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line and the MRT Blue Line Extension) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) and to facilitate the services to the rising number of passengers.
- Study on solar power generation project in the areas of the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line), one of the projects on that the Company has conducted a study for a while, not to mention the fact that the global trend has been toward the greater utilization of renewable energy because the production of electricity from natural resources will have no impact on the environment, reducing both Carbon dioxide (CO₂) emissions and global warming. According to the NOVA's information, the rail service providers in other countries have started switching to solar power.
- Study on application of highly efficient technologies in the systems including the guidelines for properly improving and changing the working processes of the systems, to control the functions of equipment, so that the study results will be used for reference in operations in the next year for the purpose of energy saving on the parts of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line Extension) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line).

Here are the ongoing activities:

- Continual review of the work process in terms of policies, goals, operational plans and internal and external audits, to achieve efficiency in the work process.
- Improvement of the train service timetables to make them commensurate with the increasing number of passengers during the period of public relations in order to encourage everyone to save energy in the pursuit of sustainable development.
- Water is one of the resources which the Company greatly values and appreciates; the Company has then chosen to install the electric train cleaning systems which are capable of recycling used water, that is, such systems can recycle used water by up to 3 cubic meters, and the Company has also applied the aforesaid cleaning systems from the commencement of the metro service until now.
- One of the Company's strengths lies in selection of eco-friendly technologies which still remains unchanged, for example, repair and maintenance service vehicles used within the Depot areas have engines which meet the EURO IV standards, the exhaust emission standards for vehicles, which can rest assured that the use of the repair and maintenance service vehicles will in no way give rise to toxic pollution, etc.

With regard to the Company's work operations in the field of energy and environmental conservation, the Company has strictly complied with relevant government laws, e.g., laws governing energy conservation and environment, and has also adopted the (ISO 50001) Energy Management System standard, including the (ISO 14001) International Environmental Management System standard, from the opening of the MRT service, while simultaneously undertaking activities to control and improve, remedy risks or things which may threaten the safety through risk assessment, engagement and listening to opinions of all related parties, in order to create correct knowledge and understanding, as well as to alleviate traffic problems, help conserve environment and improve the quality of life of the people. To that end, the Company has further improved its operations in respect of management to strive for the sustainable development, and has been therefore provided standard certifications as follows:

- ISO 9001:2015 Quality Management System;
- ISO 14001:2015 Environmental Management System;
- ISO 45001: 2018, OHSAS 18001:2007 and TIS 18001:2001 Occupational Health and Safety Management Systems;
- Safety Management System from Ricardo Rail Limited.

In 2020, the Company carried out the continuous and systematic energy management to achieve efficiency in the metro system through energy management suitable for the business and to ensure the environmental conservation in a concrete way in the pursuit of sustainable development under the energy conservation policy which must be pursued by everyone in the same direction, with the commitment to responsibility for energy conservation; therefore, developed the energy management system to ensure the optimum use of energy based on the following guidelines:

- Control of energy consumption in activities including purchasing of products and services of the Company to meet the energy conservation goals and plans to ensure the optimum use of energy in compliance with laws;
- Assuring that such energy control measures are continuously implemented and reviewed, including update and improvement; and
- Educating and raising awareness of staff and contractors, including related parties, as to their own roles, duties and responsibilities regarding impacts of energy use.

These policies are an integral part of the Company's business operations and it is the responsibility of all staff and contractors to put them into practice earnestly and regularly to ensure that the energy conservation has been conducted continuously and sustainably.

In 2021, the ongoing action plans for energy saving projects for the sustainable development of the energy management system are as follows:

- Appropriate electric energy use control in the areas of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line Extension) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line);
- Implementation of the solar power projects in the area of the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line);
- Implementation of the projects for replacement of fluorescent bulbs with LED bulbs in the areas of the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line and the MRT Blue Line Extension);
- Implementation of the projects for improvement of main equipment efficiency of the systems of the M.R.T. Chaloem Ratchamongkhon Line Project (the original MRT Blue Line and the MRT Blue Line Extension);
- Implementation of the projects for installation of LED bulbs in place of fluorescent bulbs of the areas of the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line);
- Implementation of the projects for energy conservation activities for all employees or staff.

In addition, the Company has paid attention to the potential environmental impact from the MRT services so as not to be harmful to the environment, quality of life, and livelihood of the people and communities nearby, by strictly monitoring, preventing and mitigating the environmental impacts in accordance with the Environmental Impact Mitigation Measures and Monitoring Program (EMP), during the implementation of the MRT projects in service, namely, the M.R.T. Chaloem Ratchamongkhon Line Project and the M.R.T. Chalong Ratchadham Line Project, for report to the Office of Natural Resources and Environmental Policy and Planning (ONEP) to inspect and monitor the environmental qualities in key environmental issues as follows:

(1) Air Quality

The results of air quality measurement in the atmosphere around the projects showed that the total suspended particulate (TSP), particulate matter (PM10) and carbon monoxide (CO), nitrogen dioxide (NO₂), and the total hydrocarbons (THC) did not exceed normal level.

(2) Air Quality in MRT Stations and Trains

The results of air quality measurement in the MRT stations and trains, during both peak and off-peak hours, showed that the total bacterial and fungal volume, ventilation rate, temperature, and relative humidity did not exceed normal level.

(3) General Noise Level

The results of general noise level measurement showed that the average noise did not exceed 70 dB(A), with the maximum level not exceeding 115 dB(A), which met the standard requirements.

(4) Vibration Level

The results of vibration level measurement did not exceed normal levels.

(5) Effluent Quality

The results of effluent quality measurement in stations, depot and administration building did not exceed normal levels. The wastewater treatment system could work efficiently according to its design.

(6) Waste Management

The results of waste management were found that segregation, collection and transport of waste for disposal were made efficiently in accordance with the management plan and applicable laws.

2.1.3 Commercial Development Business

The Company has carried out commercial development in relation to the expressway system by allowing the private entities and individuals to use the space for commercial operations in the vicinity of the expressway system for installing Intelligent Traffic Signs and advertising boards in various forms and for installing shops in the areas of toll plazas and engaging in other business, such as, use of the areas in the expressway system for installing 3G signal distribution devices, etc. In respect of commercial development of the M.R.T. Chaloe M Ratchamongkhon Line Project (MRT Blue Line), the Company also has operated and appointed its subsidiary, namely, Bangkok Metro Networks Limited (“BMN”), as the management representative in the commercial development of such MRT project, per the following details:

1) Nature of Services

- **Commercial Development Relating to Expressway System**

As for the commercial development in the area of the expressway system, the Company and one of its subsidiaries, namely, NECL, allowed private entities and individuals to take on the lease of spaces for commercial operation, as follows:

- o Installation of Intelligent Traffic Signs and Advertising Boards

Private entities were allowed to install Intelligent Traffic Signs on the main routes and in front of toll plazas, and install advertising boards in various areas, such as, in front of toll plazas, toll booths, expressway columns, and expressway barriers, etc.

- o Retail Areas around Toll Plazas

Private entities and individuals were allowed to take on the lease of retail areas for providing service to expressway service users around Prachachuen, Srinagarindra, and Bang Pa-in Toll Plazas.

- o Other Business Operations

Private entities were allowed to use the expressway areas for installation of 3G signal distribution devices, etc.

- **Commercial Development Relating to Metro System**

The Company has appointed its subsidiary, namely, BMN, as the sole management representative in the commercial development of the M.R.T. Chaloe M Ratchamongkhon Line Project (MRT Blue Line), per the following details:

- o Procurement and/or Production of Advertising Boards

BMN, as the Company’s representative, will conduct studies and analyses on the areas in the MRT stations in order to set up and develop advertising media which suit the passengers’ behavior in use of the services to maximize the effectiveness of communication. To that effect, BMN will work in association with agencies or brand owners, to launch innovations in use of technologies for replacing static media with dynamic media, developing more creativity to create image, awareness, as well as strengthening the engagement between consumers and goods and services.

With the nature of the areas within the MRT stations which are composed of undergrounded structures covering the large areas in a closed environment, with a timing of Captive Environment Capture Attention of the advertising media before downing to the platform levels, including the media integration in the areas nearby, such nature of this type is then conducive to the creation of advertising media with the storytelling trends of the brand owners which will help encourage and improve engagement, as well as helping consumers recognize those products and services, which are the prime goals or measurement of the effectiveness of the budget spending for advertisement and public relations among the customer groups. Other than the integration of advertising media inside the MRT stations, BMN has adopted the concepts of the integration, creativity, storytelling trend, to the areas on the MRT stations through areas of ventilation chimneys, roof structures of the train stations, passenger elevators, thereby resulting in a perfect advertising and promotion.

However, the Company has been facing challenges, technological changes, perception of information, together with behavior, lifestyle of consumers which are rapidly evolving, as a result, the development of advertising media in the MRT trains will be constantly conducted to ensure that it has fulfilled the needs of customers, to their satisfaction, and to assure customers that the advertising media in the MRT trains has proved valuable and brought the maximum benefits for them.

o Lease of Retail Areas in MRT Stations

The retail space in the MRT stations is arranged for the service provisions both inside and outside the areas of Metro Mall. Currently, the rental and service areas in the Metro Mall which are in service, including, Kamphaeng Phet Station, Chatuchak Park Station, Phahon Yothin Station, Lat Phrao Station, Thailand Cultural Centre, Phra Ram 9 Station, Phetchaburi Station, Sukhumvit Station, and Khlong Toei Station. The Company continues to supply products and services which are in demand and suitable for the MRT passengers' styles of the use of services. Each area will be zoned appropriately, and in the meanwhile, the Company has come up with an idea to develop the Metro Mall area as a stopover or meeting point for service users, therefore, the common area has been improved to be larger in order to accommodate the needs of the service users, thereby making the services in the MRT trains a part of their livelihoods in the new normal.

In addition to the spaces for lease and services inside the Metro Mall, the Company has also provided the spaces for lease and services outside the Metro Mall in order to satisfy the small-sized enterprises' needs for their space or to serve as an area to increase sales channels of the space tenants and the services in the Metro Mall area, as another option. The services will be provided in a short-term event area designated by the Company in compliance with regulations on safety in metro stations, covering a total of 38 elevated and underground stations. This year, the enterprises took an interest in the use of the services of the MRT Blue Line Extension, such as, Tao Poon Station, Wat Mangkon Station, Itsaraphap Station, Tha Phra Station, Bang Wa Station, Phasi Charoen Station, Bang Khae Station, and Lak Song Station, etc.

o Provision of Service and Maintenance of Telecommunications System Equipment

Nowadays, the M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line) has a total of 22 underground stations, divided into Bang Sue - Hua Lamphong Section, with 18 underground stations, and Hua Lamphong - Lak Song Section, with another four underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, where telecommunications equipment has been installed by the Company to receive and transmit mobile phone signals, which is in consistency with the government sector's issuance of the licenses to the private entities at present, and to reflect the technological changes and fulfill the service users' desire for optimum efficiency, the Company is in the process of enhancing efficiency in equipment receiving and transmitting signals in Bang Sue - Hua Lamphong Section to provide the efficient services to the people whenever they use the MRT services.

2) Marketing and Competition of Commercial Development Business

• Customer Characteristics and Target Customers

The main commercial development business in the MRT system consists of the installation of advertising media, lease of spaces and services, and service and maintenance of telecommunications equipment, as a result, the customer characteristics and target groups vary according to service types. Therefore, the Company has classified its customer characteristics and target groups under service types as follows.

o Advertising and Public Relations Media

Most of the advertising media customers include the Company's customer groups, comprising advertising agencies which represent the brand owners to serve as planning operators, purchase advertising media in accordance with objectives of the brand owners; and another group of customers is brand owners who have a desire to directly purchase advertising media with the Company. The main proportion of the Company's customers is relative to advertising media purchase from the agency customer group. This year, the Company's customer proportion of agencies to brand owners increased from the previous year to 80:20, due to the economic slowdown and the impact of the COVID-19 epidemic; ongoing intensely-prone competition in the industry; industrial structure and changing consumer behavior; small to large brand owners' reduction of their budgets to purchase advertising media. On the other hand, the Company worked more with agencies during the 3th-4th quarters of the year to create campaigns for the goods and services which still need the budgets for purchase of advertising media in order to boost sales in the last quarter of the year. The top five product and service groups which use advertising media in the MRT system are comprised of communication equipment group (mobile phones), followed by beverage, consumable goods, insurance, and website groups.

o Lease of Retail Areas in MRT Stations

In 2020, lease of spaces and services of the retail shops in the MRT stations were affected by the COVID-19 epidemic situation, with the government announcing the closure of certain types of retail shop services from the beginning of 2020, including a request for cooperation from the private sector to allow employees to work from home, resulting in a dramatic decline in the number of the MRT users which had an impact on the sales of the space tenants and services in the MRT stations. Nonetheless, the Company implemented relief measures in aid of the customer groups, including an exemption of rental and service fees during the service shutdown or a 50-percent discount on rental fees in case of stores which remained open for service, or extension of rental-service fee payment period, as a result, they are still the Company's business alliances which have continued business and taking a lease on retail spaces in the MRT stations. Most of the customer groups for space rental and services have continued their business with the Company, for instance, customer groups in categories of food and beverage, convenience stores, supermarkets, bakery shops, foreign currency exchange shops, phone accessories stores, beauty and salon shops, eyeglass shops, etc.

o Provision of Service and Maintenance of Telecommunications System Equipment

The Company's customer groups are those who have obtained licenses to operate the telecommunications business from the Office of the National Broadcasting and Telecommunications Commission (the Office of the NBTC) to provide mobile phone services, both public and private sectors, comprising AIS, DTAC, TRUE MOVE, TOT, and CAT, each of which would hold the license to provide the service under the frequency category. The frequency services provided in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) include 850, 900, 1800, 2100, 2300 and 2600 MHz.

3) Marketing Policy and Strategies of Commercial Development Business

• **Service and Product Strategies of Commercial Development Business**

Commercial Development Relating to Expressway System

- o Intelligent Traffic Signs in the form of maps and text messages are provided to give traffic updates to expressway users, including advertising boards in front of toll plazas, barriers, expressway columns, and in front of toll booths.
- o Shops and public restrooms are provided to expressway users in 4 toll plazas of the Si Rat Expressway and the Udon Ratthaya Expressway, namely, Srinagarindra Toll Plaza, Prachachuen Toll Plaza (inbound), Bang Pa-in Toll Plaza (inbound), and Bang Pa-in Toll Plaza (outbound).

Commercial Development Relating to Metro System

- o The technological changes, digital disruption, including the situation of the COVID-19 epidemic have an impact on the advertising media industry structure in a manner that the media mix modeling, together with the ways the agencies work, planning and decision to spend budgets for advertising and public relations of the advertisers have resulted in a change in the business plans and new strategies have been established during the foregoing crisis, as such, the advertisers have been affected, both directly and indirectly, and then reduced their advertising budgets, by changing from a long-term plan to a short-term plan, exploring creative ideas to create motivation or engagement with consumers, making a declining use of offline media and switching to online media in order to rapidly reach consumers. These changes have forced the agencies and the Company, as the advertising media owner in the MRT system, not only to adjust oneself but the respective service plans in order to meet the needs of the agencies or advertisers.

BMN has worked with the advertisers (brand owners) and agencies in exploring creative ideas which suit the advertisers' products with the compelling storytelling through the advertising media in the MRT trains to ensure that the MRT users perceive and engage with the products and services. Other than that, BMN is also looking for business alliances to offer a variety of the use of the advertising media in the MRT trains, for example, the production of content for advertisement through the PIDS, the marketing activities inside the MRT stations in collaboration with the brand owners, the transition of advertising media platform from static media to dynamic media at the prominent points inside the MRT stations. Apart from the development of advertising media inside the MRT stations, BMN has also carried out development of advertising media for the areas above the MRT stations, for instance, ventilation chimneys or ventilation buildings, roof areas of the MRT stations, passenger elevators or free space on the MRT stations; the integration of such areas, creativity of advertising media which is capable of catching the public's eyes on the roads outside to become a Landmark Media which can efficiently send persuasive communications out to people on the areas out of the MRT stations.

- o The technological changes and the COVID-19 epidemic have not only affected the advertising media business, but also the space rental and service business, that is, the available retail space is beginning to take fewer leaseholders because their switching to online sales is increasing. By this reason, the retail shops in the future may only be a place for product showcase and may be needed in a smaller size. In addition, the situation of the COVID-19 epidemic has substantially changed consumers' spending habits in a manner that they have switched to doing online shopping and using delivery services more, thereby resulting in a decrease in the number of shop-goers at shopping centers, as compared with the previous years.

Nevertheless, the retail space inside the MRT stations will be the areas where meet the needs of entrepreneurs and consumers because people's switching to mass rapid transit services is nowadays rising, therefore, the available retail space in the MRT stations will provide greater convenience in people's spending, thereby saving time in travelling to large shopping centers. Other than the availability of the retail space, the Company has also provided common areas as a meeting point or stopover to facilitate the MRT service users, which has a positive effect on the entrepreneurs in the rental space as it will increase the number of passengers accessing to the services and that for a longer period of time, thereby causing a rise in sales of the retail shops.

- o This year, 5G is considered the catalyst for momentous technological change in Thailand, the awakenings of 5G are increasing hastily because it is not only a mobile network, but it will also be used more widely, especially in communications. 5G networks have been developed to transmit multiple streaming data simultaneously with greater efficiency, stabilization, and rapidity. As a consequence of such transformation, the Company has improved and developed its devices to accommodate all frequency bands, including the 2600 MHz for 5G, together with the improvement of the efficiency of antenna transceivers from SISO to MIMO, which was already completed at the stations of the MRT Blue Line Extension, comprising, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station and Itsaraphap Station. Currently, it is in the process of boosting the efficiency of devices in the phase of Bang Sue - Hua Lamphong Section in order to provide the MRT service users with the efficient services.

In addition to the primary commercial services as mentioned above, the Company has also provided service areas for selling products and services or organizing various marketing activities outside the area of the Metro Mall inside the MRT stations, covering a total of 38 MRT stations of the MRT Blue Line Project, with the varied sizes of the areas depending on each station structure.

- **Corporate Image Promotion Strategies**

- o Giving back to the society, support of the government policies are regarded as an important mission which has been realized and prioritized by the Company through, such as, organizing activities to broaden knowledge of the youths, activities for reading promotion, provision of support to the government sector in public relations about its services, etc.

- **Distribution Strategies and Channels of Commercial Development Business**

- o The commercial services in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) have varied according to the service types, distribution channels are then differentiated by the service types.
 - Public relations media have sale channels via business alliances as agencies together with direct presentation to the brand owners.
 - Spaces for lease and service and telecommunications service are presentation of the spaces direct to the brand owners or the service providers.

4) **Industrial Outlook and Competition of Business Development Business**

- **Advertising Media**

The digital disruption, the economic slowdowns both at home and abroad, the ongoing situation of the COVID-19 epidemic at the beginning of the year until now, including the domestic political situation are factors behind the tremendous impact on the advertising media industry in Thailand.

As for the advertising media outlook from January to October 2020, its growth rate dropped by 15 percent, despite a sign of recovery in the advertising media industry in the end of the third quarter until the beginning of the fourth quarter of 2020, with all advertising media types being affected by such aforementioned situations. The top five most affected media include media in theaters, stores/outlets, newspapers, magazines and cable television media, with the growth rate declining by more than 30 percent compared to the previous year, which the growth rate of cinema media declined by more than 50 percent. Furthermore, the advertising media relative to the MRT advertising media, which is mobile media, has been affected significantly, with its contraction accounting for 25 percent compared to the same period of the previous year. Upon the analysis on the contracted media types, it would be found that such contraction has correlated with the situations which gave rise to the slowdown, particularly due to the COVID-19 epidemic, in which the government has taken various measures to contain the spread of the virus, for instance, the closures of retail shops in shopping centers, the closures of crowded places such as movie theaters, entertainment spots; and the social distancing measures to allow employees to work from home.

In the third and fourth quarters before a new wave of the COVID-19 at the end of 2020, irrespective of signs of improvement that the brand owners started returning to use budgets for advertising in order to boost their sales in the last quarter of the year, during such length of time, the advertising industry had remained affected by the political demonstrations within the country. Such foregoing factors, let alone domestic and international economic conditions where their recovery capacity is still at low level, the ongoing COVID-19 epidemic, including the existing situations of the domestic political demonstrations and a new wave of the disease in late 2020, will still have the impacts until 2021 in which the brand owners continue postponing to spend the advertising budgets to see if there will be any changes in such situations or have revised their strategies to short-term instead of long-term budgeting.

- **Spaces for Lease and Service**

During the first and second quarters of the year, the situation of the first wave of the COVID-19 epidemic had a direct impact on the space rental and service business, as a result of the government measures to reduce the spread of the COVID-19, thereby making it impossible to open the business for service. Yet, the retail space resumed in service in mid-May but it was an opening for services subject to the limitations, which were obstacles in the business operations. This included a change in consumers' spending behaviors in a manner of avoiding entering crowded areas, protecting themselves from the virus infection, switching to online shopping and delivery services in place of going out to do shopping at shopping centers. Thus, the retail space service business is still waiting for the economic recovery after the emergence of the current COVID-19 crisis. Moreover, the space tenants remain affected by a decline in sales of goods and services owing to a decrease in purchasing power of consumers; they have therefore sustained losses and are unable to expand their business as planned. Likewise, the spaces for lease and services in the MRT stations are also affected by such situation in spite of the fact that during the third and fourth quarters before the new wave of the disease outbreak, the number of MRT service users has started to gradually return to normal. However, the decrease in the purchasing power of consumers, their lifestyle modifications to spending more time at home, refraining from going outside as much as possible, and the new wave of the disease outbreak, have started to result in a slowdown or decline in the sales and number of tenants of the MRT spaces.

5) Procurement of Products and Services of Business Development Business

- **Nature of Procurement of Products**

The Company has obtained the concession from the Mass Rapid Transit Authority of Thailand (MRTA) for operation and commercial development in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), with the Company conducting commercial development in respect of 1) procurement and/or production of advertising media of various forms; 2) lease of retail areas in the MRT stations; 3) provision of service and maintenance of telecommunications system equipment; and 4) other commercial activities, by authorizing Bangkok Metro Networks Limited as the Company's representative to conduct the commercial development.

With respect to the expressways, the Company and one of its subsidiaries (NECL) has allowed private entities and individuals to take on lease of expressway areas for installation of Intelligent Traffic Signs and billboards of different types, including retail areas around toll plazas, and other business activities, such as, the use of the expressway areas for installation of 3G signal distribution devices, etc.

6) Environmental Impact of Commercial Development Business

The Company also cares for and takes into account the environmental impact on the retail shop floors in the MRT system in order to prevent any impact on the environment, quality of life, and livelihood of people and communities (details shown in Item 9: Environmental Impact of Rail Business).

2.2 Work Pending Delivery

- None -

3. Risk Factors

The Company realizes the significance of the management of risks from business operations under the changes of internal and external factors affecting its operational results. Risk management is considered a key instrument for business administration to ensure efficient and effective achievements and promote its competitiveness, as well as a key factor of the Good Governance. The Company thus arranges for the systematic risk management, monitoring, and measures to minimize risks continuously. The Board of Directors has appointed the Corporate Governance and Risk Management Committee for policy-level consideration on the sufficiency and appropriateness, with the Management to supervise the overall risk management process of the organization and perform daily routine work on behalf of the Corporate Governance and Risk Management Committee to monitor, evaluate and prepare a report on risk management to the Board of Directors for information.

In addition, the Company has also prepared an annual risk management plan, a risk management handbook as guidelines in the operations, and regularly monitors, evaluates, reviews risks every quarter to be in line with the ever-changing internal and external circumstances, including a backup plan in case of emergency, in order to ensure prompt action in solving problems and coordination with relevant units at all times. The risk management policy of the Company is as follows:

1. To adopt a risk management process in accordance with international standards or practices to ensure the efficiency of risk management, implementation and development in the same direction on an enterprise level in line with the business operation policy of the Company.
2. To treat the risk management as part of work, significant decision-making regarding management, and strategic plan to achieve the specified objectives, goals, missions and vision of the Company.
3. To carry out proactive risk management to manage risks which may result in the Company's loss of interests and opportunities.
4. To delegate risk management as the staff's responsibility at all levels and manage risks within their work units and the organization to contain risks at sufficiency and appropriate level.
5. To determine guidelines for prevention or reduction of risks at a level acceptable to the Company in order to formulate plans to manage and control risks in an acceptable level. All work units must consider the justification of expenses or costs to implement risk management measures in comparison with expected benefits.
6. To efficiently communicate the risk management within the Company for staff's effective learning, development, and compliance.
7. To prepare an annual risk management plan subject to consideration and approval of the Corporate Governance and Risk Management Committee in respect of sufficiency and appropriateness to the current business circumstances.
8. To regularly follow up and assess the results of risk management to make sure that risk management is duly and properly conducted.

Risk factors which may materially affect the Company's business operations are as follows:

3.1 Systematic Risk

3.1.1 Risk from Business Operations under Agreements with Government Sector and Government Policy

The Company has operated its businesses under the relevant Concession Agreements subject to the supervision of the government agencies, difference in the contractual parties' understanding of compliance with the terms and conditions of the respective Concession Agreements may then arise in various aspects, such as, revisions of expressway toll or MRT fare rates, responsibility for costs under the respective Agreements, and etc., about which the Company may require a certain period of time to conduct negotiations for corresponding understanding in order to avoid any impacts on the Company's business operations.

Moreover, there may be policy changes in the government administration by the political party in charge, which such changes possibly affect the existing practical guidelines or terms specified in the relevant Agreements, or may require the Company to proceed beyond those specified in the relevant Agreements or undertakings.

As a result of negotiations for resolution of the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project (the Udon Ratthaya Expressway) until the settlement could be reached, the Council Ministers' Meeting on February 18, 2020 passed a resolution approving the amendments of the relevant Agreements to settle the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project. In this regard, the Company and NECL signed the Second Stage Expressway Project (Amendment) and the Bang Pa-in - Pak Kret Expressway Project (Amendment) with EXAT on February 20, 2020.

Given the fact that the Company and NECL have been granted to extend the respective expiration periods of the existing Agreements, including the Second Stage Expressway Agreement (Sectors A, B and C), the Agreement for Extension of the Second Stage Expressway Project (Sector D), and the Bang Pa-in - Pak Kret Expressway Project Agreement, until October 31, 2035, there is no more risk of uncertainty in considering the renewal of the relevant Agreements with government agencies, but risks from the business operations pursuant to the relevant Agreements with government agencies and government policies in accordance with the Concession Agreements with EXAT and MRTA still remain. In this regard, the Company has established a joint operating system with the government agencies, both at the administrative and operating levels, by sharing sufficient information with each other to ensure good understanding towards each other, as well as regularly and closely monitoring the political situations and policy changes, and reasonably reviewing the strategies and operational plans to suit the situations and ensure the mutual interest in the long run.

3.1.2 Risk Relating to Revenues less than Projections

The Company provides both expressway and metro services, therefore, the Company's core revenues are tolls and fares, which may be affected by several external factors beyond the Company's control, such as, expansions of electric train networks, other feeder system modes with greater convenience, alternative fare rates of other transit systems available for route users, road traffic congestion, oil prices, and urban growth, and businesses surrounding the expressway or metro routes which would change the people's destinations, etc., all of which will affect the volume of the Company's service users. Moreover, the Company generates commercial development revenue, which may vary depending on the local and overseas economic conditions, competition in advertising media and retail space lease business, as well as the progress in opening of retail shops in the stations, several factors of which are beyond the Company's control. Therefore, should the Company's revenues differ from study results or projections, it may affect the liquidity and serviceability management with respect to the existing obligations owed to the lending financial institutions or creditors according to the mutually agreed schedule, such as, interest expenses, scheduled repayment of loans, operating expenses under the Agreements, as well as remuneration payable to MRTA, etc.

To minimize such risk, the Company has established a unit to closely monitor any impact which may affect various factors and formulated appropriate strategies. In addition, the Company can limit potential impacts from risk factors, such as oil prices, road traffic congestions, and alternative fare rates of other transit systems available for passengers, due to the Company's full services of expressways and metro, both of which are considered substitute products. With respect to the commercial development, the Company has developed new advertisement media to increase its commercial development revenue, such as advertisement media management via the Passenger Information Display System (PIDs), platform billboard, and digital media, including further development of retail space.

In 2020, the Company had been affected by the situation of the outbreak of COVID-19 from late February and continued to July 2020, the government and private agencies had allowed their own personnel and staff to work from home wherever possible to reduce the risk of an infection with COVID-19, not to mention the fact that the government imposed various measures, for example, risky locations must remain closed, activities in crowded places are prohibited, including the imposition of a curfew under which no persons throughout the Kingdom were allowed to depart from their dwelling places during 22.00 - 04.00 hrs. from April 3, 2020, with the approved curfew relaxation in the second phase to start from 23.00 - 04.00 hrs. from May 17, 2020, and in the third phase to start from 23.00 - 03.00 hrs. from June 1, 2020 onwards. These were aimed to impose restrictions on the people's relocation to prevent and contain the spread of COVID-19, resulting in a decrease in the travelling volume, by which the Company's core revenues were affected accordingly.

The travelling volume of both expressway and metro services which had declined from February 2020 caused a decrease in the Company's revenues in the first quarter of the year. Nevertheless, after the government's relaxation on enforcement of its measures enabling the people to do activities of their daily living more conveniently, for example, cautious opening of some shops, restaurants, beauty salons, department stores, and etc., were allowed, the travelling volume was then rising. That was, the number of expressway users returned by more than 80 percent for the metro service, due to the ongoing social distancing measures, under which, during the peak hours, only 20 percent of the number of passengers required to travel could be accommodated. In this regard, if after the situation would have been defused by which the government has unlocked all of its measures, it was expected that the travelling volume and revenues of the Company would return to normal.

Notwithstanding, the Company remains cash and bank deposits and has the undrawn credit facilities extended by many financial institutions, no liquidity problem has confronted the Company.

3.1.3 Risk from Interest Rate and Foreign Exchange Rate Fluctuations

Given that the Company remains obliged to service interest-bearing liabilities to lenders, and the Company plans for future investment in many projects, therefore, it may require a large amount of long-term loans. Thus, interest expenses are considered the significant expenditures for the Company. The increased interest rates on loans may affect the Company's operational results due to the floating interest cost in respect of the certain credit facility, thereby putting the Company at risk by bearing an increase in expenses from interest rate fluctuation or increase in the money market. However, the Company has managed such risk from interest rate fluctuation, by arranging for the loan structure, divided into loans at floating interest rates and loans at fixed interest rates including plans to issue debt instruments or debentures as suitable to the economic conditions and the Company's view of the future interest rates.

The Company entered into a conversion contract for partial floating interest rates to fixed interest rates during the period which the interest rates in market had gradually declined, in order to reduce the potential risk from interest rate fluctuation in the future. However, the Company still maintained a partial loan bearing the floating interest rate to ensure consistency with the presently economic condition which has not yet given a signal of an increase in interest rate, thereby resulting in a decrease in financial cost. In this regard, the floating interest rate would be converted into fixed interest rate to minimize the risk in the future in due course.

In addition, the Company incurred expenses in foreign currencies, for example, the maintenance cost of the M&E Equipment, and insurance premiums, part of which had to be paid in foreign currencies. Thus, should the Baht value depreciate, the Company's expenses will increase accordingly. However, the proportion of its expenses in foreign currencies is low.

The Company will still consider reducing risk from the exchange rate, such as negotiations for reduction of foreign currency expenses and buying forward, etc.

As a consequence of the outbreak of COVID-19 which has had a negative impact on financial markets in that investors therefore have faced some uncertainty as to their holding of financial instruments, as such, investments in newly-issued debt instruments were reduced in order to maintain liquidity, thereby causing a slowdown in investment demand, along with the fact that TRIS Rating Co., Ltd. revised the Company's credit rating from A with a "Stable" outlook to A with a "Negative" outlook, which may affect the Company's plan to issue new debentures.

Nonetheless, in 2020, the Company issued its debentures in the amount of Baht 3,000 Million, with a 4-12 year maturity, at the rates of 2.88 - 3.78 percent per annum. In addition, the Company has its credit facilities extended by many banks available in case of the Company's inability to issue debentures, therefore, the Company's repayment of due debts is in no way affected.

3.1.4 Risk from Serious Accidents, Public Unrest, or Natural Perils

The Company's businesses of both construction and management of the expressways and metro are exposed to an event or external factor which results in an emergency, for example, perils, serious accident, earthquake and such events which may be caused by terrorism, sabotage as bombing, riot, including gathering of insurgent groups, which may force the Company to suspend its services, thereby giving rise to loss of revenue, damaging assets, tarnishing image and destroying reliability of the Company. For this reason, the Company has set forth emergency plans in response to any such events which may suddenly occur, for example, removing various significant and essential M&E equipment for management of the expressways for storage at the safe place, as well as arranging for staff training to ensure that the staff in charge will be able to take prompt actions to resolve such emergency, for instance, practicing emergency drills of all relevant units inside and outside the Company by the way of simulation of such various situations as emergency in the metro stations from bomb threat and bomb blast in the metro stations, train breakdown and stop inside the tunnel, fire in the rolling stock, metro stations or tunnel, etc., as well as establishes a unit for monitoring, alerting and coordinating with relevant agencies to prevent the occurrence of any serious accident and to be ready for rescue operations; installation of metal detectors, CCTVs, and provision of security staff in all areas.

The Company has taken out insurance against property all risks, business interruption, public liability, and terrorism in respect to the metro service business.

3.1.5 Risk in respect of Personnel

As the government realizes the significance for solving problems on travelling and traffic in Bangkok by using the mass rapid transit system, it thus expedited the expansion of the metro network and the connecting system to other transportation systems. Therefore, it would be highly possible that there would be governmental organizations or private agencies operating the mass rapid transit system business which require additional personnel with knowledge, expertise, and skills in the technical field in the rail business. As a result, it would be likely that the Company's main personnel would be enticed away from the Company.

The risk from a shortage of competent personnel is considered as one of the Company's main risks, as they are a key factor to drive our organization to success. The Company gives priority to the personnel risk management, starting from the nomination and selection of good and qualified personnel suitable for the Company; continuous staff training courses to improve knowledge, skills, and abilities in various fields necessary for the performance of work based on each staff's position and designated duties; encouragement of the staff morale; consideration of appropriate and fair remuneration and welfare; organizing outing activities to encourage staff to love, unite, feel connected with the organization; review and revisions of the operation process and work system to ensure readiness at all times, as well as preparation of the succession plan, whereby the Company has prepared the succession plan and appointment of a working group comprising high-level executives to set up guidelines in the selection of staff to ensure the availability of personnel, both in the executive and supervisor levels, in order to prevent the risk from a shortage of personnel having knowledge, expertise and technical skills for specific work. The Company has arranged for collection of the body of knowledge for specific work and extended the results to the knowledge management program, in order to continuously improve the work process.

3.1.6 Risk in respect of Information Technology Security

With the Company's commitment to providing the services of the expressway system and the mass rapid transit system with safety, convenience, rapidity, reliability, punctuality and efficiency, the Company then needs to employ the cutting-edge technology to support its operations, including the provision of the services with the highest efficiency in a constant manner, which there may be a risk from disruption of main work systems, such as the collection control system, traffic control system, electricity system, and equipment (electrical power system, signaling system, communications system, SCADA system, platform screen door system, automatic fare collection system, signage system) and the Company's internal computer system (Back Office). If there is an attempt to have unauthorized or unapproved access to the information technology system of the Company, from both internal and external persons, including computer virus attacks, there is a risk which the fare collection system may break down; the fare management system may be disrupted and out of service.

The Company sets up an emergency plan to deal with possible incidents which may have an impact on system equipment, comprising preventive and corrective plans for system equipment, on a regular basis, for prevention and arranging for staff in charge to ensure their access to tackling problems immediately in case of emergency in the work systems; there is a process of replaceable cards management in the case where the fare management system is not able to record entry-exit to and from the gates. The system is designed to enable all fare collection equipment to collect information in a stand-alone manner in the case where the server is not able to collect information on travelling of passengers. Manuals are prepared to specify procedures and methods for the safety of the information technology system. Furthermore, the Company formulates the policy to improve the toll collection system at the control center level in accordance with the ISO/IEC 27001:2013 Information Security Management System standard in order to provide a higher degree of security to the information technology of the toll collection system at the control center level, and also defines a standard for critical information management to ensure the business continuity, enhancement of the trust in the organization on the global stage. The Company has obtained certification of the ISO/IEC 27001:2013 standard for development of the process and Information Security Management System (ISMS) in accordance with the ISO/IEC 27001:2013 international standard for the toll collection systems at the Si Rat Expressway Control Center (CCB 2) and the Si Rat - Outer Ring Road Expressway Control Center (CCB7), as well as developing personnel in the field of information technology security management to enable them to perform works under the work process / system so developed, including following up news on cyber threats for taking precautions and making preparedness to handle at all times.

3.1.7 Operational Risks from the COVID-19 Outbreak Situation

There was recently the emerging infectious disease known as COVID-19 which was caused by a newly discovered and unknown strain of the Coronavirus, and which had widely spread in Wuhan of China. Currently, the large outbreak of the COVID-19 infection has occurred worldwide.

As a result of the situation of the outbreak of the COVID-19, the Company has continued to monitor the situation and heighten the precautionary measures in both the MRT Blue Line and the MRT Purple Line, with such measures being taken to cover passengers, staff, contractors, and visitors. The Company has implemented the following:

- 1) Adopting the work rules and regulations regarding prevention and containment of dangerous communicable diseases and the business continuity management plan to cope with the situation of the outbreak of the COVID-19;
- 2) Imposing precautionary measures against the spread of COVID-19 in accordance with the government measures, namely:
 - Providing face masks for staff;
 - Avoiding crowded activities;
 - Splitting the work teams to reduce their risk of exposure to the disease transmission;
 - Requiring all staff, contractors and visitors entering the Company' areas to always wear face masks and frequently wash their hands in case of a conversation or close contact with other persons;
 - Avoiding travelling to any other provinces at risk of the ongoing outbreak;
 - Providing alcohol or gel hand sanitizers for staff and passengers;
 - Disinfecting inside the trains at the Depots every day before the train service, and spraying disinfectants inside the trains at the terminal stations during the rush hours;
 - Disinfecting inside the metro stations, the office buildings in the common areas, and the frequently touched points or devices every hour, the Company's common vehicles every trip, and shared office equipment;
 - Providing screening points for staff, contractors and passengers by measuring body temperature before entering the area;
 - Prioritizing the passengers' access to the services at each station's entrances-exits, shop floor, platform floor, and ensuring seat distancing on board in accordance with social distancing measures;
- 3) Adjusting the train service in accordance with the Emergency Decree on Public Administration in Emergency Situation B.E. 2548 (2005) (No. 3) prohibiting any person throughout the Kingdom from departing from his/her dwelling place between 23.00-04.00 hrs., and other government requirements. Adjusting the service hours and making it known to the passengers for acknowledgement of the change of the last train timetables of the MRT Blue Line and the MRT Purple line to end at 22.30 hrs;
 - Increasing trains while increasing service frequencies during rush hours in the evening until the service closing of both the MRT Blue Line and the MRT Purple Line to ensure the passengers' convenience and relieved congestion;
 - Requiring the MRT service users to always wear medical face masks while using the services.
- 4) The Company ensures the implementation in the event that any staff is found infected with the disease in accordance with the work rules and regulations regarding prevention and containment of dangerous communicable diseases, and the business continuity management plan, as follows:
 - Notifying the Department of Disease Control and the regulatory body (MRTA) about the staff infected with the COVID-19;
 - Assessing a group of staff at risk of being further infected with the disease, and requiring the group of staff at risk to comply with the quarantine measures;
 - Assessing the areas where pathogen spread may occur; considering zoning the work areas for cleaning and spraying disinfectants;
 - Making passengers, mass media, and the public known about such implementation in order to build their confidence in the use of the services

In this regard, the Company has continued to strictly observe the precautionary measures against the spread of the COVID-19 throughout the years 2020 and 2021 in conformity with the government measures.

3.2 Corporate Specific Risk

3.2.1 Risk from Legal Disputes

Pursuant to the existing Concession Agreements, the Company and NECL had a total of 19 disputes with EXAT on a different interpretation of several matters, such as adjustment of toll rates and responsibility for costs under the Agreements. The disputes were referred to the Arbitral Tribunal in accordance with the dispute settlement procedures under the Agreements and in the Administrative Court.

On February 18, 2020, the Council of Ministers' Meeting resolved to approve the amendment of the Agreements to settle the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project. The Company and EXAT signed the Second Stage Expressway Agreement (Amendment) while NECL and EXAT signed the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) on February 20, 2020. In this regard, the Company, NECL and EXAT had already filed the withdrawals of their respective Plaints or execution of all the judgments, as a result, the Second Stage Expressway Agreement (Amendment) between the Company and EXAT, and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) between NECL and EXAT came into effect.

3.2.2 Risk from Return on Investments in Companies less than Projections

The Company may be exposed to a risk from return on investments in companies less than projections in the event that the operational results of such companies whose shares were held by the Company do not meet the projections. To minimize such risk, the Company will take into account the proportion of investments in companies in line with the Company's investment policy whereby those investments can be converted into cash when there are appropriate business opportunities and occasions.

Since 2019, the Company has changed its policy on investment from investments in associates recognizing share of profit or loss according to the shareholding percentage to other long-term investments in available-for-sale securities, which a change in market capitalization would be recorded on the end date of the accounting period. The price difference is treated as unrealized gain or loss indicated in the shareholders' equity.

In this regard, the decrease in the shareholding percentage to be the investment in the available-for-sale securities shall be deemed to minimize a risk from return on investments in companies less than projections in the event that such company's operational results fail to meet the projections. However, the Company sent its representatives to be members of the board of directors of the companies invested by the Company to ensure the Company's participation in their management and acknowledge the operational results of the companies invested by the Company on a regular basis.

3.2.3 Risk Relating to Fluctuation of Cost of Rail Business

Costs of rail business comprise the cost of farebox and cost of train service, which are deemed the main expenditure of the Company's business operations, comprising repairs and maintenance costs for the metro and civil infrastructure, public utility cost, personnel cost, and payment of remuneration from fare revenue.

As for the maintenance costs under the M&E contract, the Company's contract is in foreign and Baht currencies, subject to adjustment based on the Consumer Price Index as specified in the contract. Given the long-term contract, the Company will be then exposed to risk due to changes in such indices.

The public utility cost mainly comprises the cost of electricity used at the metro stations and for train operations. The cost of electricity may be adjusted according to the electricity rates of the Metropolitan Electricity Authority, which may result in the Company's increased cost.

Therefore, the Company's costs of rail business in respect of the cost of farebox vary according to the aforesaid costs. However, in the past, the Company remained able to effectively control its cost of farebox. Besides, the cost of farebox is mostly fixed cost, not varying directly according to the increased volume of passengers, provided that there is no material change in the volume of passengers to the extent that the Company is required to add the number of trains for service to enhance the capacity to accommodate the passengers.

In the Concession Agreement for the MRT Purple Line Project, the service fees for the O&M Services payable by MRTA to the Company are calculated and based on the projections of operating expenses estimated by the Company, whereby such service fees may be adjusted only based on the actual inflation rate and electricity charge rate under the method specified in the Concession Agreement. Therefore, profits from the Operation Service will vary according to the Company's ability to manage the actual costs and expenses to mirror the specified projections. Should the actual costs and expenses be different from the projections, the Company's operational results may be affected since the Company is not able to request compensation or increase the service fees from MRTA.

However, with the expertise and experience in the management of the MRT Blue Line Project, the Company is confident in its ability to efficiently manage costs and expenses for operations to be close to the projections.

3.2.4 Risk from Engagement of Outsourced Experts as Main Contractors for Supply and Maintenance of the M&E Equipment

The Company has accepted the transfer of the agreement for the procurement of the M&E Equipment and an agreement for maintenance of the M&E Equipment with main contractors, namely, Siemens Limited, Thailand, and Japan Transportation Technology (Thailand). Thus, in the event that such outsourced expert group, as such main contractors, is unable to provide services under the agreements to the Company or there is any change in the maintenance agreement, the Company's business operation may be affected and in the event that the trains cannot be opened for service, the Company's image may be affected.

In this regard, the Company has managed the risk by study information from the members of the international federations of public transport operators, e.g., UITP, APTA, NOVA Group of Metros, including the advice from Lloyd's Register Rail, the highly experienced consultant, it is then possible for the Company to select and procure other manufacturers' M&E Equipment which is compatible with its existing system. The Company also formulates the strategic plan in developing the quality of its personnel to ensure they have sufficient capabilities for working with local and overseas equipment manufacturers and contractors in the maintenance and repair of the M&E Equipment and the rail system to ensure efficiency without reliance on the sole existing manufacturer.

3.2.5 Risk from Work Operations of Expressway Construction and Management Business

The Company takes into account the risk from operations of expressway construction and management business which may be resulted from primary factors, i.e., personnel, work system, operation system and external factors, which cause error or insufficiency of work procedures, employees, work system or information technology system, including employees' fraud and events or external factors, which may give rise to monetary and non-monetary damage, namely, damage to reputation or security of the Company. Therefore, it is greatly necessary to have a thorough supervision system with due care. The Company has then arranged for a specific unit having duties to monitor and maintain the routes and toll collection system in accordance with the operation standards, which can be assured by the experience and expertise of staffs in charge from all divisions, thereby leading to the quality and availability of efficient, complete and continued service.

In addition, the Company has also established the preventive measure for the significant structures of the expressway systems so as to be available for full-time service by way of drawing up a plan for inspection of the structures of the Si Rat Expressway, the Udon Rathaya Expressway, and the Si Rat - Outer Ring Road Expressway to be in line with the inspection by JMI Pacific Co., Ltd., a designing company with expertise in structural inspection. The monitoring, surveillance, and maintenance were conducted to ensure that there would be no impact on the use of the expressways. As for to the toll collection, communication and traffic control systems, which are important to its operations, the Company has provided the preventive maintenance as well as the data backup system, the power backup system and the management of purchase of spare materials.

Moreover, the Company may be exposed to the risk from non-functional toll collection equipment which may arise from various causes, such as, inoperative electrical system due to a power failure on the part of the Metropolitan Electricity Authority, error processing by the operating system, etc. In this regard, the Company gives high priority to such risk management by arranging for power backup system, a security system for prevention of access to significant work systems by any third parties, determination of authorization levels of access to information and equipment, and installation of virus scan software and data backup in the operating system to ensure instant substitution.

3.2.6 Risk from Delayed Construction and Operation of the Projects

The Company executed the Concession Agreement for the MRT Blue Line Extension Project with the Mass Rapid Transit Authority of Thailand (MRTA) on March 31, 2017, whereby the Company shall have duties in supply, installation, and test run and commissioning of the M&E Systems for the MRT Blue Line Extension Project, provided that such M&E Systems shall be connected with those of the M.R.T. Chaloem Ratchamongkhon Line Project in order to provide the train operation service in phases as planned. The Company managed such risk by entering into an agreement engaging CH. Karnchang Public Company Limited as Project Manager, as well as for supply, installation, and test run and commissioning of the M&E Systems for the Project. Such implementation went according to plan, as follows:

- Phase 1: Bang Sue Station - Tao Poon Station, under the Agreement scheduled for service opening by August 15, 2017, was opened for service by the Company on August 11, 2017;
- Phase 2: Hua Lamphong Station - Lak Song Station, under the Agreement scheduled for service opening within 30 months, was opened for service by the Company on September 29, 2019; and
- Phase 3: Tao Poon Station - Tha Phra Station, with its service opening within 36 months (in March 2020), was opened for its commercial operation by the Company on March 30, 2020, thereby providing a single rail network (Through Operation) for the train operations of the MRT Blue Line and the MRT Blue Line Extension Projects, and such service generates income for the whole line as specified in the respective Concession Agreements.

The MRT Blue Line Extension Project had completed all of its 3 phases of service within the specified period of time under the Agreement; it was then deemed that there remained no risk from the delayed operation of the MRT Blue Line Project.

4. Property Used in Business Operations

4.1 Main Assets

As of December 31, 2020, the Company and its subsidiaries had main assets used in business operations, as follows:

(Unit: Million Baht)

Class of Assets	Net Book Value
1. Building and equipment	379
2. Rights to operate expressway sectors	31,702
3. Rights to use sites for expressway construction	-
4. Intangible assets under the Concession Agreement for the MRT Blue Line Project	44,684
Total	76,765

The main assets of the Company and its subsidiaries as indicated above can be classified into class of assets and companies, as follows:

4.1.1 Building and Equipment

As of December 31, 2020, the book value of the building and equipment as per the consolidated financial statements of the Company and its subsidiaries was as follows:

(Unit: Million Baht)

Company	Net Book Value	Ownership	Encumbrance
BEM	347	Owner*	None
NECL	14	Owner**	None
BMN	18	Owner	None
Total	379		

- Remarks:
- * This refers to the building, construction improvement, and certain structures of the Second Stage Expressway System. Despite the fact that the title to such building is owned by EXAT, the Company is granted the right to use such building to operate the Second Stage Expressway Project under the conditions as specified in the Agreement. The Company takes on the lease of a building space for use as its head office located at No. 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400, at the rental rate of Baht 10,000 per month.
 - ** NECL does not own any property, plant, and equipment but NECL takes on the lease of a building space for use as its head office located at No. 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400, at the rental rate of Baht 10,000 per month. NECL uses the Bang Pa-in - Pak Kret Expressway Control Center Building, which is part of the Bang Pa-in - Pak Kret Expressway Project, to supervise the operations. Despite the fact that the title to such building is owned by EXAT, NECL is granted the right to use such building to operate the Bang Pa-in - Pak Kret Expressway Project under the conditions as specified in the Agreement.

4.1.2 Rights to Operate Expressway Sectors

As of December 31, 2020, the book value of the rights to operate expressway sectors as per the consolidated financial statements of the Company and its subsidiary was as follows:

(Unit: Million Baht)

Company	Net Book Value
BEM	26,965
NECL	4,737
Total	31,702

The rights to operate expressway sectors are considered the costs of construction of the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway, and the Udon Raththaya Expressway, with the details as of December 31, 2020, comprising:

(Unit: Million Baht)

Class of Assets	Net Book Value	Ownership	Encumbrance
Si Rat Expressway (Sectors AB, C and D)	2,856	EXAT	None
Si Rat - Outer Ring Road Expressway	23,418	EXAT	None
Udon Raththaya Expressway	4,737	EXAT	None
Project costs during construction	691	EXAT	None
Total Net Book Value	31,702		

Given that the Expressway Agreements above are on a BTO (Build, Transfer and Operate) basis, the title to all expressways, including various permanent constructions in relation to or used in connection with the expressway systems, shall be vested in EXAT immediately upon construction by the Company and NECL. Upon opening for service, the Company and NECL are entitled to utilize such property and shall have the duty to keep such property maintained throughout the term of the Agreements.

On February 18, 2020, the Council of Ministers resolved to approve the amendment to the Agreements for settlement of all of the disputes between the Company/NECL and EXAT; and on February 20, 2020, the Company/NECL and EXAT signed the Second Stage Expressway Agreement (Amendment) and signed the Pa-in - Pak Kret Expressway Project Agreement (Amendment), for the respective specified concession periods of 15 years and 8 months from February 20, 2020, which are entitled to be extended under the remaining entitlement in the existing Agreements. In this regard, the Company and NECL are required by these Agreements to be responsible for expenses relating to toll collection, traffic management and rescue operation on the expressways, including costs of maintenance of the expressways under the relevant Agreements throughout the term of the Agreements. As for the Si Rat - Outer Ring Road Expressway Agreement, it has the specified concession period of 30 years from December 15, 2012.

The essence of revenue sharing and renewal of the concession periods under the respective Agreements (Amendments) is as follows:

Expressway	Revenue Sharing The Company/the Subsidiary : EXAT	Extended Period	Remaining Extension Entitlement *
Si Rat (Sectors AB, C and D)	First Stage and Second Stage Sector AB 40 : 60 Sector C 100 : 0	15 years and 8 months to October 2035	4 years and 4 months
	Sector D 100 : 0	8 years and 6 months to October 2035	11 years and 6 months
Udon Rattaya (Bang Pa-in - Pak Kret)	100 : 0	9 years and 1 month to October 2035	10 years and 11 months

* The remaining period under entitlement to full extension of the respective Agreements as specified in the existing Agreements.

Toll rates have been revised to increase at a fixed rate every 10 years from September 1, 2018 for the Second Stage Expressway Agreement and every 10 years from November 1, 2018 for the Bang Pa-in - Pak Kret Expressway Project Agreement at the rates specified therein.

4.1.3 Rights to Use Sites for Expressway Construction

The rights to use sites for expressway construction are considered as a part of the rights to operate completed expressway sectors. The Company recorded the initial costs of the rights to use sites for expressway construction at the costs equivalent to the present value of the encumbrance in payment of compensation for site acquisition cost to EXAT under the Second Stage Expressway Agreement after initial recognition of the rights to use sites for expressway construction which showed the value at costs, less accumulated amortization. The rights to use sites for expressway construction were totally amortized in the first quarter of 2020.

4.1.4 Intangible Asset under the Concession Agreement of the MRT Blue Line Project

As of December 31, 2020, the book value of intangible assets under the Concession Agreement for the MRT Blue Line Project as per the consolidated financial statements of the Company and its subsidiary were as follows:

(Unit: Million Baht)

Company	Net Book Value
BEM	44,377
BMN	307
Total	44,684

The intangible assets under the Concession Agreement for the MRT Blue Line Project are considered the costs of construction of the MRT Blue Line Project, with the details as of December 31, 2020, comprising:

(Unit: Million Baht)

Company	Class of Assets	Net Book Value	Ownership	Encumbrance
BEM	M&E Equipment	41,741	Owner	None
BEM	M&E Equipment and leasehold improvements, telecommunications system equipment, and advertising system equipment in metro stations	1,125	Owner	None
BMN	M&E Equipment and leasehold improvements, telecommunications system equipment, and advertising system equipment in metro stations	306	Owner	None
BEM	Project costs during construction	1,511	Owner	None
BMN	Project costs during construction	1	Owner	None
	Total Net Book Value	44,684		

4.2 Investments in Other Companies

4.2.1 Summary of Investments as per the Financial Statements

As of December 31, 2020, the book value of investments in other companies as per the Company's separate financial statements was as follows:

(Unit: Million Baht)

Company	Book Value under Cost Method	Portion of Investment in each Company (percent)	Paid-up Capital	Type of Investments	Nature of Business Operations
1. Northern Bangkok Expressway Company Limited Less: Provision for impairment of investments Net investments	2,604 (2,450) <u>154</u>	99.99	5,250	Subsidiary	- Construction and operation of the Bang Pa-in - Pak Kret Expressway Project
2. Bangkok Metro Networks Limited Less: Provision for impairment of investments Net investments	507 (16) <u>491</u>	90.52	254	Subsidiary	- Development of lease retail spaces in the metro stations and the basement level of the park and ride facility - Procurement of advertising boards or media in the metro stations and inside the trains - Provision of service and maintenance of telecommunications system equipment in the metro stations
3. TTW Public Company Limited	4,061	18.47	3,990	Other Company	- Production and distribution of tap water
4. CK Power Public Company Limited	3,340	17.59	8,129	Other Company	- Investment in other companies (Holding Company) operating the energy business
5. Eastern High-Speed Rail Linking Three Airports Company Limited	400	10.00	4,000	Other Company	- Development of electric railway projects

4.2.2 Policy on Investment and Management in the Subsidiaries

The Company has the policy to invest in businesses which are related, similar, or beneficial, and support the Company's business operations, in order to provide opportunities and long-term yields, and strengthen the Company's stability and operational results.

The investment policy shall be as follows:

1. To invest in projects or acquire ordinary shares in project operators, in a manner of longterm investments;
2. To invest up to the minimum proportion to allow the Company to participate in setting out policies, monitoring and reviewing operations of such companies so invested;
3. Not to invest in any project giving rise to environmental impact or contrary to the good moral of the society.

As of December 31, 2020, the Company invested in the subsidiaries and other companies, as follows:

1) Northern Bangkok Expressway Company Limited ("NECL")

The Company established NECL in 1996, by holding 99.99 percent of its shares. The potential benefits to be derived by the Company would be in the form of dividend from the investment in shares of NECL. Due to the impact on NECL from the government policy for construction of the competing road, NECL's revenue did not meet its projection. In this regard, NECL's operational results continued to sustain a loss to the extent that the accumulated loss exceeded its equity, resulting in shareholders' deficit. In 2003, NECL, therefore, increased its registered capital by Baht 3,000 Million to become the registered capital of Baht 6,000 Million. At present, NECL called for share payment of 75 percent of the increased registered capital of Baht 3,000 Million. NECL has started to generate profits since 2013 onwards. The Company has assigned its five executives to be members of NECL's board of directors, from a total of six directors of NECL. In case NECL would take any actions which may significantly affect the Company, NECL would be required to seek prior approval from the Company's Board of Directors' Meeting. Furthermore, the Company is also the service provider for all operations of NECL.

As of December 31, 2020, NECL's registered and paid-up capital was Baht 5,250 Million. The Company's shareholding in NECL was 99.99 percent of its registered capital.

2) Bangkok Metro Networks Limited ("BMN")

The Company established BMN on February 25, 2009, to operate the businesses of procurement and production of advertising media in various forms inside the metro stations and inside the trains, lease of retail spaces in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) stations and spaces in the basement level of the Lat Phrao park and ride facility. In addition, BMN also provides service and maintains telecommunications system equipment inside the metro stations. Subsequently, in October 2018, the Company, who shall be exclusively entitled to commercial development in the M.R.T. Chaloem Ratchamongkhon Line Project in accordance with the Concession Agreement for the MRT Blue Line Project dated March 31, 2017, entered into an agreement engaging BMN as a management representative for all commercial development in lieu of granting of the commercial development right.

As of December 31, 2020, BMN's registered and paid-up capital was Baht 254 Million, whereby the Company held shares in BMN representing 90.52 percent of all BMN's shares sold.

In this regard, the Company has a control policy or participates in setting out the significant policies on the business operations by assigning its five representatives to be members of BMN's board of directors, from a total of seven directors of BMN.

3) TTW Public Company Limited (“TTW”)

The Company has invested in TTW which operates the business of production and distribution of tap water to the Provincial Waterworks Authority for further distribution to water users in the vicinity of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority, for a period of 30 years from July 21, 2004, on a Build-Own-Operate (BOO) basis, and TTW also acquired the rights to manage the tap water production and wastewater treatment systems in Bang Pa-In Industrial Estate from Bangpa-in Land Development Co., Ltd., for a period of 30 years from August 6, 2009.

TTW has invested in Pathum Thani Water Co., Ltd., representing 98 percent of its registered capital. Such company operates the business of production and distribution of tap water in the vicinity of Pathum Thani-Rangsit, Pathum Thani Province, under the Water Production and Distribution License Agreement with the Provincial Waterworks Authority, for a period of 25 years from October 15, 1998. TTW has also invested in Thai Water Operations Company Limited which operates the business of operation and management of tap water production and distribution systems and wastewater treatment, in which TTW holds shares representing 68 percent of its registered capital. In addition, TTW has invested in the energy business through holding 24.98 percent of shares in CK Power Public Company Limited whose main business is holding company in other companies operating the business of production and distribution of electricity from various types of energy. The potential benefits to be derived by the Company would be in the form of dividend from the investment.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of TTW. As of December 31, 2020, the Company held shares in TTW representing 18.47 percent of its registered capital.

4) CK Power Public Company Limited (“CKP”)

The Company has invested in CKP, which operates core business by investing in other companies (Holding Company) operating the business of production and distribution of electricity from various types of energy. As of December 31, 2020, CKP invested by holding shares representing 61.33 percent in SouthEast Asia Energy Limited; 30 percent in Nakhon Ratchasima Solar Limited; 30 percent in Chiangrai Solar Limited; 100 percent in Bangkhenchai Company Limited; 65 percent in Bangpa-in Cogeneration Limited; 37.50 percent in Xayaburi Power Company Limited; and 42 percent in Luang Prabang Power Company Limited. The potential benefits to be derived by the Company would be in the form of dividend from the investment.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of CKP. As of December 31, 2020, the Company held shares in CKP representing 17.59 percent of its registered capital.

5) Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)

The Company invested in EHSR, which was established by CPH Group to carry out development of electric railway projects, design and construction works, civil work, in association with other projects, supply of M&E Systems and rolling stocks, including provision of train operation and maintenance services, and development of areas for supporting the electric railway services of the project, for a period of 50 years (with the construction period of 5 years and the operation period of 45 years). The potential benefits to be derived by the Company would be in the form of dividend from the investment.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of EHSR. As of December 31, 2020, the Company held shares in EHSR representing 10 percent of its registered capital.

5. Legal Disputes

5.1 Disputes with the Expressway Authority of Thailand (“EXAT”)

The Company/the subsidiary and the EXAT had reached the mutual agreement for settlement of a total of 19 disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Agreement (the Udon Rattaya Expressway), in the total amount of Baht 134,274.8 Million, which subsequently on February 18, 2020, the Council of Ministers had resolved to grant approval for the Company/the subsidiary and the EXAT to amend the relevant Agreements to settle the disputes; and on February 20, 2020, the Company/the subsidiary and the EXAT then signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment).

Currently, the Company/the subsidiary and the EXAT have completely complied with the applicable laws for settlement of all of the disputes between each other.

6. General Information and Other Significant Information

6.1 General Information

(1) General information of the Company

Company Issuing Securities	: Bangkok Expressway and Metro Public Company Limited (“BEM”)
Business Operation	: Construction and management of the expressways and the rail mass rapid transit system projects, including other related businesses
Company Registration No.	: 0107558000491
Registered Capital	: Baht 15,285 Million, which is fully paid up.
Head Office	: 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Telephone	: 0 2641 4611 and 0 2354 2000
Fax	: 0 2641 4610 and 0 2354 2040
Website	: www.bemplc.co.th
Branch Office (1)	: 238/7 Asoke-Dindaeng Road, Bangkapi Subdistrict, Huai Khwang District, Bangkok 10310
Telephone	: 0 2641 4611
Fax	: 0 2641 4610
Branch Office (2)	: 189 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Branch Office (3)	: 189/1 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Branch Office (4)	: 189/2 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Telephone	: 0 2354 2000
Fax	: 0 2354 2040

(2) Legal entities in which the Company holds 10 percent of shares or more

Company Issuing Securities	: Northern Bangkok Expressway Company Limited (“NECL”)
Business Operation	: Construction and management of the Udon Rathaya Expressway
Head Office	: 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 6,000 Million, Baht 5,250 Million of which is paid up.
Shareholding Percentage	: 99.99 percent
Telephone	: 0 2641 4647
Fax	: 0 2641 4646
Company Issuing Securities	: Bangkok Metro Networks Limited (“BMN”)
Business Operation	: Procurement and production of advertising media in various forms in the MRT stations and inside the MRT trains, lease of retail space in the MRT stations, the MRT Blue Line Project and the basement level of the Lat Phrao park and ride facility, including provision of service of telecommunications system in the MRT stations and inside the MRT trains.
Head Office	: 832 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 254 Million, which is fully paid up.
Shareholding Percentage	: 90.52 percent
Telephone	: 0 2690 8200
Fax	: 0 2690 8212
Website	: www.bmn-mrt.com
Company Issuing Securities	: TTW Public Company Limited (“TTW”)
Business Operation	: Production and distribution of water supply to the Provincial Waterworks Authority and investment in companies operating the business of other public utilities
Head Office	: 30/130 Moo 12, Buddhamonthon 5 Road, Tambon Rai Khing, Amphoe Samphran, Nakhon Pathom Province 73210
Registered Capital	: Baht 3,990 Million, which is fully paid up.
Shareholding Percentage	: 18.47 percent
Telephone	: 0 2811 7526
Fax	: 0 2420 6064
Website	: www.ttwplc.com
Company Issuing Securities	: CK Power Public Company Limited (“CKP”)
Business Operation	: Investment by holding shares in other companies (Holding Company) operating the business of production and distribution of electricity from various types of energy
Head Office	: 587 Viriyathavorn Building, 19th Floor, Sutthisan Winitchai Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 9,240 Million, Baht 8,129 Million of which is paid up.
Shareholding Percentage	: 17.59 percent
Telephone	: 0 2691 9720
Fax	: 0 2691 9723
Website	: www.ckpower.co.th

Company Issuing Securities	: Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)
Business Operation	: Development of railway projects, performance of design and construction, civil works in association with other projects, supply of M&E Systems and rolling stocks, including provision of train operation and maintenance services, and development of areas for supporting the rail services of the project.
Head Office	: 313 C.P. Tower, 14th Floor, Silom Road, Silom Subdistrict, Bangrak District, Bangkok 10500
Registered Capital	: Baht 4,000 Million, which is fully paid up.
Shareholding Percentage	: 10.00 percent
Telephone	: 0 2858 3149

(3) Reference

Securities Registrar	: Thailand Securities Depository Company Limited The Stock Exchange of Thailand 93 Rachadapisek Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400 Telephone : 0 2009 9382 Fax : 0 2009 9476
Auditor	: EY Office Limited 193/136-137 Lake Rajada Office Complex, 33rd Floor, New Rajadapisek Road, Klongtoey District, Bangkok 10110 Telephone : 0 2264 0777 Fax : 0 2264 0789
Legal Advisor	: The Legists Group Abdulrahim Place, 9th Floor No. 990 Rama IV Road, Silom Subdistrict Bangrak District, Bangkok 10500 Telephone : 0 2636 1111 Fax : 0 2636 0000
Financial Advisor	: Advisory Plus Company Limited 1550 Thanapoom Tower, 10th Floor New Petchburi Road, Makkasan Subdistrict Ratchathewi District, Bangkok 10400 Telephone : 0 2652 7858-64 Fax : 0 2652 7867
Debenture Registrars	: Siam Commercial Bank Public Company Limited G Tower, Grand Rama 9, 15th Floor, North Wing 9, Rama 9 Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310 Telephone : 0 2128 2326-9 Fax : 0 2128 4625 : Krung Thai Bank Public Company Limited 977/2 Phaholyothin Road, Samsen Nai Subdistrict Phayathai District, Bangkok 10400 Telephone : 0 2298 0831 Fax : 0 2298 0835

Debenture Holders' Representative : Siam Commercial Bank Public Company Limited

G Tower, Grand Rama 9, 17th Floor, North Wing 9,
Rama 9 Road, Huai Khwang Subdistrict,
Huai Khwang District, Bangkok 10310
Telephone : 0 2128 2316-7
Fax : 0 2128 4621

Regularly Contacted Financial Institutions : Krung Thai Bank Public Company Limited

35 Sukhumvit Road, Khlong Toei Nuea Subdistrict
Wattana District, Bangkok 10110
Telephone : 0 2208 4631-9
Fax : 0 2256 8619

: Siam Commercial Bank Public Company Limited

9 Ratchadaphisek Road, Chatuchak Subdistrict
Chatuchak District, Bangkok 10900
Telephone : 0 2256 2323

: TMB Bank Public Company Limited

3000 Phaholyothin Road, Chom Thong Subdistrict
Chatuchak District, Bangkok 10900
Telephone : 0 2299 2511-2
Fax : 0 2299 2752

: Bangkok Bank Public Company Limited

333 Silom Road, Silom Subdistrict
Bang Rak District, Bangkok 10500
Telephone : 0 2230 1036
Fax : 0 2230 2722

6.2 Other Significant Information

- None -

7. Information on Securities and Shareholders

7.1 Number of Registered Capital and Paid-up Capital

- 7.1.1 The Company has the registered capital of Baht 15,285 Million, comprising 15,285 million ordinary shares at the par value of Baht 1 per share, Baht 15,285 Million of which has already been paid up, divided into 15,285 million ordinary shares at the par value of Baht 1 per share.
- 7.1.2 As at December 30, 2020, the Company's 1,307,026,321 ordinary shares were used as underlying securities for the issuance of Non-Voting Depository Receipt or NVDR, representing 8.55 percent of all shares in the Company. Such shares entitle their holders to receive dividends from investment in NVDR in the same amount as such dividends received by Thai NVDR Company Limited from the Company, provided that NVDR holders shall not be entitled to vote at any shareholders' meeting of the Company. Investors may check the number of NVDR from the Stock Exchange of Thailand's website at www.set.or.th/nvdr.

7.2 Shareholders

7.2.1 List of Major Shareholders

As at June 26, 2020, which was the latest closing date of the share register book, the first 10 major shareholders were as follows:

No.	Shareholders	Number of Shares (shares)	Shareholding Percentage (percent)
1	Group of CH. Karnchang Public Company Limited ⁽¹⁾	4,923,781,781	32.21
2	Mass Rapid Transit Authority of Thailand	1,256,259,584	8.22
3	Thai NVDR Company Limited	1,205,839,759	7.89
4	Krung Thai Bank Public Company Limited	815,356,075	5.33
5	Social Security Office	480,341,600	3.14
6	Mr. Wichai Wachiraphong	369,888,857	2.42
7	STATE STREET EUROPE LIMITED	305,512,331	2.00
8	Bangkok Bank Public Company Limited	303,448,709	1.99
9	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	290,696,674	1.90
10	Mr. Min Tienworn	200,000,000	1.31
	Total	10,151,125,370	66.41
	Others	5,133,874,630	33.59
	Grand Total	15,285,000,000	100.00

Remarks: ⁽¹⁾ CH. Karnchang Group's shareholding in the Company represented 32.21 percent of the Company's paid-up capital, with the details as follows:

<u>CH. Karnchang Group</u>	<u>Number of Shares</u>	<u>% of Paid-up Capital</u>
1. CH. Karnchang Public Company Limited ⁽²⁾	4,787,121,829	31.32
2. CH. Karnchang-Tokyu Construction Company Limited ⁽³⁾	136,659,952	0.89
	<u>4,923,781,781</u>	<u>32.21</u>

⁽²⁾ CH. Karnchang Public Company Limited ("CH. Karnchang Plc.") operates the general construction business, with Trivisvavet Group holding shares representing 33.54 percent of the Company's paid-up capital (information as of June 30, 2020), with the details as follows:

<u>Trivisvavet Group</u>	<u>Number of Shares</u>	<u>% of Paid-up Capital</u>
1. Mahasiri Siam Co., Ltd. ⁽⁴⁾	242,745,365	14.331
2. CH. Karnchang Holding Co., Ltd. ⁽⁵⁾	181,787,530	10.732
3. CK. Office Tower Co., Ltd. ⁽⁶⁾	86,048,212	5.080
4. Mrs. Sopida Trivisvavet	15,383,225	0.908
5. Mr. Plew Trivisvavet	14,231,497	0.840
6. Mrs. Pranee Tongkittikul	6,614,342	0.390
7. Mrs. Saikasem Trivisvavet	6,061,142	0.358
8. Miss Walainut Trivisvavet	3,177,484	0.187
9. Mr. Nattavut Trivisvavet	2,465,785	0.146
10. Miss Supamas Trivisvavet	1,700,000	0.100
11. Mr. Kritsada Trivisvavet	1,366,145	0.081
12. Mr. Kris Trivisvavet	1,363,070	0.080
13. Mr. Puwanet Trivisvavet	1,114,855	0.066
14. Mrs. Korakot Trivisvavet	1,100,000	0.064
15. Miss Kanthanat Trivisvavet	1,067,600	0.063
16. Miss Thanatchsorn Trivisvavet	780,040	0.046
17. Miss Sawanya Trivisvavet	600,025	0.040
18. Mr. Prasert Trivisvavet	204,285	0.012
19. Mrs. Ornanong Trivisvavet	102,775	0.006
20. Mrs. Saranthorn Trivisvavet	100,000	0.005
21. Miss Phatsanan Trivisvavet	97,000	0.005
22. Miss Suratha Trivisvavet	59,300	0.003
23. Mr. Sompol Trivisvavet	25,500	0.001
24. Mrs. Bangorn Trivisvavet	10,000	0.000
25. Mrs. Chayanich Trivisvavet	1,742	0.000
	<u>568,206,919</u>	<u>33.544</u>

Shareholders may view additional information of CH. Karnchang Plc. in the Annual Registration Statement (Form 56-1) on the website of the SEC Office (www.sec.or.th) or the website of the Stock Exchange of Thailand (www.set.or.th).

⁽³⁾ CH. Karnchang-Tokyu Construction Company Limited operates the business of construction of all types, having a total of 1,000,000 shares, with its 549,999 shares representing 55 percent held by CH. Karnchang Plc.

⁽⁴⁾ Mahasiri Siam Co., Ltd. operates the investment business, having a total of 9,000,000 shares, with its 7,782,987 shares representing 86.48 percent held by Trivisvavet Group.

⁽⁵⁾ CH. Karnchang Holding Co., Ltd. operates the investment and consultation business, having a total of 8,400,000 shares, with its 2,100,000 shares representing 25 percent held by Mahasiri Siam Co., Ltd., and its 5,250,000 shares representing 62.50 percent held by Trivisvavet Group.

⁽⁶⁾ CK. Office Tower Co., Ltd. operates the business of investment and consultancy, having a total of 3,000,000 shares, with its 750,000 shares representing 25 percent held by Mahasiri Siam Co., Ltd., and its 1,875,000 shares representing 62.50 percent held by Trivisvavet Group.

7.2.2 The Company's Shareholding Structure

It has demonstrated the Company's defense mechanisms for preventing a hostile takeover, whereby the Company has no policy on shareholding in two or more companies to form a structure of company group, such as, by means of a cross holding or pyramid holding.

7.2.3 The Company's Free Float Percentage

According to the report on the shareholding distribution of strategic shareholders as at June 26, 2020, as submitted to the SET by the Company, the proportion of the Company's non-strategic shareholders was 54.02 percent of all issued and paid-up shares of the Company.

7.2.4 Shareholders' Agreement

There was no shareholders' agreement between the Company and its major shareholders.

7.3 Issuance of Other Securities

7.3.1 Long-Term Loans

In 2020, the Company made the long-term loan drawdown for the MRT Blue Line Extension Project in the amount of Baht 5,300 Million, and repaid the long-term loan according to the payment schedule in the amount of Baht 1,312 Million, and as a result, as at December 31, 2020, the Company and its subsidiaries had long-term loans amounting to Baht 18,818 Million.

7.3.2 Debentures

In 2020, the Company issued debentures at the total value of Baht 3,000 Million, for the purpose of repayment of the Company's existing debts. As at December 31, 2020, the Company's outstanding debentures were as per the following details:

Details of Debentures	Debentures No. 1/2016 Series 2	Debentures No. 1/2016 Series 3
Debenture Symbol	BEM216A	BEM236A
Total Value of Debentures	Baht 1,615 Million	Baht 2,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	1,615,000 units	2,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.52%	3.00%
Maturity	5 years	7 years
Issue Date of Debentures	June 24, 2016	June 24, 2016
Maturity Date	June 24, 2021	June 24, 2023
Registrar	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2016 Series 4	Debentures No. 1/2016 Series 5	Debentures No. 2/2016
Debenture Symbol	BEM266A	BEM286A	BEM286B
Total Value of Debentures	Baht 3,335 Million	Baht 2,750 Million	Baht 500 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	3,335,000 units	2,750,000 units	500,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	3.30%	3.61%	3.61%
Maturity	10 years	12 years	11.9 years
Issue Date of Debentures	June 24, 2016	June 24, 2016	August 11, 2016
Maturity Date	June 24, 2026	June 24, 2028	June 24, 2028
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

Debentures (continued)

Details of Debentures	Debentures No. 3/2016 Series 1	Debentures No. 3/2016 Series 2	Debentures No. 3/2016 Series 3
Debenture Symbol	BEM200A	BEM250A	BEM270A
Total Value of Debentures	Baht 2,500 Million	Baht 2,500 Million	Baht 3,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	2,500,000 units	2,500,000 units	3,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.62%	3.78%	3.95%
Maturity	4 years	9 years	11 years
Issue Date of Debentures	October 21, 2016	October 21, 2016	October 21, 2016
Maturity Date	October 21, 2020	October 21, 2025	October 21, 2027
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2017 Series 1	Debentures No. 1/2017 Series 2
Debenture Symbol	BEM229A	BEM249A
Total Value of Debentures	Baht 2,000 Million	Baht 3,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	2,000,000 units	3,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.65%	3.10%
Maturity	5 years	7 years
Issue Date of Debentures	September 7, 2017	September 7, 2017
Maturity Date	September 7, 2022	September 7, 2024
Registrar	KTB	KTB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2018 Series 1	Debentures No. 1/2018 Series 2	Debentures No. 1/2018 Series 3
Debenture Symbol	BEM214A	BEM234A	BEM254A
Total Value of Debentures	Baht 3,000 Million	Baht 3,500 Million	Baht 3,500 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	3,000,000 units	3,500,000 units	3,500,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.05%	2.46%	3.01%
Maturity	3 years	5 years	7 years
Issue Date of Debentures	April 5, 2018	April 5, 2018	April 5, 2018
Maturity Date	April 5, 2021	April 5, 2023	April 5, 2025
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2019 Series 1	Debentures No. 1/2019 Series 2
Debenture Symbol	BEM225A	BEM245A
Total Value of Debentures	Baht 1,000 Million	Baht 2,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders
Number of Debentures	1,000,000 units	2,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.65%	3.18%
Maturity	3 years	5 years
Issue Date of Debentures	May 9, 2019	May 9, 2019
Maturity Date	May 9, 2022	May 9, 2024
Registrar	SCB	SCB
Holders' Representative	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2019 Series 3	Debentures No. 1/2019 Series 4
Debenture Symbol	BEM265A	BEM295A
Total Value of Debentures	Baht 1,000 Millions	Baht 1,000 Millions
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders
Number of Debentures	1,000,000 units	1,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	3.59%	3.84%
Maturity	7 years	10 years
Issue Date of Debentures	May 9, 2019	May 9, 2019
Maturity Date	May 9, 2026	May 9, 2029
Registrar	SCB	SCB
Holders' Representative	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2020 Series 1	Debentures No. 1/2020 Series 2	Debentures No. 1/2020 Series 3
Debenture Symbol	BEM246A	BEM306A	BEM326A
Total Value of Debentures	Baht 1,000 Million	Baht 1,300 Million	Baht 700 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders
Number of Debentures	1,000,000 units	1,300,000 units	700,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.88%	3.50%	3.78%
Maturity	4 years	10 years	12 years
Issue Date of Debentures	June 10, 2020	June 10, 2020	June 10, 2020
Maturity Date	June 10, 2024	June 10, 2030	June 10, 2032
Registrar	SCB	SCB	SCB
Holders' Representative	SCB	SCB	SCB
Early Redemption Right	- None -		The issuer of debentures shall have the early redemption right.
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		The issuer of debentures shall either repay the principal in full on the maturity date or repay the principal, in full or in part, on the date of the issuer of debentures' exercise of the early redemption right.
Rating	A	A	A

7.4 Policy on Dividend Payment

The Company has the policy to pay a dividend at not less than 40 percent of the net profit of each year, taking into account the operational results, financial structure and obligations, investment, as well as regular payment of dividends to shareholders.

In this regard, the Board of Directors may pay an interim dividend to shareholders when it is of the view that the Company has sufficient profit and cash flow to pay a dividend. Once the dividend payment has been made, such dividend payment shall be reported to the following shareholders' meeting.

The Company's dividend payment in the previous years was as follows:

Dividend from Operations	Dividend Declared (Million Baht)	Dividend per share (Baht)	Net Profit (Million Baht)		Percentage of Dividend to Net Profit	
			Separate Financial Statements	Consolidated Financial Statements	Separate Financial Statements	Consolidated Financial Statements
2016						
- First half	764	0.05	1,218	1,206		
- Second half	917	0.06	1,345	1,400		
Total in 2016	1,681	0.11	2,563	2,606	65%	65%
2017						
- First half	917	0.06	1,442	1,425		
- Second half	1,070	0.07	1,533	1,698		
Total in 2017	1,987	0.13	2,975	3,123	67%	64%
2018						
- First half	917	0.06	1,695	1,714		
- Second half	1,376	0.09	1,412	3,603		
Total in 2018	2,293	0.15	3,107	5,317	74%	43%
2019						
- First half	917	0.06	1,626	3,977		
- Second half	1,376	0.09	1,298	1,458		
Total in 2019	2,293	0.15	2,924	5,435	79%	42%
Total in 2020 ⁽¹⁾	1,529	0.10	1,698	2,051	90%	75%

Remark: ⁽¹⁾ This is put on the Agenda of the 2021 Annual Ordinary General Meeting of Shareholders for consideration.

7.5 Policy on Dividend Payment of the Subsidiaries

NECL has the policy on dividend payment at the rate of approximately 40 percent of net profit after deducting statutory reserves, by taking into consideration the operational results in the fiscal year of the separate financial statements as at the end of the fiscal year and under the conditions of the credit facility agreement, subject to the investment plan, necessity and appropriateness in other aspects as the board of directors of the subsidiary deems appropriately.

BMN has the policy on dividend payment at the rate of not less than 40 percent of net profit each year, by taking into account the operational results, financial structure and obligations, investment, as well as regular payment of dividends to shareholders.

8. Management Structure

The Company has established and reviewed the Company's management structure by realizing the organizational leadership roles and responsibilities of the Board of Directors in achieving the sustainable value creation for the business. The Company has also assigned the Board of Directors to ensure that all directors and executives discharge their duties with duty of care and duty of loyalty and to ensure that the Company's operations have been carried out in compliance with applicable laws, articles of association and resolutions of the shareholders' meeting.

As for the structure of the Board of Directors, the Company has taken into account scale, composition, proportion of independent directors, skill, experience, education, capability and character traits, together with gender and age as appropriate and necessary to lead the organization to meet the objectives and goals specified by the Company. As at December 31, 2020, the Board of Directors consisted of 15 qualified persons, namely, five executive directors, five independent directors and five non-executive directors. To ensure that the entire Board of Directors has suitable qualifications, can understand and satisfy the needs of stakeholders, as well as enabling the Board of Directors to carry out operations by exercise of their discretion to make decisions independently.

Currently, the Company has the Board of Directors and four subcommittees as appointed to help supervise the Company's administration in various aspects, namely, the Audit Committee, the Executive Board, the Nomination and Remuneration Committee, and the Corporate Governance and Risk Management Committee, and also has the Management Team, per the details as follows:

8.1 Board of Directors

The Board of Directors comprised 15 directors who were knowledgeable, competent and experienced in varied fields of business; whose names, as of December 31, 2020, were listed below:

No.	Name-Surname	Position	Category	Attendances/ Number of Board of Directors' Meetings
1	Mr. Plew Trivisvavet	Acting Chairman of the Board of Directors ⁽¹⁾ Deputy Chairman of the Board of Directors Chairman of the Executive Board Nomination and Remuneration Committee Member	Executive Director	7/7
2	Mr. Vitoon Tejatussanasoontorn	Chairman of the Audit Committee Nomination and Remuneration Committee Member	Independent Director	7/7
3	Gen. Chetta Thanajaro	Chairman of the Nomination and Remuneration Committee Audit Committee Member	Independent Director	6/7
4	Dr. Annop Tanlamai	Audit Committee Member	Independent Director	6/7
5	Mrs. Vallapa Assakul	Chairman of the Corporate Governance and Risk Management Committee	Independent Director	7/7
6	M.L. Prasobchai Kasemsant	Director	Independent Director	5/7
7	Mr. Supong Chayutsahakij	Executive Director Nomination and Remuneration Committee Member	Executive Director	7/7

No.	Name-Surname	Position	Category	Attendances/ Number of Board of Directors' Meetings
8	Mr. Phongsarit Tantisuvanitchkul	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	7/7
9	Miss Arisara Dharamadhaj	Director	Non-executive Director	7/7
10	Mr. Panit Dunnvatanachit	Director	Non-executive Director	5/7
11	Mr. Vithaya Punmongkol ⁽²⁾	Director	Non-executive Director	3/3
12	Mrs. Natamon Bunnak	Director	Non-executive Director	7/7
13	EXAT's Representative ⁽³⁾	Director	Non-executive Director	N/A
14	Dr. Sombat Kitjalaksana	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	7/7
15	Mrs. Payao Marittanaporn	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	7/7

Remarks: Directors' profiles appear on pages 231 to 235.

- ⁽¹⁾ Dr. Virabongsa Ramangkura former Chairman of the Board of Directors, resigned from his position as director on April 2, 2020.
- ⁽²⁾ Mr. Vithaya Punmongkol was appointed as director on April 9, 2020 to replace Mr. Yuttana Yimgarund who resigned from his position as director on October 25, 2019.
- ⁽³⁾ EXAT's Representative was in the process of being nominated as director to replace Mr. Wichan Ekarintrakul, who resigned from his position as director on February 14, 2020.

Authorized Directors

The Company has determined five directors authorized to sign and bind the Company, comprising Mr. Plew Trivisvavet, Mr. Supong Chayutsahakij, Mr. Phongsarit Tantisuvanitchkul, Dr. Sombat Kitjalaksana, and Mrs. Payao Marittanaporn, whereby two of these five directors shall jointly sign and affix the Company's seal.

Independent Directors

The Board of Directors of the Company comprises of five independent directors or representing one-third of the total number of directors of the Company. The Company specifies the qualifications of its independent directors in compliance with the notifications of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, as follows:

Qualifications of Independent Directors

1. Holding shares of not exceeding 0.5 percent of the total number of voting shares of the Company, its parent company, subsidiaries, associated companies, major shareholders or controllers of the Company, including shares held by any related persons of each independent director;
2. Not being or having been a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or a controller of the Company, its parent company, subsidiaries, associated companies, subsidiaries of the same tier, major shareholders or controllers of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date, provided that such prohibited characteristics shall not apply to an independent director who was a public servant or an advisor to a government authority which is the Company's major shareholder or controller;
3. Not being a person having a relationship by blood or by legal registration in the capacity as parent, spouse, sibling, and offspring, including spouse of the offspring of other directors, executive, major shareholder, controller or person to be nominated as a director, an executive or a controller of the Company or its subsidiaries;

4. Not having or having had any business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholders or controllers of the Company in a manner which may prevent the exercise of his or her independent judgment; and not being or having been a substantial shareholder or controller of any person having a business relationship with the Company, its parent companies, subsidiaries, associated companies, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;

The aforesaid business relationship shall include any transaction in the ordinary course of business for lease of immovable property, any transaction relating to assets or services or grant or receipt of financial assistance through receiving or extending any loan, guarantee, providing assets as collateral, including any other similar action, which causes the Company or contractual party to be subject to indebtedness payable to the other party in the amount of three percent or more of the Company's net tangible assets or in the amount of Baht Twenty Million or more, whichever is lower. Such indebtedness shall be calculated according to the calculation method of connected transaction value under the Notification of the Capital Market Supervisory Board, Re: Rules on Connected Transactions, mutatis mutandis. However, the consideration of such indebtedness shall include the indebtedness incurred during the course of one year prior to the commencement of a business relationship with the same person;

5. Not being or having been an auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of an audit firm which employs the auditor of the Company, its parent company, subsidiaries, associated companies, major shareholders, or controllers of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
6. Not being or having been a professional service provider, including legal advisor or financial advisor which receives an annual service fee exceeding Baht Two Million from the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of such professional service provider, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
7. Not being a director appointed as a representative of the Company's director, major shareholder or shareholder who is a related person of the major shareholder;
8. Not engaging in any business of the same nature as material competition with the business of the Company or its subsidiaries; or not being a substantial partner in a partnership or a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or holding more than one percent of the total number of voting shares of another company engaging in any business of the same nature as material competition with the business of the Company or its subsidiaries;
9. Not having any other characteristics preventing the provision of independent opinions on the Company's operations.

8.2 Management Team

8.2.1 List of Names of Management Team⁽¹⁾

The Management Team under the structure as at December 31, 2020, comprised 10 persons as listed below: (information of executives appear on page 235 to 238).

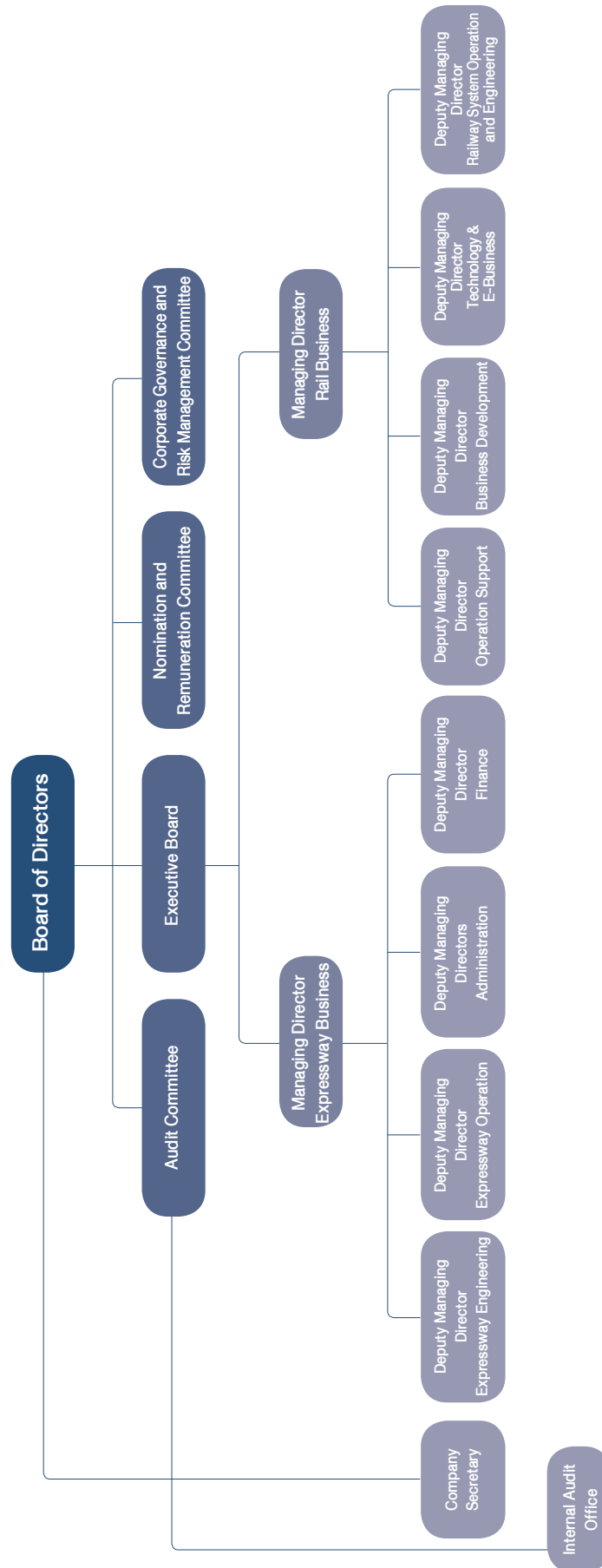
No.	Name	Position
1.	Dr. Sombat Kitjalaksana	Managing Director
2.	Mrs. Payao Marittanaporn ⁽²⁾	Managing Director
3.	Mr. Sanguan Kunatinun	Deputy Managing Director Expressway Engineering
4.	Mrs. Sudruthai Prommart	Deputy Managing Director Expressway Operation
5.	Mr. Phakpoom Thaweewittayarat	Deputy Managing Director Administration and Company Secretary
6.	Miss Panan Tosuwanthaworn	Deputy Managing Director Finance
7.	Mr. Wittoon Hatairatana	Deputy Managing Director Railway System Operation and Engineering
8.	Mr. Alvin Gee	Deputy Managing Director Operation Support
9.	Dr. Vites Techangam	Deputy Managing Director Technology and E-Business
10.	Mr. Anawash Suwanarit	Deputy Managing Director Business Development

Remarks: ⁽¹⁾ Executives Nos. 1-10 of the Management Team were executives under the definition of "executive" required by the Office of the Securities and Exchange Commission.

⁽²⁾ Mrs. Payao Marittanaporn was due to retire from her position as Managing Director on December 31, 2020.

8.2.2 Management Structure of the Company

Organizational Chart of Bangkok Expressway and Metro Public Company Limited



Remark: Since January 1, 2021, Dr. Sombat Kitjalaksana has held the position as Managing Director with his duty to supervise both the expressway and rail businesses.

8.2.3 Structures of the Boards of Directors of Subsidiaries

1) Northern Bangkok Expressway Company Limited

As at December 31, 2020, the Board of Directors of Northern Bangkok Expressway Company Limited comprised six directors as follows:

1. Mr. Plew Trivisvavet	Chairman of the Board of Directors
2. Mr. Supong Chayutsahakij	Director
3. Mr. Phongsarit Tantisuvanitchkul	Director
4. Dr. Sombat Kitjalaksana	Director
5. EXAT's Representative*	Director
6. Mrs. Payao Marittanaporn	Director

Remark: * In the process of being nominated as director to replace Mrs. Tasanuch Thammachot who resigned from her position on January 10, 2020.

Authorized Directors

Northern Bangkok Expressway Company Limited has determined five directors authorized to sign and bind the subsidiary, comprising Mr. Plew Trivisvavet, Mr. Supong Chayutsahakij, Mr. Phongsarit Tantisuvanitchkul, Dr. Sombat Kitjalaksana, and Mrs. Payao Marittanaporn, whereby two of these five directors shall jointly sign and affix the subsidiary's seal.

2) Bangkok Metro Networks Limited

As at December 31, 2020, the Board of Directors of Bangkok Metro Networks Limited comprised seven directors as follows:

1. Mr. Phongsarit Tantisuvanitchkul	Chairman of the Board of Directors
2. Dr. Sombat Kitjalaksana	Director
3. Mr. Witoon Hatairatana	Director
4. Miss Panan Tosuwanthaworn	Director
5. Mrs. Thipsuda Yimwilai	Director
6. Mr. Anawash Suwanarit	Director
7. Mr. Nattavut Trivisvavet	Director

Authorized Directors

Bangkok Metro Networks Limited has determined seven its authorized directors, namely:

- o Mr. Phongsarit Tantisuvanitchkul and Dr. Sombat Kitjalaksana shall jointly sign and affix the company's seal; or
- o Either Mr. Phongsarit Tantisuvanitchkul or Dr. Sombat Kitjalaksana shall jointly sign together with Mr. Witoon Hatairatana, Miss Panan Tosuwanthaworn, Mr. Anawash Suwanarit, Mr. Nattavut Trivisvavet, or Mrs. Thipsuda Yimwilai, totaling two persons, shall jointly sign and affix the company's seal.

8.3 Company Secretary, the Person Taking the Highest Responsibility in Finance and Accounting, and the Person Supervising Accounting

1) Company Secretary

The Board of Directors has considered appointing the qualified person as Company Secretary. On December 30, 2015, the Board of Directors appointed Mr. Phakpoom Thaweewittayarut, who was knowledgeable and capable in the fields of accounting, law, and audit, as well as fully understanding rules, regulations and criteria applicable to listed companies, to serve as the Company Secretary (details of his profile appear on page 236, No.17), with the duties and responsibilities as follows:

1. Providing suggestions to directors relating to provisions of laws, relevant rules and regulations.
2. Arranging for orientation and providing necessary information for the performance of duties to the current and new directors.
3. Monitoring the Company to ensure its compliance with laws, Articles of Association, relevant regulations and the good corporate governance principles.
4. Convening meetings as stipulated by laws and Articles of Association, preparing and keeping minutes of meetings, as well as coordinating to ensure efficient performance in compliance with resolutions passed by the Board of Directors or the shareholders' meetings.
5. Preparing and keeping the following documents:
 - a) Directors' register;
 - b) Notices, minutes of the Board of Directors' meetings and annual reports of the Company;
 - c) Notices and minutes of the shareholders' meetings.
6. Keeping reports on interest filed by directors or executives.
7. Monitoring to ensure disclosure of information and information memorandum to regulatory units in compliance with relevant laws, rules, and regulations.
8. Contacting and communicating with shareholders and relevant regulatory units, whereby shareholders may inquire or request any information as needed by contacting at Tel. 0 2641 4611 or sending questions via email to companysecretary@bemplc.co.th.
9. Promoting the provision of various training courses and providing useful information for the performance of duties of new directors.
10. Making other arrangements as announced by the Capital Market Supervisory Board.
11. Proceeding with other matters as assigned by the Board of Directors.

2) The Person Taking the Highest Responsibility in Finance and Accounting

The Board of Directors appointed Miss Panan Tosuwanthaworn, who had knowledge and abilities in the fields of accounting and finance, to serve as the Deputy Managing Director: Finance, holding the position of top management in accounting and finance (details of her profile appear on page 236, No.18), with the duties and responsibilities as follows:

1. Planning financial strategies to encourage internal and external growth as well as financing to accommodate growth linking with the Company's growth strategies and business value.
2. Controlling and managing infrastructure in terms of financial information and financial management of the Company to ensure that the Company's work operations are driven to achieve tasks and goals as planned.
3. Developing and managing financial tools to contribute to the analysis of the efficiency of work operations and analysis of business value.
4. Communicating the organization's significant financial information to enhance the understanding and trust of investors relating to stability and opportunities of the Company.

In 2020, Miss Panan Tosuwanthaworn, the Deputy Managing Director: Finance, received training in the courses of TFRS 15 Revenue Recognition with Requirements on Revenue Code, Discussion Paper: Business Combinations - Disclosures, Goodwill and Impairment, New TSA 540: Accounting Estimate, and Samples of Recognition of Transactions on the parts of Lessees and Lessors in case of reduction of rental fees under the lease agreements offered by the lessors due to the COVID-19 situation, organized by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King, for a total of 6 hours.

3) The Person Supervising Accounting

Per the organizational chart of the Company, an officer at the management level i.e., Miss Saranya Lertjiraprasert, who had knowledge and understanding of the accounting system of the Company, was appointed to hold the position of General Manager of Accounting Division, as the person supervising accounting (details of her profile appear on page 238, Np.23), with her duties and responsibilities as follows:

1. Drawing up policies and plans on accounting and finance as well as determining the accounting and financial systems in line with the guidelines for the Company's work operations.
2. Overseeing preparation of accounts and inspecting close of accounts of the Company in each period to ensure that they are made properly and in accordance with the specified practices.
3. Overseeing and inspecting preparation of financial statements, balance sheet, income statement, and accounting reports.
4. Overseeing and inspecting income-expenditure of the Company.
5. Overseeing the Company's budgeting and inspecting to ensure that the budget is utilized properly and in accordance with the budget plan as specified.
6. Overseeing the preparation of relevant tax reports for submission to relevant government authorities.

In 2020, Miss Saranya Lertjiraprasert, the General Manager of Accounting Division, received training in the course of TFRS in Financial Instruments: Perspectives on Use and Analysis of Data through Financial Statements of Non-Institutional Entities, from the Federation of Accounting Professions under the Royal Patronage of His Majesty the King, for six hours.

8.4 Remuneration of Directors and Executives

The Company has the policy to pay remuneration for directors and executives, by taking into account appropriate remuneration in accordance with criteria on remuneration determination as follows:

Remuneration for Directors and Managing Directors

1. The remuneration shall be appropriate for and in line with the scope of duties and responsibilities of each director, e.g., as Chairman of the Board of Directors, chairman of each subcommittee and the member of the Executive Board, the Audit Committee, the Nomination and Remuneration Committee and the Corporate Governance and Risk Management Committee, who shall receive additional remuneration for such position.
2. The remuneration for the directors and the Managing Directors is at the level which is appropriate and sufficient to attract as well as retaining knowledgeable and qualified directors to perform duties for the Company efficiently in order to lead the organization to accomplish the short-term and long-term goals.
3. The elements of remuneration are clear, transparent and easy to understand.
4. The remuneration shall be considered by the Nomination and Remuneration Committee to ensure that the remuneration is at the appropriate and competitive level and stays at the same level as that in the same sector which is adequate to retain the directors and the Managing Directors who possess the qualifications in line with the goals in the business operations of the Company.

Remuneration for Executives

Remuneration for executives, excluding the Managing Directors, shall be considered in accordance with the criteria and policy specified by the Executive Board, corresponding to the Company's operational results and each executive's performance evaluation results through the Performance Management System (PMS).

In 2020, the Company paid remuneration for directors and executives as follows:

(1) Monetary remuneration

- (1.1) Remuneration for directors of the Company comprised annual remuneration, meeting allowance, and bonus. In 2020, the total remuneration for directors of the Company amounted to Baht 35,166,147, in line with the resolution of its 2020 Annual Ordinary General Meeting of Shareholders which approved the remuneration for directors in the total amount not exceeding Baht 39,000,000, namely, bonus for directors for 2019 in an amount not exceeding Baht 21,000,000 and remuneration for directors for 2020 in an amount not exceeding Baht 18,000,000.

Unit: Baht

List of Directors	Remuneration for Directors 2020						Bonus 2019	Remuneration for Directors in Holding Directorships in Subsidiaries (NECL/BMN)
	Board of Directors	Executive Board	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Risk Management Committee	Total		
1. Dr. Virabongsa Ramangkura ⁽¹⁾ Chairman of the Board of Director	700,000					700,000	2,500,000	
2. Mr. Plew Trivisvavet Deputy Chairman of the Board of Directors Chairman of the Executive Board Nomination and Remuneration Committee Member	750,000	1,000,000		175,000		1,925,000	2,300,000	NECL 1,000,000
3. Mr. Vitoon Tejtassanasoontorn Director Chairman of the Audit Committee Nomination and Remuneration Committee Member	650,000		525,000	175,000		1,350,000	1,225,000	
4. Gen. Chetta Thanajaro Director Chairman of Nomination and Remuneration Committee Audit Committee Member	600,000		325,000	250,000		1,175,000	1,225,000	
5. Gen. Sampao Choosri ⁽²⁾ Director Chairman of the Corporate Governance and Risk Management Committee Audit Committee Member							1,212,534	
6. Mrs. Vallapa Assakul ⁽³⁾ Director Chairman of the Corporate Governance and Risk Management Committee	650,000				275,000	925,000	1,027,877	
7. Dr. Annop Tanlamai Director Audit Committee Member	600,000		325,000			925,000	1,025,000	
8. Mr. Supong Chayutsahakij Director Executive Director Nomination and Remuneration Committee Member	650,000	500,000		175,000		1,325,000	1,275,000	NECL 650,000
9. M.L. Prasobchai Kasemsant Director	550,000					550,000	1,050,000	
10. Mr. Phongsarit Tantisuvanitchkul Director Executive Director Corporate Governance and Risk Management Committee Member	650,000	500,000			175,000	1,325,000	1,275,000	NECL 650,000 BMN 179,000
11. Mr. Werapong Suppasedsak ⁽⁴⁾ Director							283,562	
12. Miss Arisara Dharamadhaj ⁽⁵⁾ Director	650,000					650,000	616,438	
13. Mr. Panit Dunnvatanachit Director	550,000					550,000	900,000	
14. Mr. Yuttana Yimgarund ⁽⁶⁾ Director							732,329	
15. Mr. Vithaya Punmongkol ⁽⁷⁾ Director	368,407					368,407	-	
16. Mrs. Natamon Bunnak Director	650,000					650,000	900,000	
17. Mr. Wichan Ekarintrakul ⁽⁸⁾ Director								
18. Dr. Sombat Kitjalaksana Director Executive Director Corporate Governance and Risk Management Committee Member Managing Director	650,000	500,000			175,000	1,325,000	1,275,000	NECL 650,000 BEM 131,000
19. Mrs. Payao Marittanaporn Director Executive Director Corporate Governance and Risk Management Committee Member Managing Director	650,000	500,000			175,000	1,325,000	1,275,000	NECL 650,000
Total	9,318,407	3,000,000	1,175,000	775,000	800,000	15,068,407	20,097,740	3,910,000
Amount Approved by Shareholders						18,000,000	21,000,000	

Remarks : ⁽¹⁾ Dr. Virabongsa Ramangkura resigned from his position as director on April 2, 2020.
⁽²⁾ Gen. Sampao Choosri resigned from his position as director on December 18, 2019.
⁽³⁾ Mrs. Vallapa Assakul was appointed as Chairman of the Corporate Governance and Risk Management Committee on December 18, 2019.
⁽⁴⁾ Mr. Werapong Suppasedsak retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019.
⁽⁵⁾ Miss Arisara Dharamadhaj was appointed as a director on April 26, 2019.
⁽⁶⁾ Mr. Yuttana Yimgarund resigned from his position as director on October 25, 2019.
⁽⁷⁾ Mr. Vithaya Punmongkol was appointed as a director on April 9, 2020.
⁽⁸⁾ Mr. Wichan Ekarintrakul resigned from his position as director on February 14, 2020. (with his intention not to receive remuneration)

- (1.2) In 2020, the Company paid remuneration, comprising salary and bonus for its executives at the levels of Managing Director downwards to Deputy Managing Director, totaling 10 persons, in the total amount of Baht 103,258,280.70.
- (1.3) In 2020, NECL paid remuneration for its directors, comprising annual remuneration, meeting allowance, and bonus, in the total amount of Baht 3,764,805, in line with the resolution of its 2020 annual ordinary general meeting of shareholders which approved the remuneration for directors in an amount not exceeding Baht 4,250,000, namely, bonus for its directors in 2019 in an amount not exceeding Baht 1,400,000 and remuneration for its directors for 2020 in an amount not exceeding Baht 2,850,000.
- (1.4) In 2020, BMN paid remuneration for its directors, comprising annual remuneration and meeting allowance, in the total amount of Baht 965,000, in line with the resolution of its 2020 annual ordinary general meeting of shareholders which approved the remuneration for directors for 2020 in an amount not exceeding Baht 1,044,000.
- (2) Other remuneration
- (2.1) Other remuneration for directors
- None -
- (2.2) Other remuneration for executives

The Company has established a provident fund, which provides executives with long-term remuneration upon termination of employment with the Company or upon retirement, whereby executives pay savings at the rate of 5-10 percent of their respective salaries according to service years and the Company pays contributions at the same rate to the fund. In 2020, the Company paid contributions to the provident fund for all 10 executives as Managing Directors and Deputy Managing Directors in the total amount of Baht 5,219,984.6.

The Company's contribution rates shall be in accordance with the resolution of the Board of Directors' Meeting, by mainly taking into account the Company's profitability and the Company's operational results.

8.5 Personnel

8.5.1 Number of Staff as at December 31, 2020

- Expressway business: there were a total of 986 staff, comprising personnel in two main functions, namely, Operation and Engineering, representing 81.34 percent of all staff, and personnel in supporting functions, namely, Administration, Finance and Corporate Governance, representing 18.66 percent of all staff.
- Rail business: there were a total of 2,996 staff, comprising personnel in main functions, namely, Project Management and Development Group, Engineering & Maintenance Group, Train Operation Group, Strategy Group, representing 87.35 percent of all staff, and personnel in supporting functions, namely, Technology & E-Business, Business Development Group, Human Resources Group, General Affairs Group, Safety and Quality Group, Law and Compliance Division, representing 12.65 percent of all staff.
- As of December 31, 2020, the Company had its staff in each function (excluding executives) as follows:

Functions	Staff (persons)
1. Main functions	3,419
2. Supporting functions	563
Total	3,982

- Subsidiaries
 - o NECL has no employment of executive and permanent staff but operates the Udon Ratthaya Expressway by means of a service agreement with BEM.
 - o BMN had a total of 207 staff in each work unit (excluding executives), comprising Sale and Marketing Department, Design and Production Department, Business Development Department, Finance Department, and Operation Department.
- In 2020, the Company paid remuneration to its staff in the total amount of Baht 2,051.91 Million, comprising salaries, overtime pays, bonus in the amount of Baht 1,954.38 Million, and contributions to the provident fund in the amount of Baht 97.53 Million. Moreover, the subsidiaries paid remuneration to their staff in the same manner as the Company did in the total amount of Baht 98.51 Million.
- Significant Change in Number of Staff over the Past Three Years
 - None -
- Relationship between Executives and Labor Union (if any)
 - None -

8.5.2 Personnel Development Policy

The Company is determined to be a leading, fully-integrated transportation service provider in Thailand and ASEAN, with its social mission to provide the transport service with convenience, rapidity, and safety by engaging in the business with its commitment to social and environmental responsibility, attainment of value added creation and optimum benefits for all stakeholders with fairness and sustainability.

Currently, the Company continues to undergo changes and business competition, and, to enable the Company to create the “Route of Happiness for Better Travelling Mode”, the Company then realizes the significance of personnel development to ensure that they have preparedness and capability to not only create value for the Company but also value for the society as a whole.

Personnel is regarded as a key feature in moving the business forward with sustainability, the Company has thus clearly incorporated the practices for staff’s compliance into the Company’s Codes of Conduct. In this regard, the Company is committed to development of efficiency of its staff to meet quality of work and quality of life of staff by fostering conceptions and values relating to quality policies, comprising personnel development, teamwork, creation of quality, working environment, and accountability of executives and staff, including formulation of clear policies on safety and hygiene along with ensuring environment and hygiene in the workplace with safety to life and property of personnel and the Company.

The Company firmly believes that qualified staff is a key factor in bringing the sustainable growth and success to the organization, it has thus clearly formulated the personnel development policy, as follows:

1. The Company establishes a policy on nomination, development, and retention of its personnel by means of provision of remuneration in the form of salary, welfare, and other remuneration which are competitive in the same industry.
2. The Company regards its staff as valuable resources, that is, human resources are one of the major factors to the Company’s development and competitiveness as well as the achievement of the Company’s objectives. The Company realizes the significance of internal personnel development and improvement by the way of regular training and performance review, including local and overseas study visits and training, particularly the awareness and training in respect of service safety. The Company’s staff must strictly comply with the Company’s safety rules and international standards.
3. The Company arranges for the efficient personnel management system based on fairness, equality, and opportunity for staff development and exercise of competency at full capacity.
4. The Company gives priority to morale and a sense of pride in work performance of staff by determining remuneration and career advancement based on knowledge, competency, and fairness, as well as arranging for the reasonable welfare system, together with the development of staff lifestyle in order to retain the Company’s valuable human resources.

5. Retention of the Company's competent personnel

The Company takes care of the highly capable and competent staff by ensuring to provide them opportunities for career path advancement. The Company is ready to create the path to happiness, by starting from the "Source of Happiness", which signifies the Company's personnel. To ensure that the Company's personnel can provide the quality service, particularly in respect of safety, the Company has encouraged the sphere of safety at work with a commitment to fostering and creating awareness of occupational safety and health to its personnel at all levels and then to its business alliances, customers, together with nearby communities. In addition, the Company has integrated the social and environmental responsibility activities in processes related to safety, for that reason, the Company not only gives priority to the safety of the service users, but also to all persons throughout the value chain of the Company.

Personnel Development and Improvement Policies in 2020

1) Creation of Organizational Culture

The Company has aimed to provide the expressway service and train operation service with efficiency and continuous development, it has therefore fostered the conceptions and practices in various aspects, whether it be awareness of safety or awareness of accountability and responsibility, which are communicated via the operating process and with support of supervisors until attaining the organizational culture. This is to rest assured of the staff's practices and behavioral expressions in accordance with the Company's goals.

2) Management of Work Competency

Personnel is regarded as an invaluable resource which will support the Company to endlessly evolve and have business competitiveness, and as the Company has planned to develop competency of staff at all levels by establishing core competency, performance competency and managerial competency of each work position, performance evaluation process and training provision as suitable for staff according to his/her work position, duties and responsibilities, to ensure staff's in-depth and extensive expertise, resulting in the Company's competency in moving its business forward to be the fully-integrated transportation service provider in Thailand and ASEAN.

8.5.3 Benefits

1) Remuneration for Staff

In order to determine the appropriate and competitive remuneration to maintain the good and competent staff to work with the organization, the Company then participates in the survey of wages and remuneration to compare with labor market and other companies in the same sector as well as reviewing the starting salary for new graduates and base salary based on the value of work via the institute conducting wage survey on a regular basis. Therefore, it can be assured that the Company determines the fair and appropriate remuneration to the staff.

The Executive Board considers adjusting wages on a yearly basis by taking into account the Company's operational results through the Competency KPIs and its payment coverage ratio.

Furthermore, the Company establishes a provident fund for long-term care of staff in order to motivate staff to work with the Company and to encourage staff's saving habits to secure adequate retirement savings for a quality retirement life. Staff may apply for provident fund membership, whereby staff pay savings at the rate of 5 to 15 percent of his/her salary according to his/her ability to save and the Company pays contributions at the rate of 5 to 10 percent according to such staff's service years and requirements of the fund. Staff who are fund members shall gain benefits arising from management in proportion to each staff's savings in the fund. The Company also provides group life insurance benefits for staff so as to secure staff and staff's family.

2) Staff Welfare

In addition to welfare required by law, the Company also provides staff with an additional and appropriate welfare and encourages the roles of the Staff Welfare Committee, beginning with the arrangement for the legitimate election as required by law in order to jointly provide advice and suggestions to the Company on welfare benefits for its staff as a whole and monitor to ensure that the Company's welfare benefits are properly provided to its staff, which lead to adjustment and improvement of the Company's welfare in various aspects as appropriate according to the changing economic and social circumstances.

3) Labor Relations

The Company sets out a policy to take care of its staff via the line management through the human resources unit with the duties to provide advice to, support supervisors and provide them with regular training on personnel management and understanding of the work rules and regulations of the Company. The Company also sets out the investigation procedures with clarity in case of any disciplinary misconduct by staff to ensure fairness and solutions to prevent repeated misconduct, including clear and rapid grievance procedures. Furthermore, the Company yearly organizes the activities to strengthen relationships with benefit its staff, comprising merit-making and food offering to monks activities on the occasion of New Year Day and merit-making to celebrate the Company's anniversary, New Year's Eve activity, Blood Donation to Thai Red Cross Society activity, Songkran Day activity, workout activity, mindfulness meditation activity, health and nutrition activity. In addition to the Company's internal activities as mentioned above, the Company also encourages and supports budget for off-work activities by allowing staff who are interested in useful activities to form activity group in the form of various clubs, such as, sports club, photo club, volunteer club, and music club. The sports club arranges for activities all year round, i.e., football match, walking-jogging for good health, as well as participation in walking-running for charity in association with the government sector on various occasions; internal sports activity so as to encourage staff to work out and then select the Company's athletes to participate in sports competition with external organizations to gain more experience and strengthen good intercompany relationships. The music club regularly arranges for recreational activities every year to promote staff to show their artistic and performance talents, to perform their shows in various events of the Company, and to spread happiness to the society, particularly to the underprivileged communities.

4) Occupational Safety and Health

The Company gives priority to the occupational safety and health by setting out a policy to require each work unit to set out measures and practices relating to proper use of safety equipment as appropriate for each task, as well as providing budget support in improvement of the efficiency of such equipment to be ready for effective and sufficient use, including review of use of such equipment on a regular basis throughout the year and emergency simulation drill. Moreover, the Company also provides training to its staff on the awareness of safety at work, life, and assets of its customers.

5) Quality of Staff's Life

The Company realizes the significance of life quality of staff, including staff of construction and management of the expressways and the metro projects, together with motorists and the society along the expressway routes, and then sets out a policy on hygienic workplaces and routes:

- By adopting the ISO 14001 Environmental Management System to the work operations. The Company was certified by SGS (Thailand) Limited in accordance with UKAS Standard of England and NAC Standard of Thailand and through the commitments of the management and contribution of staff in realizing the significance and necessity as members of the world community with duty to preserve the environment, and the Company continues to undergo a recertification audit of ISO 14001 Environmental Management System.
- By adopting the international standard safety management system as a guideline for operations, namely, OHSAS/TIS 18001, as well as engaging Ricardo Rail as a safety consultant to provide suggestions on risk management and to devise new safety management techniques for improvement of the Company's work processes to ensure more safety.

6) Anti-Drug in Office Campaign

With the Company's awareness of the country's drug problems which give rise to major impacts on the economic and social stability, public order and morality, the Company, in association with the external organizations, namely, the Department of Labor Protection and Welfare, Bangkok Area 2, and the Department of Labor Protection and Welfare, Bangkok Area 5, including the Department of Labour Protection and Welfare in Nonthaburi Province, then carried out the Drug Free Workplace project, which has been defined as the Company's policy to demonstrate the Company's commitment and guidelines for implementation, as follows:

- Supervisors at all levels have to behave themselves as a role model, provide knowledge, recommendations and assistance to staff, and give them advice about appropriate and proper lifestyle practices, including dangers and harmful effects of drug use.
- Supervisors at all levels have to be on the lookout for their line staff and employees to prevent them from being involved in drugs.
- Staff and contractors have to assume the role and participate in campaigns for prevention and resolution of drug problems, as well as helping monitor, and give promptly report to the supervisors if any something illegal or any person with suspicious drug-related behavior is found within the Company.
- All staff and contractors have to provide cooperation in drug testing.
- The Company is willing to provide cooperation with government agencies in providing information, news and behaviors of persons involved in drugs.

To ensure that the Drug Free Workplace project has been carried out widely and continuously, the Occupational Health and Working Environment Subcommittee working in all areas of the Company then has been assigned to run this project. The duties and responsibilities of the working group of the Drug Free Workplace project are as follows:

- Providing suggestions about guidelines for drug prevention and solution;
- Complying with policies and action plans for drug prevention and solution;
- Promoting and supporting activities for raising awareness and campaign on anti-drug in the business premises;
- Training and meeting to ensure staff's and contractors' drug-related knowledge, understanding, and correct drug prevention and solutions;
- Providing cooperation with government officials in reporting on drug offenses.

Anti-Drug Campaign Activities in 2020

- A slogan contest on prevention and solution of drug problems under the “Say No To Drug” slogan to ensure that staff and contractors engaged in preventing and solving drug problems in the business premises, which attracted a lot of attention from staff and contractors and more than 340 slogans were then submitted for the contest.
- A no drug addicted activity to alert staff to the existing drug problems.
- Drug education activities on a monthly basis through all internal communication channels of the Company.

The Company is one of 150 business premises which was granted a Drug Free Workplace Certificate by the Department of Labor Protection and Welfare due to the Company’s “Drug Management System in the Business Premises Ranking No. 1”, as a role model for other business premises in a way which the Company could encourage its staff to participate in anti-drug campaigns in the business premises until concrete success could be achieved.

7) Anti-Corruption in All Operating Procedures

The Company has designed its operating procedures on the basis of independent check and balance and has adopted the SAP system to inspect every step of the operating procedures, including prevention of any potential unusual practices in the procedures.

The adopted SAP system comprises purchasing and procurement, maintenance, inventory, accounting and finance modules, all of which are connected together as one single system (Integrated System), thereby ensuring that every step of the operating procedures and cross-platform processing can be inspected, including financial data tracking, and as a result, corruption can be prevented efficiently.

9. Corporate Governance

The Board of Directors and management put their trust in and realize the significance of the Corporate Governance Code, comprising establishing organizational leadership role and responsibilities of the Board for creating value for the business to attain the sustainable business operations, strengthening effective management and internal control, implementing mechanisms for control including checks and balances intended to ensure the transparent and auditable management, respect for rights and equality of shareholders by encouraging and supporting participation and communication with shareholders, ensuring disclosure and maintaining financial integrity; and ensuring all groups of stakeholders-oriented management, as crucial factors in adding value and bringing the highest returns to the Company's shareholders with the long-term sustainability.

To boost confidence of all shareholders, investors and stakeholders and development resulting in the good corporate governance of the Company and its subsidiaries on a continuous basis, including understanding of the Board of Directors in the Company's business operations, expectations of stakeholders, opportunities and risks affecting the business operations, the Board of Directors shall regularly review the corporate governance policy on a yearly basis at least once a year. In this connection, the Company has publicized the corporate governance policy on its website at <http://www.bemplc.co.th> to allow all shareholders, investors, and stakeholders to acknowledge the practical guidelines and business operations of the Company based on the Corporate Governance Code. Moreover, the Company has informed and communicated to the Company's staff to acknowledge and adhere to such policy.

• Corporate Governance Policy

The Company realizes the significance and benefits of good corporate governance to ensure that the Company has the efficient, transparent, auditable management systems in place to help build trust and confidence among shareholders, investors, stakeholders, and all concerned parties, in pursuit of the Company's sustainable growth. To that effect, the Company adheres to the guidelines of the Company's corporate governance policy in accordance with the Principles of Governance Corporate Code covering 8 chapters, namely:

1. Establish Clear Leadership Role and Responsibilities of the Board

- o Fulfill the duties with awareness and thorough understanding of its leadership roles in supervising and ensuring good management and creating sustainable value for the business.
- o Monitor and supervise that directors and executives comply with their own scope of duties and responsibilities with care and honesty, in accordance with laws, regulations and meeting resolutions.

2. Define Objectives that Promote Sustainable Value Creation

- o Define business objectives and goals which conform to and promote sustainable value creation for the Company, stakeholders and society.
- o Monitor, oversee the formulation of strategies to ensure compliance with business objectives and goals, by appropriately adopting innovations and technologies.

3. Strengthen Board Effectiveness

- o Establish and review the board structure in terms of size, composition and the proportion of independent directors to ensure appropriateness.
- o Ensure the transparent and clear selection and nomination procedures.
- o Ensure the remuneration structure which is appropriate for their respective roles and responsibilities.
- o Promote the development of skills and knowledge for the performance of their duties on a regular basis.
- o Put a limit on the number of listed companies in which the Company's director will hold the directorship that no director may hold a directorship position in more than five listed companies, to ensure efficiency in performance of duties.

4. Ensure Effective CEO and People Management

- o Have the recruitment and development procedures for top executives to ensure they have knowledge, skills, experience and qualifications required to drive the organization towards its goals.
- o Ensure the appropriate remuneration structure.
- o Have the human resources management and development to ensure the Company has adequate staff who are knowledgeable, skilled, and experienced.

5. Nurture Innovation and Responsible Business

- o Nurture and develop the creation of a culture of corporate innovation development to add value to the business according to the constantly changing circumstances, by taking both internal and external stakeholders into account.

6. Strengthen Effective Risk Management and Internal Control

- o Ensure the appropriate risk management and internal control systems in place, supervise the Company's operations to effectively achieve its objectives.
- o Handle conflicts of interest and prevent any inappropriate use of assets, information, opportunities and execution of transactions with any related parties to ensure compliance with applicable laws and standards.

7. Ensure Disclosure and Financial Integrity

- o Ensure the accuracy, completion, adequacy, punctuality, transparency in disclosure of significant financial information and non-financial information of the Company.
- o Ensure the appropriate use of technology in communicating and disseminating information to stakeholders.
- o Protect information which affects the Company's securities prices to ensure that the disclosed information can reflect implementation or creation of sustainable value for the business.

8. Ensure Engagement and Communication with Shareholders

- o Ensure the participatory process so that the Company's shareholders have the opportunity to participate effectively in decision-making regarding the Company's significant matters.
- o Ensure equitable treatment toward and protection of basic rights of the Company's shareholders to ensure that all shareholders are treated equitably, have measures against the improper use of insider information to seek benefit for oneself or for others, which causes damage to shareholders as a whole.
- o Encourage the Company's shareholders to exercise their basic rights, and take care of shareholders to the greater degree than their legal rights
- o Refrain from committing any violation or infringement of shareholders' rights.

As a result of the operational results from the adherence to and compliance with the aforesaid Principles of Corporate Governance Code, the Company then received assessments and awards for the corporate governance in 2020, as follows:

- The Company received the "Excellent" rating in the assessment of the quality of the 2020 Annual Ordinary General Meeting of Shareholders (AGM Checklist 2020), from the Thai Investors Association.
- The Company received the "Excellent" rating from the results of corporate governance survey of listed companies, from the Thai Institute of Directors Association (IOD).
- The Company was announced as one of the Thailand Sustainability Investment 2020 list for the fourth consecutive year as a listed company engaging in business operations by taking into account environment, society and corporate governance.
- The Company was awarded the Thailand's Top Corporate Brand 2020 as one of the organizations which realized the significance of development of its corporate brand to ensure greater strength for the country's social and economic sustainability, with the highest brand value in the transportation and logistics sector in 2020, from the Faculty of Commerce and Accountancy Chulalongkorn University.

In 2020, the Board of Directors supervised and monitored to ensure the development of the Company's corporate governance through activities held throughout the year 2020 covering and in compliance with the Corporate Governance Code for Listed Companies, as follows:

9.1.1 Shareholders' Rights and Encouragement of Participation by Shareholders

The Board of Directors acknowledges and realizes the significance of shareholders' fundamental rights as well as encouraging participation by shareholders and communication with shareholders, namely, share purchase, sale and transfer, entitlement to the Company's profit sharing, meeting attendance for exercising their rights to vote in the shareholders' meeting independently and equitably, participation in decision-making in the Company's important matters, appointment or removal of directors, determination of remuneration for directors, appointment of auditors, determination of remuneration for auditors, and rapid receipt of the Company's complete and sufficient information and news via easily accessible channels, whereby the Company encourages its shareholders to fully exercise their rights through the shareholders' meeting and refrains from taking any actions which violate or infringe shareholders' rights, as follows:

1. Shareholders' Meeting

1.1 Shareholders' participation in the shareholders' meeting

The Company realizes and gives priority to shareholders' rights and encourages their participation, whereby the Board of Directors clearly sets out in the corporate governance policy that the Company must support all groups of shareholders, particularly minority shareholders, foreign shareholders, and institutional shareholders, to exercise their rights without limitation to only such rights provided by laws. In this regard, the Company must not take any actions which violate or infringe shareholders' rights and also promote shareholders' right to decide on significant changes, by ensuring that the shareholders have been provided with the Company's sufficient information. Furthermore, the Company prepares documents in both Thai and English versions for clear acknowledgment and understanding of all shareholders.

In case it is inconvenient for any shareholder to attend the meeting in person, the Company prepares proxy forms for enabling the shareholders to decide among themselves how they wish their votes to be cast, and gives them an option of appointing the Company's independent director nominated by the Company as their proxy to exercise the right to attend the meeting and vote on each agenda item on their behalf. Three available proxy forms under the law are prepared, as follows:

- Proxy Form A is a general simple proxy form (for shareholders in all cases);
- Proxy Form B is a proxy form with specific details;
- Proxy Form C is used only by foreign shareholders who appoint a custodian in Thailand.

The Company makes these three proxy forms available on the Company's website for shareholders to choose and use them as appropriate. Furthermore, the Company prepares duty stamps available for free for shareholders who appoint their proxies to attend the meeting.

1.2 Shareholders' access to the Company's information

The notice of the meeting which contains detailed explanations, facts and reasons in support of each agenda item, date, time, place, including details relating to the documents or evidence in support of participation in the meeting, is prepared by the Company in both Thai and English versions to ensure all shareholders' acknowledgment and clear understanding. The Company posts the notice of the meeting on the Company's website 30 days in advance. In 2020, the Company convened one shareholders' meeting, namely, the 2020 Annual Ordinary General Meeting of Shareholders on July 20, 2020, the Company had disseminated the notice of the meeting on the Company's website since June 19, 2020 and also sent the notice of the meeting to Thailand Securities Depository Company Limited, as the Company's share registrar, for delivery of the same to shareholders 10 days prior to the meeting, i.e., July 10, 2020, so as to allow shareholders to have time to consider the details of each agenda item. Furthermore, the shareholders' meeting was proceeded in accordance with the order of agenda as specified in the notice of the meeting without adding any agenda to the meeting without prior notice to shareholders in the meeting, so that shareholders had time to study the information for support of their consideration of each agenda item.

1.3 Facilitation to shareholders' exercise of their rights to attend the meeting and vote

The Company has not defined any special conditions which may restrict shareholders' opportunity to attend the meeting. The Company sets shareholders' meeting date which do not fall on any long holidays or public holidays; and an appropriate meeting time which is not too early in the morning or too late in the evening. The meeting is held at a venue which is convenient for commuting, such as, close to a metro station or expressway on-off ramp, and with sufficient parking area, together with meeting venue and travelling map. In 2020, the Company convened one shareholders' meeting, namely, the 2020 Annual Ordinary General Meeting of Shareholders on July 20, 2020 at 14.00 hrs., which was held at the Le Concorde Ballroom, 2nd Floor, Swissotel Bangkok Ratchada, No. 204 Ratchadaphisek Road, Huai Khwang, Bangkok, which shareholders could conveniently travel to by public transportation system such as buses, MRT, and by car, etc. However, due to the situation of the outbreak of the COVID-19, the Company complied with the meeting guidelines issued by the Center for COVID-19 Situation Administration or CCSA, by which the Company could provide a maximum of 200 seats at an appropriate physical distancing of at least one meter from each other and asked for shareholders' cooperation in appointing the Company's independent director as their proxy to attend the meeting on their behalves.

1.4 Shareholders' opportunity to ask questions in advance

To ensure communication with shareholders and build participation with shareholders, the Company provides an opportunity for its shareholders to propose agenda items or send questions or comments in advance, under the criteria and process which are publicly disclosed on the Company's website at www.bemplc.co.th, or via E-mail address: companysecretary@bemplc.co.th, Tel.: 0 2641 4611, Fax: 0 2641 4610, or by post, to the Managing Director Office, Bangkok Expressway and Metro Public Company Limited (Branch Office 1) No. 238/7 Asoke-Dindaeng Road, Bangkok Subdistrict, Huai Khwang District, Bangkok 10310. In this regard, the Company will consider answering the questions via appropriate channels or further clarify in the ordinary general shareholders' meeting.

As for the 2021 Annual Ordinary General Meeting of Shareholders, the Company had provided an opportunity for shareholders to propose agenda items or send questions in advance via the website from October 1, 2020, to December 31, 2020, of which shareholders had been widely notified via the SET's website.

2. Conduct of the Shareholders' Meeting

As a result of the situation of the outbreak of the COVID-19, the Company adhered to the rules on organizing meetings in accordance with the order of the Center for COVID-19 Situation Administration or CCSA to ensure conformity to various practices and operating the principles of SET, by giving a written notice of the Company's measures for organizing the 2020 Annual General Meeting of Shareholders to shareholders for acknowledgment, per the following details:

- Kindly requested shareholders to appoint the Company's independent director as their proxy to attend the meeting on their behalves;
- Provided the temperature-screening points before all attendees' attendance at the meeting, in which case, if any shareholder/proxy failed the screening for temperature measurement, the Company reserved the right not to allow such shareholder/proxy to attend the meeting.
- Resulted in the limited number of available seats in the meeting room, the attendees' seats must be spaced at an appropriate physical distancing of at least one meter from each other. In the event that the meeting room could not be accommodated because the provided seats in the meeting were fully occupied, the Company kindly requested shareholders coming in person to appoint the Company's independent director as their proxies instead.
- Neither served complimentary snack box nor served tea or coffee in the shareholders' meeting in order to minimize the common contact of objects with others for the sake of safety and hygiene of all attendees.
- Kindly requested all present shareholders to always wear a face mask during attendance at the meeting venue, and the Company reserved the right not to allow those who were not wearing a face mask to attend the meeting venue. Moreover, the Company facilitated shareholders' attendance at the meeting by having the Company's reception staff available to provide relevant information to shareholders, both before-after and during the meeting. The Company also used the facilities, including methods to conduct the meeting, as follows:

2.1 Use of technology in the meeting

The Company used barcodes and computer systems for meeting registration and voting to ensure accuracy, convenience, rapidity, and as such voting results could be displayed promptly.

2.2 Directors' participation in the shareholders' meeting

The Board of Directors always gives priority to their participation in the shareholders' meeting to answer questions and take suggestions of shareholders into consideration. The 2020 Annual Ordinary General Meeting of Shareholders was held on July 20, 2020, with 14 directors out of a total of 14 directors attending the meeting (the proportion of directors attending the meeting was 100 percent). The Chairman of the Board of Directors, the Audit Committee Chairman, chairs of various subcommittees, the Managing Directors, and the Management Team of the Company attended such shareholders' meeting to answer shareholders' questions.

2.3 Rules on voting

The Company specifies that shareholders have one vote for each share held by them. Normally, the majority votes shareholders who attend the meeting and cast votes is applicable. Agenda items on the determination of remuneration for directors must be passed by not less than two-thirds of all votes of the shareholders who attend the meeting. As for other issues, votes are in accordance with the Articles of Association, laws and relevant regulations. Agenda items for acknowledgement require no resolution.

2.4 Vote counting or examination in the shareholders' meeting

To ensure transparency, compliance with the laws and the Articles of Association, the Company provides for a legal advisor to count or inspect the counting of votes to ensure transparency and compliance with the laws and the Articles of Association. The Company would introduce the examiners of vote counting to the meeting and has them recorded in the minutes of the shareholders' meeting. In casting votes on each agenda item, the Company uses the barcode system to record such votes to ensure that the voting results are expeditiously displayed to the meeting. Voting results of the meeting, favorable, unfavorable, abstaining votes, and voided voting cards, would be also displayed. The Company discloses resolutions, together with voting results on each item to the meeting, and also disseminates such resolutions via the SET's system as well as making such resolutions and minutes of the meeting available on the Company's website for the shareholders' information and examination of voting results in a rapid manner.

2.5 Use of voting cards

- Voting cards are provided for every agenda for those who attend the meetings in person or by proxy and have power to vote on each agenda item. The Company's officers facilitate the collection of voting cards in the meeting room. To ensure transparency, the Company has its legal advisor and the shareholders' representatives serve as examiners and witnesses in the counting of votes.
- In case shareholders appointing their proxies have clearly voted for, against or abstained from voting on the respective agenda items, the Company collects and records such votes into the computer system for processing in advance. The legal advisor and the shareholders' representatives examine the counting of votes by proxy.
- To ensure that the conduct of the meeting in each agenda item is efficient and beneficial to shareholders as a whole that the Board of Directors has sufficient time to clarify or answer shareholders' questions, the Company collects only the voting cards of the shareholders attending the meeting in person and intending to vote against or abstain from voting.
- For the agenda item on the appointment of directors in respect of which shareholders may vote on an individual basis, the Company collects the voting cards from all shareholders attending the meeting in person to ensure transparency in the counting of votes which can be requested for review at a later date. In case of by proxy, the Company will check votes cast in the provided proxy form.

2.6 Shareholders' opportunity to share opinions or ask questions in the meeting

This was due to the situation of the outbreak of the COVID-19, the Chairman of the Board of Directors who presided over the shareholders' meeting allowed and encouraged shareholders to share opinions and ask questions concerning related to the meeting, based on the following practices:

- Allowing shareholders to share additional opinions or ask additional questions on the agenda in advance through various channels, such as, registered mail with return receipt requested, e-mail and facsimile, and having shareholders attending the meeting write their questions on the question sheet provided by the Company during the meeting instead of using a microphone to avoid contract;
- Allowing shareholders to share additional opinions or ask additional questions relating to matters other than the agenda items after the meeting had been proceeded in accordance with all agenda items.

While proceeding the meeting, the Company's staff was provided to facilitate shareholders' submission of their question sheets to directors in place of directly asking them questions during the meeting.

3. Preparation of Minutes of the Shareholders' Meeting and Disclosure of the Meeting' Resolutions

- 3.1 The Company discloses resolutions of the shareholders' meeting in each item on the Company's website in addition to the disclosure to SET via SETLink system within the shareholders' meeting day for shareholders' acknowledgement of the information and review of the voting results, together with cast votes in a rapid manner.
- 3.2 The Company prepares minutes of every shareholders' meeting with accuracy and completeness, comprising the following information:
 - The list of directors attending the meetings;
 - The number of shareholders/shares present at the meetings (in person/by proxy);
 - Brief explanation on material issues, such as voting procedures and display of voting results, to the meetings prior to conducting the meetings;
 - Names of persons who ask/answer questions or share opinions in brief;
 - Resolutions of the meetings, with details of votes for, against, abstentions, and voided cards.
- 3.3 After the end of the shareholders' meeting, minutes of the shareholders' meeting are required to be completed within 14 days, provided that such minutes shall contain sufficient details for the shareholders absent from the meeting to review on the Company's website. Moreover, video presentation of the atmosphere of the shareholders' meeting is made available on the Company's website until the next shareholders' meeting, so that shareholders who are not attending the meeting or those who are interested in the Company's information can access to the meeting's details other than that recorded in the minutes of the meeting.

9.1.2 Equitable Treatment towards Shareholders

The Board of Directors realizes the significance of supervision and monitoring to ensure the Company's equal and fair treatment towards all shareholders, both major shareholders and minority shareholders, including foreign shareholders, and ensure the Company's prevention of usage or receipt of inside information which has not yet been disclosed to the public in a manner which such is done for personal interests or others' interests; which may take advantage of and cause damage to shareholders as a whole, all of which are considered unfair treatment in capital market. As a result, the Board of Directors formulates measures to prevent inside information usage and disclose information, as well as setting out fair criteria and methods for execution of transactions which may give rise to a conflict of interest, as follows:

1) Provision of Information prior to Shareholders' Meeting

The Board of Directors ensures that the Company gives a notice of the meeting, together with agenda items and opinions of the Board on each agenda item, to the SET in accordance with the rules on disclosure, and such notices are posted on the Company's website on the following business day; ensures that the Company prepares the notice of the meeting, together with details of each agenda item, both in Thai and English, for the convenience of foreign shareholders; and disseminates such notice of the meeting, together with details of each agenda item, on its website 30 days prior to the meeting date. The Board of Directors also ensures that the Company gives prior notice to shareholders on rules and regulations in the conduct of the meeting, voting procedures, including their voting rights.

2) Protection of Minority Shareholders' Rights

To enable shareholders to exercise their rights to propose any matters relating to the Company's significant changes, the Company, therefore, adopts a policy to fairly and equally allow all shareholders to exercise their rights to propose agenda items to the shareholders' meeting and to nominate qualified persons for appointment as directors via the channels announced on the Company's website. Shareholders may exercise such rights three months prior to the end of the accounting period. In this regard, the Board of Directors considers incorporating agenda items proposed by shareholders as appropriate. As for the persons nominated for appointment as directors, the management proposes such names to the Nomination and Remuneration Committee for further submission to the Board of Directors and the shareholders' meeting. In addition, shareholders are allowed to exercise their rights to appoint directors on an individual basis in the agenda item of appointment of directors, in respect of which shareholders may vote on an individual basis.

3) Prevention of Trading of Securities from Inside Information Usage

The Board of Directors has set out written guidelines for protection and prevention of inside information usage, and informed all directors, executives, and staff of such guidelines for compliance. In this regard, directors and executives are required to do as follows:

- submit the first report on their own securities holdings, their respective spouses and minor children's securities holdings in the Company; and report on every change in such securities holdings from purchase, sale, transfer or acceptance of transfer of securities, to the Office of the Securities and Exchange Commission in accordance with Section 59 of the Securities and Exchange Act B.E. 2535 (1992) within three business days from the date of purchase, sale, transfer or acceptance of transfer of securities, and the Company regularly reminds the Board of Directors thereof. Directors and executives are also required to report on their securities trading or holdings to the Board of Directors' Meeting on a quarterly basis.
- Report on each change in the securities holdings to the Office of the Securities and Exchange Commission and submit a copy of such report to the Company at the same date which the report on such change has been made to the Office of the Securities and Exchange Commission.
- No directors, executives, and staff who have known any material inside information with an effect on the securities prices shall disclose such material inside information to any third party before it has been disclosed to the public.
- Report to the Board of Directors' acknowledgment on the securities holdings in the Company by directors, executives, including their related persons, together with report on every change in the securities holdings to the Board of Directors' Meeting.

Moreover, directors and executives have been aware of their specified duties and responsibilities, including punishments under the laws. In addition, the Company prohibits its executives who have access to inside information from taking any actions contrary to the relevant laws, rules, and regulations. In this aspect, the Company has established a policy on securities trading for all directors and executives to impose measures to prevent the misuse of insider information as follows:

- Directors and executives shall avoid and refrain from trading the Company's securities during the period of 1 month prior to the disclosure of quarterly and annual financial statements.
- Directors, executives and employees, who have known any financial statements information or any other material information that affect the Company's securities prices, are prohibited to trade or allow other to use such information to trade the Company's securities during the period of 1 month prior to the disclosure of the financial statements and/or any other information that affect the Company's securities prices whether for one's own benefits or others.

In 2020, the Board of Directors and executives complied therewith strictly, no any violation or non-compliance with the criteria for securities trading by usage of the inside information and asset trading under the rules of the SET and the Office of the Securities and Exchange Commission was found.

4) Interests of Directors and Executives

4.1 Report on interests of directors and executives

The Board of Directors imposes a duty on its directors and executives to report on their personal interests and disclose their holdings of directorships or executive positions in other legal entities, and their shareholdings in other legal entities in excess of 25 percent of total voting shares and this obligation applies to both reporters and their related persons. This is to ensure that the Board of Directors has information in support of its consideration and approval of execution of transactions of the Company and its subsidiaries with accuracy and transparency in compliance with the relevant rules and regulations.

The Company Secretary keeps such reports on interests of directors and executives, and provides copies of such reports to the Chairman of the Board of Directors and the Audit Committee Chairman within seven business days from the date of the Company's receipt thereof.

Report on securities holdings by directors and executives for 2020

Names of Directors/Executives	Amount of Ordinary Shares			
	As at December 31, 2019	Change in 2020	As at December 31, 2020	
			Amount	Percent (%)
<u>Directors</u>				
1. Mr. Plew Trivisvavet	24,606,878	1,000,000	25,606,878	0.1675
The spouse	2,402,527	-	2,402,527	0.0157
2. Mr. Vitoon Tejatussanasoontorn	803,893	(803,893)	-	-
3. Gen. Chetta Thanajaro	-	-	-	-
4. Dr. Annop Tanlamai	-	-	-	-
5. Mrs. Vallapa Assakul	-	-	-	-
6. Mr. Supong Chayutsahakij	-	-	-	-
7. M.L. Prasobchai Kasemsant	-	-	-	-
8. Mr. Phongsarit Tantisuvanitchkul	-	-	-	-
9. Miss Arisara Dharamadhaj	-	-	-	-
10. Mr. Panit Dunnvatanachit	-	-	-	-
11. Mr. Vithaya Punmongkol*	-	-	-	-
12. Mrs. Natamon Bunnak	-	-	-	-
13. Dr. Sombat Kitjalaksana	2,999,141	-	2,999,141	0.0196
14. Mrs. Payao Marittanaporn	-	-	-	-
<u>Executives</u>				
15. Mr. Sanguan Kunatinun	-	-	-	-
16. Mrs. Sudruthai Prommart	-	-	-	-
17. Mr. Phakpoom Thaweewittayarut	-	-	-	-
18. Miss Panan Tosuwanthaworn	-	-	-	-
19. Mr. Witoon Hatairatana	-	-	-	-
20. Mr. Alvin Gee	-	-	-	-
21. Dr. Vites Techangam	-	-	-	-
22. Mr. Anawash Suwanarit	-	-	-	-

Remark : * Mr. Vithaya Punmongkol was appointed as director on April 9, 2020 to replace Mr. Yuttana Yimgarund who resigned from his position on October 25, 2019.

4.2 Interested directors' participation in the shareholders' meeting

The Board of Directors sets out a policy to prohibit its directors and executives, who are connected persons or interested persons in relation to any agenda items to be considered, from participating in the meeting and voting on such items. The Company Secretary gives prior notice to such interested directors and executives to express their intention not to participate in the meeting nor vote on such item. In considering a connected person and interested person, the Board of Directors takes into account such reports on interests which all directors and executives have a duty to prepare and submit to the Chairman of the Board of Directors and the Audit Committee Chairman.

5) Related Party Transactions / Connected Transactions

5.1 Policy on related party transactions / connected transactions

In case the Company executes a connected transaction/related party connection under the definition of the SET, the Company must comply with the rules and regulations of the SET, as follows:

- The Company shall comply with the rules and regulations of the SEC Office and the SET, including the requirements on the disclosure of connected transactions as well as acquisition and disposition of significant assets of the Company or its subsidiaries and the accounting standards as prescribed by the Federation of the Accounting Professions. If there are transactions which may give rise to a conflict of interest in the future, such as, hiring a group of persons who may have a conflict of interest to carry out construction, project management, project maintenance, the Audit Committee shall jointly consider the necessity and justification of such transactions, including pricing and terms of the transactions, which must be based on the ordinary course of business. Pricing must also be compared with third party prices or market price. Interested persons will not be allowed to participate in the consideration and approval of the transactions.
- The Company has no policy to extend or guarantee a loan for a person who may have a conflict of interest under the definition of the SEC Office.
- Should the Board of Directors and/or the Audit Committee have no expertise in considering any particular related party transaction which may take place, the Company will arrange for an independent expert or the Company's auditor to give any opinion on such related party transaction to support the decision-making of the Board of Directors and/or the Audit Committee or the shareholders, as the case may be.
- The Company will disclose the related party transactions in the notes to the financial statements that have been reviewed or audited by the Company's auditor.

5.2 Criteria on execution of connected transactions on arm's length basis

The Board of Directors approves in principle the Company's execution of connected transactions on arm's length basis, namely, transactions which involve commercial terms in a manner persons of ordinary prudence may enter into with general parties under the same circumstances, through commercial negotiation without any influence in the capacity as director, executive or related person, as to execution of such transactions between the Company and its subsidiaries with directors, executives or their related persons, as follows:

- Engagement of any company or legal entity which is the connected person for repair, improvement or additional construction of expressways and related equipment should such company or legal entity propose fair price and conditions to the utmost benefit of the Company.
- Engagement of any company or legal entity which is a connected person for repair or purchase of materials or equipment, inclusive of labor, for maintenance of administration buildings and depots in the future, subject to the commercial conditions and other agreements which are not different from others.

- Transactions between the Company and its subsidiaries with MRTA, as follows:
 - Support of public relations and advertising activities to facilitate the metro service, in an amount not exceeding Baht One Million per year.
 - Support of government policies to facilitate people's commute by the metro during the specified period from time to time by means of discounts or free rides, provided that MRTA will compensate for revenue during such period in accordance with appropriate and fair criteria.
- Transactions in the manner of management or advisory service to any legal entity which is a connected person.
- Leases of office building spaces for the Company and its subsidiaries from CH. Karnchang Public Company Limited.
- Other transactions which are connected transactions on arm's length basis under the definition of the SEC Office or the SET.

5.3 Prevention of a conflict of interest

- Directors and executives must inform the Company of relationships or connected transactions in any business which may give rise to a conflict of interest;
- Any connected transaction with directors which may give rise to a conflict of interest with the Company must be avoided. Any connected transaction which is necessary to be executed must be proposed to the Audit Committee to consider providing an opinion in relation to justifications and benefits for the Company prior to proposing the same to seek approval of the Board of Directors in accordance with the Corporate Governance Code, and ensure compliance with the rules of the SET and the SEC Office;
- Executives and staff must strictly comply with the Articles of Association and the code of business ethics of the Company, in order to ensure the Company's reliability and trust for all stakeholders, and ensure dissemination of the information for all staff's understanding and adherence to the same.

9.1.3 Role of Stakeholders and Responsible Business Operations

The Company has a clear policy which focuses on and realizes rights of every group of all stakeholders, whether inside, such as, staff and executives of the Company and its subsidiaries, or outside, such as, customers, business related persons, lenders, traders, society and communities where the Company is located, nearby schools, government sector, including competitors, and other relevant authorities. Any stakeholder wishing to contact or have any comments may directly contact directors or the Company Secretary. In addition, the Board of Directors has laid down the corporate governance policy that requires the Company to treat stakeholders based on their rights as specified by applicable laws without any actions in violation of stakeholders' right; and compensation measures in case any stakeholder sustains any damage arising from violation of the rights; as well as focuses on its operations with respect to human rights. The Company has continued to take care of stakeholders in accordance with the policies, as follows:

1) Policy on Treatment towards Each Group of Stakeholders

- 1.1 Customers:** The Company has a commitment to provision of quality, standard and reliable services as well as taking into account health, safety and fairness, keeping customers' information confidential, following up and evaluating customers' satisfaction for the purpose of development and improvement of services, together with advertisement, public relations and sales promotion, in response to customers' needs to have access to the mass transit system and routes which save their travelling time in Bangkok and its surrounding provinces. Work plans/programs are also continuously set out for improvement of the expressway and metro services for users to ensure a more rapid and convenient service with a standard safety. Rules and regulations of service provision to which the Company has adhered are as follows:

- Providing quality, safe and standard services to satisfy service users' expectations.
- Ensuring prompt responses to service users' needs, without discrimination, and allowing and facilitating submission of any comments or suggestions for service improvement.
- Providing accurate and timely information on services.
- Organizing special activities to allow the service users to visit the operation and management of the expressways and metro under the Company's concessions, including regular promotion of the service usage by and marketing activities with customers.

1.2 Business counterparts: The Company strictly discharges its obligations under the Agreements with EXAT and MRTA in its capacity as a contractual party, and fairly treats its business counterparts on the basis of equitable and impartial treatment, without discrimination. The Company also complies with conditions, rules, regulations, mutual practices, and promotes good relationships, which are clearly written in the Company's code of business ethics, along with the work procedures in accordance with ISO 9001 Quality Management System. This is to ensure its collaboration with EXAT and MRTA to provide efficient and regular services. In this regard, the Company arranges for monthly performance satisfaction assessment in order to develop and improve the efficiency of the operations. According to the assessment results, both EXAT and MRTA are completely satisfied with the Company's collaboration.

Moreover, the Company organizes quarterly meetings between its operating staff and EXAT's personnel and monthly meetings with MRTA, which not only enhance the efficiency and results in the service users' satisfaction but also minimizes conflicts or impacts which may give rise to disputes over joint operations between both parties.

1.3 Traders / Contractors: The Company has a commitment to the procurement of standard goods and service, for the purpose of development and maintenance of sustainable relationships with traders, with the clear objectives in terms of quality of goods and service worth its value, technical standard, and credibility. The Company, therefore, provides fair and equal procurement procedures for all traders and follows the procedures in a systematic way in compliance with the work procedures regarding procurement and conditions of contracts or agreements with fairness in accordance with the requirements of ISO 9001 Quality Management System, based on the practices, as follows:

- Determining the criteria for selection of trade counterparts through a strict screening process to ensure fair business operations without violation of human rights.
- Ensuring equal and fair competition on a database, without discrimination or preventing any trader from participating in business competition.
- Preparing contracts or agreements in appropriate, fair and standard forms.
- Arranging for management, monitoring, surveillance, including rechecking systems to ensure the full compliance with contracts or agreements and internal control system to prevent fraud and misconduct in all steps of the procurement procedures.
- Paying consideration to traders on time in accordance with terms of payment as mutually agreed.
- Not allowing directors and/or staff to accept any benefit from traders privately or by reason of personal relationship.
- Evaluating traders on a yearly basis and informing them of the results of the evaluation with suggestions for traders to continuously improve the quality of goods and services, and also allowing traders to contact the management to make any complaints if they are unfairly treated.
- Refraining from seeking any trader's confidential information dishonestly or improperly, such as bribing directors and staff of its competitors.
- Refraining from making a serious accusation against traders without reasonable grounds.

1.4 Lenders / Debenture holders: The Company strictly complies with the conditions of credit facilities agreements, suretyship agreements, capital management to build up the confidence of the financial institution lenders who provide financial support to the Company's projects, and refrains from breaching any conditions thereof as mutually agreed. The Company complies with and adheres to the following practices:

- Strictly complying with the conditions of the credit facilities agreements as mutually agreed. Failure to comply with any condition must be informed to the lenders in advance for jointly seeking a solution.
- Ensuring equitable and fair treatment towards all lenders, based on fair returns for both parties.
- Reporting correct and reliable financial information to the lenders accurately, completely, timely and regularly.
- Refraining from giving, soliciting, receiving, agreeing to receive or accepting an engagement for any benefits fraudulently in commercial terms.
- Disclosing information (if any) on giving, soliciting, receiving, agreeing to receive or accepting engagement fraudulently, to the lenders, and jointly resolving such problems with fairness and rapidity.

Debenture holders: The Company issues debentures in accordance with applicable requirements, laws and notifications of the SEC and strictly complies with policies, objectives and resolutions of the shareholders' meeting, and also realizes the significance of its responsibility to fulfill commitments in accordance with the requirements regarding the debenture issuer's rights and duties, including relevant contractual conditions.

1.5 Staff: The Company considers staff as a key resource behind its business movements and as a crucial factor to the Company's sustainable success and growth, and then clearly sets out the staff practices, as suitable for each work position, and has respect for human rights, for instance, determination of remuneration and other benefits with fairness, provision of welfare benefits not less than that provided by law or higher as appropriate, taking into account staff's hygiene and safety at work, provision of training, development of competency and support of career advancement, as well as providing staff opportunity to improve their important and essential skills in connection with working or in any other fields, etc. In this regard, the Board of Directors has authorized the management to follow up, evaluate and review work performance on a yearly basis.

1. Treatment of staff

- Establishing structures and providing fair and appropriate benefits to staff according to work competency, to which staff performance evaluation system (people assessment) has been applied, focusing on work competency assessment and capability measurement as principle for development of staff's skills and competency to suit work position and ensure the Company's growth, as well as clearly measuring their performance based on KPIs in all key activities for supporting consideration and assessment of staff's performance.
- Creating a participatory and teamwork environment by allowing staff to express their opinions on work performance.
- Ensuring that staff take pride in and engage with the organization by encouraging their career advancement.
- Ensuring equitable treatment, integrity, and fairness in punishment, appointment, and transfer, including rewards, on the basis of staff's knowledge, capacities, and qualifications.

- Giving priority to and promoting the development of knowledge and capacities of staff at all levels, whereby the Company allows and encourages staff to attend training courses or further study in order to enhance their skills, knowledge, and expertise, as well as fostering positive attitudes toward them. Such training would emphasize the development of skills, knowledge, and competency of staff, whether it be functional skills, core skills or leadership skills. In 2020, the Company arranged for staff training, averaging 34.85 training hours/person.
- Respecting human rights in respect of nondiscrimination, provision of equitable opportunity for employment of female labor, disabled persons, underprivileged persons, youths, and the elderly.
- Supervising and monitoring to ensure that staff strictly comply with laws and regulations relating to staff, including provision of suggestions and close monitoring in order to prevent any illegal action, whereby the Company supervises and encourages staff to ensure that they use lawful products without infringement of copyrights or intellectual property, along with support of their compliance with the operational guidelines and performance of duties with integrity, without involvement with corruption in any form, for the benefits and success of the Company.

2. Policy on safety and hygiene

The Company realizes and gives priority to the safety and hygiene of the business premises to ensure staff's quality performance and quality of life with safety and hygiene at work, by setting out the policy on safety and hygiene, as follows:

- The Company formulates measures to prevent any work-related accident, injury and illness through sincere cooperation among all staff as well as restrict and cope with safety risks arising from undertaking work under the normal operating process.
- The Company formulates measures to design tools and equipment, set out practices, provide for training and supervise operations by taking into account safety for life, hygiene and property of staff and that of the Company as a whole.

The Company not only provides the hygienic work environment at the workplace for the sake of safety for life, hygiene together with property of staff and the Company, the Company also takes into account safety and hygiene of the service users, through provision of regular training to technical and engineering teams, including rescue and traffic management staff on the expressways, so as to ensure their efficient and safe performance; and in regard to the metro business, the Company also holds training to all staff on work safety and implements safety operations in accordance with the laws as well as local and international safety standards, i.e., TIS 18001 : 2001 and OHSAS 18001 : 2007, with the main aim of taking care of welfare in terms of safety, occupational health and work environment for staff related to the metro operations.

In 2020, the Company had five work-related accidents on the expressways, and had three work-related accidents in metro operations, without any loss of staff.

Work-Related Accidents (times)		Injury Frequency Rate (I.F.R.)	
Expressway Business	Rail Business	Expressway Business	Rail Business
5	3	1.82	0.45

Remark : The injury frequency rates (I.F.R.) were calculated from the number of work-related injuries (N) per man-hours worked (MH) whereas $I.F.R. = N \times 1,000,000 / MH$.

- 1.6 Supply chain:** The Company deals with the supply chain in strict compliance with international standards, ISO 9001 Quality Management System, and ISO 14001 Environment Management System, by way of providing education and close monitoring and audits to ensure that the supply chain of traders in business association with the Company takes account of environmental impact, in the interests of the sustainability of their mutual business alliance.
- 1.7 Communities:** The social and environmental impacts of its business operations, particularly impacts on the communities adjacent to the expressways, metro routes, or near the office where the Company is located are of concern to the Company, and therefore, the Company continues to organize special activities for providing benefits and building a learning center for business and communities in the long run.

2) Anti-Corruption Policy

The Company realizes and gives priority to anti-corruption and fraud prevention and also adopts measures to prevent corruption, both inside and outside. The Company sets out guidelines and procedures for regular practices, monitoring, surveillance, review, risk assessment, and training as suitable and up-to-date, to ensure that all directors, executives, and staff of the Company have strictly adhered to and complied with such guidelines. In this regard, the Company formulates anti-corruption policy containing the key practical guidelines, as follows:

- The Company's directors, executives, and staff at all levels should carry out activities with fairness, integrity, and transparency in business dealings with various agencies, provided that such activities must be proper in compliance with applicable laws, policies, Articles of Association, regulations, notifications or practical procedures.
- The Company encourages and promotes fair treatment with integrity towards all its traders and compliance with any contractual commitments made with the Company's stakeholders.
- The Company encourages and promotes directors', executives' and staff's awareness to ensure that they refrain from committing any fraud and realize the negative impacts of corruption.
- The Company encourages and promotes directors, executives and staff to refrain from receiving, agreeing to receive or offering any hospitality, gifts, and any other payments which are extravagant and inappropriate to those in business dealings with the Company.
- The Company arranges for staff training to educate them regarding the anti-corruption policy, practices, and guidelines.

In this regard, the Company has imposed the duty on the Internal Audit Unit to follow up, conduct surveillance, review, risk assessment and training for preventing / suppressing corruption.

3) Policy and Practices on Non-infringement of Intellectual Property

The Company respects and upholds the proprietary rights in others' intellectual property, whereby use of the intellectual property shall be subject to the prior consent of the intellectual property owner, and then, the Company formulates a policy to forbid any arrangements which infringe intellectual property of any kind, based on the following guidelines:

- All staff have duty to protect and keep the Company's intellectual property confidential to ensure that such information must not be leaked out and exploited for personal gain or any other person's gain without permission.
- All staff must respect and honor others' intellectual property and refrain from exploiting any work piece as others' intellectual property, whether in whole or in part, without the owner's permission.

4) Policy on Respect of Laws and Human Rights Principles

The Company makes it mandatory for directors, executives and staff to comply with the laws and human rights principles or human dignity, regardless of race, color, sex, language, religion, social origin, property, birth, political opinion, or other status, as well as realizing their own rights, duties, and responsibilities towards society and others, based on the guidelines, as follows:

- The Company strictly complies with the laws and human rights principles and does not support any business which violates human rights.
- The Company treats all staff equally, without discrimination in terms of employment, remuneration, training, promotion, termination or dismissal due to sex, race, color, religion, age, marital status, pregnancy, political opinion, or disability, etc.
- The Company allows all staff to enjoy equal rights for work pursuant to rules, regulations, notifications, and orders of the Company.

5) Policy on Corporate Social Responsibility and Sustainable Development

The Company is committed to its business operations with social and environmental responsibility; as well as mainly focusing on coordination for mutual benefit with all groups of stakeholders in every dimension as appropriate in the pursuit of the Company's sustainable business growth, along with its determined efforts to benefit and grow all groups of stakeholders together, as follows:

- To lead the organization with the concept of sustainable development, through communication and exchange of best practices with all of the Company's stakeholders;
- To incorporate the sustainable development concept into every aspect of the work and decision processes of the Company;
- To promote training, learning, and counseling, focusing on practices according to the sustainable development guidelines;
- To support regional operation and cooperation to achieve sustainable development.

It is the responsibility of every employee to seriously implement this policy as part of his or her own work processes for the sustainable growth of the Company and all groups of stakeholders.

In this regard, details on work operations in terms of corporate social responsibility and sustainable development of the Company in 2020 are shown in Part 2: Item 10: Corporate Social Responsibility.

6) Environmental Policy

The Company is environmentally responsible for its service business. Therefore, the Company is committed to environmental management based on the following practices:

- Giving priority to pollution prevention and control in compliance with international standards, taking into account the environmental impacts of all groups of stakeholders;
- Raising staff awareness and promoting the efficient use of energy and natural resources as well as providing staff with environmental knowledge and training;
- Performing duties in compliance with environment-related laws and other environmental regulations as applicable;
- Reviewing objectives and goals for improvement of the environment management system on a continuous basis;
- Communicating the environmental policy to the public and parties concerned, as well as adopting a policy to select and encourage use of eco-friendly products.

It is the responsibility of all the Company's staff and contractors to seriously and regularly implement this policy to ensure the environmental quality for the service users, staff, contractors, and communities nearby.

7) Information Security Policy

The information security plays an important part in contributing to the efficient and trustworthy business operations of the Company, the Company then is determined to develop the information security system and put it into practice, to rest assured that:

- Access to the information system shall be strict to only authorized users;
- The information system provides accuracy, reliability, and confidentiality;
- The information system is always readily available to the users;
- The information security is regularly reviewed;
- Staff are encouraged to have information security knowledge, ability, and awareness.

In this regard, it is the responsibility of everyone for the information security. Thus, the staff and external parties authorized to have access to the Company's information system have the duty to make every effort to ensure the information security of the Company.

The Company becomes aware of and considers information technology security and threats caused by the use of information technology. Currently, technology has been not only progressing rapidly, but also posing a threat, which as days go by, continues to become significant and acute. On July 5, 2018, the Company completed ISO/IEC 27001 : 2013 certification from Bureau Veritas Certification (Thailand) Limited which shall be valid until July 4, 2021. The Company has then put the same into practice and set out regulations governing information system security, provided that such regulations shall be yearly reviewed as appropriate. The practices/prohibitions for staff's access to computers; the practices for computer system administrators; and the practices for external service providers are also set out.

Furthermore, the Company properly and sufficiently allocates and manages technology resources, and supports the state-of-the-art and efficient technology to be employed in work operations. There are the work system development department and the information technology department which shall be responsible for the computer system (software and hardware) and have access to the computer program to manage database of the Company's computer system. The Company has provided for job descriptions to clearly identify duties and responsibilities of each position. For the important work systems, the Company has prepared and transferred the body of knowledge to relevant personnel in the work fields to ensure that they can perform duties in place of others. On the other hand, the Company will choose to outsource the services for the work systems which need special skills or high operational safety.

8) Innovation Promotion Policy

The Company realizes and strives for promotion and development of creating of innovative culture in the organization to add value to the businesses according to the ongoing changing circumstances by paying regard to internal and external stakeholders under the policy, as follows:

- To encourage staff to participate in improvement of the work process to ensure the highest efficiency in line with the corporate mission, by using innovations as suitable with current circumstances;
- To promote use of equipment, tools, devices, and technology in work operations, as well as using financial tools as appropriate;
- To support and promote innovative culture in the organization for taking care of the stakeholders in a continuous manner.

The Company has appointed a work group to formulate strategies and innovations to ensure the greater efficiency in management of various aspects, for instance, project analysis, engineering technique, finance, marketing, and in the context of contract, with the duty to brainstorm ideas and propose strategic and innovative guidelines for developing efficiency and generating more income for the Company, as well as conducting feasibility studies under the proposed guidelines, together with alternatives as it deems appropriate for the sake of economic benefits and improving a good image of the Company; to propose work plans to the Managing Directors for assigning agencies in charge to carry out such plans, follow up and conclude, assess, report the results to the Managing Directors.

Nowadays, Big data plays a key role in analyzing business data in a more widespread manner. The Company, as a service provider of transportation infrastructure which accommodates millions of trips per day, has then adopted the Business Intelligence (BI) which is capable of analyzing big data rapidly with less resources and displaying the results to summarize large data for easy understanding, while featuring the beautiful pattern, to the analysis, in order to predict the congestion of traffic volume, duration of trip, necessity for improvement or development of the physical expressways for the purpose of solving the current traffic congestion. This is to enable the expressway users to use the expressways which provide them with the convenient, fast, safe services, and by which the economic losses caused by fuel burning in the course of occurring traffic congestion can be minimized, not to mention the fact that greenhouse gases occurred from the oil production process and emitted from the exhaust pipes can also be reduced, thereby providing more clean and environmentally friendly air in and nearby the expressways.

In respect of expressway engineering management, the Company has developed the Pavement & Structure Management Systems, added tools to maintain the standards of the expressway services to expressway users to stay at an appropriate level in terms of rapidity, comfort, and safety in conformity with various relevant requirements and laws, whereby the Company has created such Systems in the form of Web-based Application which is capable of displaying the Management Information System (MIS) and the Geographic Information System (GIS) with the leading-edge technology, for example, Mobile Mapping System (MMS), Laser Point Cloud.

Moreover, the Company has initiated the Safety Management System to enable it to analyze the causes of accidents based on the engineering principles, and provide additional equipment / improve the routes to achieve the safety in all environments with greater efficiency. In this regard, the development of knowledge on research and innovation of the Company has been carried out in cooperation with the consulting companies which at least have successfully passed the ISO 9001 quality assessment criteria, the leading higher education institutions, and in academic cooperation with the Thailand Institute of Scientific and Technological Research where are composed of faculty of teachers, researchers and experts as a working group, thereby enabling the Company to develop knowledge and receive information which is accurate, reliable and can be used to make decisions with maximum efficiency.

9) Procedures and Channels of Complaints

• Submission of complaints

The Company has arranged for channels for all groups of stakeholders to make complaints relating to matters which may cause damage to the Company or if they may find any behavior or event which may violate or be contrary to the code of ethics or policies, they may report or submit complaints directly to the Audit Committee Chairman or independent directors or contact the Company Secretary.

Audit Committee Chairman	: Bangkok Expressway and Metro Public Company Limited
Independent Directors	No. 238/7 Asoke-Dindaeng Road, Bangkok Subdistrict,
Company Secretary	Huai Khwang District, Bangkok 10310
Telephone	: 0 2641 4611
E-mail	: companysecretary@bemplc.co.th

- **Procedures upon receipt of complaints**

1. Fact-finding
The independent directors will appoint and authorize a working group to make fact-finding and compile complaints.
2. Fact processing and screening
The authorized working group processes and screens such facts and then considers proposing appropriate steps and actions for handling such complaints.
3. Measures
The authorized working group proposes measures to deal with the violation or non-compliance with the code of ethics or policies to the Board of Directors' consideration so as to alleviate damage for those affected by such occurrence, taking the overall damage into account.
4. Report on results
The Audit Committee Chairman or independent directors or the Company Secretary reports to the Board of Directors for acknowledgment and reports on the results to the stakeholders who submitted such complaints, if the complainants can be identified.

- **Measures to protect the complainants or those who provide cooperation in the investigation**

The complainants or those who provide cooperation in the investigation are protected in accordance with the following criteria:

1. The complainants or those who provide cooperation in the investigation of facts may choose to keep their identities undisclosed, in case such disclosure may jeopardize their safety or cause any damage.
2. In case their identities are disclosed, the Company will report on developments of the fact finding.
3. The Company may not disclose name-surname, address, photograph, or any other information which may identify the complainants or those who provide cooperation in the investigation of facts.
4. The person who accepts complaints must keep related information confidential and may disclose the same only to the extent necessary by taking into account safety and damage in respect of the complainants or those who provide cooperation in the investigation of facts, sources of information or related persons. If it is likely to cause damage or jeopardize safety, appropriate protection measures must be implemented.
5. Those who sustain damage will be compensated by way of appropriate and fair procedures.

9.1.4 Ensuring Disclosure and Maintaining Financial Integrity

- 1) The Board of Directors sets out a policy to disclose information and maintain financial integrity by formulating practical guidelines, including systems for financial reporting and disclosure of significant information to ensure correctness, adequacy, equality, punctuality via appropriate channels, protecting confidential information and information which may affect securities price, as well as having the company-wide communication to make all staff have a common understanding that compliance with such policy is required in accordance with applicable requirements, standards and practices, in a transparent and auditable manner. This is to ensure that disclosed information is a matter of importance and is able to reflect practices and operations of the Company contributing to the sustainable value creation to the business.

Moreover, personnel related to preparation of the report and information disclosure are promoted and managed to ensure they have knowledge, skills and experience as suitable for their duties, responsibilities, and in an adequate amount for the Company's needs. Such personnel shall include the highest level executive in accounting and finance, accountant, internal auditor, Company Secretary, and investor relations. The Managing Directors have the power to approve information disclosure and ensure the accurate, complete, timely and transparent disclosure of both financial and non-financial, material information relating to the Company as required by the SEC Office and the SET, via the equitably accessible channels.

- 2) The Company has established the Investor Relations Unit to represent the Company, with the duty in appropriately, equitably and timely communicating information useful to shareholders and other stakeholders, such as debenture holders, investors, securities analysts, mass media, and relevant parties. The Company has also been a member of Thai IR Club, Thai Listed Companies Association. Interested investors may contact the Investor Relations Department at 0 2641 4611. Investors who find it inconvenient to visit the Company's Office No. 238/7 Asoke-Dindaeng Road, Bangkapi Subdistrict, Huai Khwang District, Bangkok 10310, may contact to make a conference call or sign up for the news mailing list via the website or submit questions or e-mail to ir@bemplc.co.th.

Other than the mandatory disclosure pursuant to the practices and legal requirements, the Company also has a policy to rotate high level executives to participate in providing information and answers to investors' questions and to learn opinions and realize requirements of Thai and foreign investors in person, that is, the Managing Directors, the Deputy Managing Directors, the Assistant Managing Directors, and the Company Secretary, all of which regularly participate in the Company's Investor Relations activities.

- 3) The Company clearly sets out the authorization levels for information available to executives at each level, and their authorized access to such information for public disclosure, by means of communicating and ensuring proper understanding of information for investors, internal and external agencies of the Company, as well as contacting and coordinating with investors, collecting investors' opinions, and communicating with high level executives to staff at all levels, as follows:

3.1 Internal communications

Although the Board of Directors and high level executives may have full access to all information of the Company, the Managing Directors are appointed as the authorized persons to disclose such information to the SET and to provide the information via the public media in accordance with the Company's disclosure policy.

The Board of Directors, executives, advisors, and staff of the Company, who perceive information, are obliged to keep any undisclosed information strictly confidential. The Company formulates work rules and regulations to prohibit staff from disclosing the Company's confidential information to any third party or abusing their positions for personal gains or for the gains of others. Any violation is deemed a disciplinary misconduct liable to termination of employment. In the past, there has never been any occurrence of misuse of inside information for personal interests or for the gains of others.

Moreover, the Company has also developed a control system on use of the Company's information by adopting such information security systems as the restriction of access to the Company's information by authorization level of staff's access to the Company's information based on their responsibilities. To prevent executives' misuse of the Company's inside information for securities trading, the Company has policies and procedures for controlling the use of inside information by directors, executives and staff to prevent any occurrence of the use of inside information for personal interests or for the interests of others.

The Company's disclosure of information to staff must be the same as the public disclosure in terms of accuracy, frequency, and timeframe. The Investor Relations Department prepares and submits to management monthly IR Reports, which collect and summarize investors' questions and opinions on the Company's business operations, in order to present useful suggestions or feedback of investors to management for further improvement of the Company's operations.

3.2 External communications

The Board of Directors adopts a policy that the Company's disclosure of material information follows the specified policy and requirements. The disclosure is prepared both Thai and in English and is made available via the SET's channel and on the Company's website at www.bemplc.co.th. The Company regularly updates such information as annual report, annual registration statement (Form 56-1), practical guidelines for good corporate governance, the Company's profile and various policies, loan status, operational results, financial ratios, securities price, dividend history, together with other information, e.g., corporate social responsibility activities and public relations news. Such information and news are made available in support of investment decision-making by investors and relevant parties, together with monthly corporate presentations to investors, which are regularly updated, so as to be regularly and timely available to all investors and those who may interest in investment, on the website. Moreover, opinions and investment analysis of the Company by securities analysts from securities companies from www.settrade.com, which are compiled in the form of Analyst Consensus, are shared on the Company's website in order to assist investors in making their decisions to invest.

In the disclosure of financial reports, the Board of Directors prepares the Report on Responsibilities of the Board of Directors towards the Financial Report to be presented along with the Report of the Auditor, as detailed on page 223.

The provision of the Company's related information to securities analysts is also another main duty of the Investor Relations Department since the Company's information is made available in the Analyst Consensus to assist investors in making their decisions to invest. The Investor Relations staff are then assigned to provide such information to ensure correct understanding and maintain good relationships with securities analysts. Staff may review and clarify for the purpose of accuracy of the Analyst Consensus, as opposed to guiding or distorting the Analyst Consensus by securities analysts, or may revise only such facts which have been outdated or disclosed to the public, in which case, such revision is not treated as guiding investment.

Other than public disclosure, the Company also participates in various activities to serve as a disclosure channel to directly meet with investors and hear their opinions as well as create good relationships with investors via activities, such as, Roadshow, Opportunity Day, Company Visit, Analyst meeting, exhibition booths, etc. The Company's management staff are rotated to accompany the Investor Relations staff to communicate and provide better explanations in support of their decisions to invest.

In 2020, the Company organized the Analyst Meeting, Company Visit, Site Visit, Conference Call, press conference and press interview, both in the offline and online forms, in order to suit the situation of the outbreak of the COVID-19, and to that effect, the Investor Relations Department organized 4 offline and 17 online meetings with various institutions, both at home and abroad, and also organized three analyst meetings.

The foregoing events were opportunities for the Company to provide appropriate clarification on the operational results and progress of the investment projects and for management to answer questions to investors and the press equally and fairly to provide material, necessary and accurate information for investment decisions to the general public, including investors and institutional analysts.

The Company regularly organizes the Company Visit program to allow shareholders to visit and meet its management. The Company also publishes BEM Magazine for disseminating business information and other useful information, which has been regularly delivered to all shareholders and debenture holders of the Company. In addition, the Company conducted a survey on the opinions and needs of analysts and investors on the quality of the communication and Investor Relations activities in 2020 (BEM IR SURVEY) for further improvement, with the survey results revealing that the percentage of satisfaction with the service provision in such Investor Relations activities was 90.06 percent.

9.1.5 The Board of Directors' Responsibilities and Strengthening Board Effectiveness

The Board of Directors realizes its roles and responsibilities in setting out policies and monitoring to ensure the Company's good management, covering its business objectives, goals, strategies, policies, important and adequate resource allocation to achieve the business objectives and goals, as well as monitoring, evaluating and ensuring the reporting on operational results in line with laws, the Articles of Association, together with resolutions of the shareholders' meeting, to ensure the operations which pursue the sustainable value creation for the business.

The Board of Directors complies with the practical principles of the Corporate Governance Code for Listed Companies in various aspects, as follows:

1. The Board of Directors' Structure

- The structure of the Board of Directors is considered by the Company in terms of size, composition, proportion of the independent directors, skill, experience, education, capability and expertise, together with gender and age as suitable and necessary for leading the organization to achieve the Company's specified objectives and goals, consisting of 14 qualified members, namely, five executive directors, five independent directors and four non-executive directors. This is to rest assured that the Board of Directors as a whole is qualified and is able to understand and respond to the stakeholders' needs, as well as enabling the Board of Directors to carry out operations conducive to exercising its discretion independently. In addition, two out of five non-executive directors are EXAT's and MRTA's representatives who have experiences in the Company's core businesses.
- The Board of Directors includes five independent directors, in line with the proportion as required by the SEC Office, who are able to independently provide opinions on the Management Team's performance. The Company also determines qualifications of "independent directors" stricter than the minimum requirements of the SEC Office and the SET.
- Directors have a term of office of three years, and the retiring directors may be re-elected. At every annual ordinary general meeting of shareholders, one-third of the number of directors vacates their office and if the number of directors is not a multiple of three, then the number nearest to one-third must retire from office.
- The Board of Directors has policy to set a limit on the number of listed companies in which each director may hold a directorship position which must not exceed five companies, to ensure efficiency in performance of their duties.

2. Performance of Duty of the Chairman of the Board of Directors and Managing Directors

The Chairman of the Board of Directors and the Managing Directors may not be the same person so as to separate between the policy making and supervisory duty and the regular managerial duty. The Board of Directors clearly determines powers and duties of the Chairman of the Board of Directors and the Managing Directors. The Chairman of the Board of Directors is an independent director by the definition of the SET and has no relationship with management.

3. Subcommittees

The Company has established four subcommittees to closely monitor and supervise operations and regularly report to the Board of Directors, namely, the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Risk Management Committee, and the Executive Board. The Board of Directors has determined duties and responsibilities of each subcommittee as detailed on pages 175 to 179.

4. Role, Duties, and Responsibilities of the Board of Directors

- 1) The Board of Directors has its role and duty in supervising to ensure the Company's good management, covering the vision, missions, strategies, targets, business plan, budget of the Company, important and adequate resource allocation, as well as supervising and monitoring to ensure the management's operations in compliance with the specified plans, for the sustainable value creation for the Company's business, conducive to the ethical business operations, with respect for rights and responsibility towards shareholders and stakeholders, provision of social benefits, environmental development or reduction of environmental impacts.
- 2) The Board of Directors has established the corporate governance policy, subject to review at least once a year, for directors, executives and staff of the Company to comply with, and also provides for mechanisms conducive to their real compliance therewith, as well as following up the results.
- 3) The Board of Directors approves preparation of the Company's code of ethics, subject to review at least once a year, prescribing the best practices of directors, executives, and staff for treatment towards the Company, colleagues, third parties and society, to allow the Company to create and push ahead the ethical organizational culture.
- 4) The Board of Directors has its duty to ensure that the Company has adequate systems and mechanisms so that the Company's operations comply with applicable laws, Articles of Association, resolutions of the shareholders' meeting, together with policies or guidelines as specified, and also has approval process for significant matters, such as, any investment, transactions which materially affect the Company or any transactions which may involve a conflict of interest, in which case, interested directors may not attend nor vote on such matter at the meeting, etc., as required by law.
- 5) In respect of risk management, the Board of Directors follows up and acknowledges risk management plan of the Company from management's report on operational results in each Board of Directors' Meeting and from the Report of the Corporate Governance and Risk Management Committee.
- 6) The Board of Directors shall supervise and monitor to ensure that the management conveys and transforms a strategic plan into operational plan, including performance assessment, and supervise and monitor the group companies. In this connection, the management is required to report on performance, together with any significant matters, to the Board of Directors for acknowledgment in the Board of Directors' Meeting.

In addition, the Company provides for the annual survey on compliance with the Company's code of ethics for directors, executives and staff, in which they must sign to signify their responsibility for compliance with the Company's code of ethics. Moreover, the Company not only arranges for the annual training and test on the code of ethics by means of e-learning for the Company's executives and staff, the Company also continues to encourage high and middle executives to undergo corporate governance training on a yearly basis.

5. The Board of Directors' Meetings and the subcommittees' meetings

Names of Directors	Attendances / Total Number of Meetings for 2020				
	Board of Directors	Executive Board	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Risk Management Committee
1. Dr. Virabongsa Ramangkura ⁽¹⁾	3/7				
2. Mr. Plew Trivisvavet	7/7	12/12		3/3	
3. Mr. Vitoon Tejatussanasoontorn	7/7		5/5	3/3	
4. Gen. Chetta Thanajaro	6/7		5/5	2/3	
5. Dr. Annop Tanlamai	6/7		5/5		
6. Mrs. Vallapa Assakul	7/7				3/3
7. Mr. Supong Chayutsahakij	7/7	12/12		3/3	
8. M.L. Prasobchai Kasemsant	5/7				
9. Mr. Phongsarit Tantisuvanitchkul	7/7	12/12			3/3
10. Miss Arisara Dharamadhaj	7/7				
11. Mr. Panit Dunnvatanachit	5/7				
12. Mr. Vithaya Punmongkol ⁽²⁾	3/3				
13. Mrs. Natamon Bunnak	7/7				
14. Dr. Sombat Kitjalaksana	7/7	12/12			3/3
15. Mrs. Payao Marittanaporn	7/7	12/12			3/3

Remarks: ⁽¹⁾ Dr. Virabongsa Ramangkura resigned from his position as director on April 2, 2020.
⁽²⁾ Mr. Vithaya Punmongkol was appointed as director on April 9, 2020 to replace Mr. Yuttana Yimgarund who resigned from his position as director on October 25, 2019.

1) The Board of Directors' Meetings

The Company gives prior notice of the annual schedule of the Board of Directors' meetings, together with the main agenda, to directors so as to allow directors to be able to manage their time to attend the meetings. Pursuant to the Articles of Association, the Board of Directors must meet at least every three months; and a quorum consists of not less than half of the total number of directors. In 2020, the Board of Directors held its seven meetings.

The Managing Director Office will deliver the notice of each meeting and agenda as clearly pre-determined 7 days prior to the meeting date and deliver the supporting documents at least five business days prior to the meeting date, so as to allow the Board to review the same prior to the meeting.

The agenda is determined by mutual discussion between the Chairman of the Board of Directors and the Managing Directors. In addition, one meeting among non-executive directors and without management will be held in order for the directors to independently discuss and exchange their opinions and to efficiently follow up the performance of management. At every meeting, the Chairman of the Board of Directors presides over the meeting to ensure that each item is carefully considered and all directors are allowed to express their opinions and take part in discussions. In addition, the high level executives will attend the meeting to clarify the information in the capacity as persons directly relevant to the problems to the satisfaction of the meeting prior to passing resolution on each item.

Moreover, the Board of Directors sets out a policy to prohibit directors and executives who are connected persons or interested persons in relation to any items to be considered from attending the meeting or voting on such item, and management gives prior notice to such directors and executives who are not allowed to attend the meeting or vote on such item. In considering who is a connected person and interested person, the Board of Directors takes into account the report on interests which all directors and executives have a duty to submit in accordance with the Board of Directors' policy requiring directors and executives to report their personal interests in order to disclose such information to the Chairman of the Board of Directors and the Audit Committee Chairman.

2) Subcommittee meetings

The Board of Directors will monitor the implementation of the Company's policies and strategies by convening subcommittee meetings to consider various significant matters and preparing reports on work performance of every subcommittee for submission to each Board of Directors' meeting, as follows:

2.1 Audit Committee

The Audit Committee regularly meets at least every quarter with the internal auditor and management and executives responsible for accounting and finance, for review of financial statements on a quarterly basis, and meets with the auditor for review of the annual financial statements, and makes a report to the Board of Directors, or in case management executes any connected transaction or transaction relating to asset acquisition or disposal which must take into account appropriateness, justification and the utmost benefit of the Company, the Audit Committee Chairman may convene additional meetings.

In 2020, the Audit Committee held its five meetings and one meeting with the auditor without management. The Audit Committee reports quarterly to the Board of Directors on its performance and will yearly summarize its performance during the previous year via the Audit Committee's report. Moreover, in 2020, the Audit Committee considered executing two connected transactions.

2.2 Nomination and Remuneration Committee

The Nomination and Remuneration Committee will meet to nominate qualified persons for appointment as directors of the Company to replace the directors who are due to retire by rotation and directors who resign prior to the end of term; review remuneration of directors and annual bonus for submission to the annual ordinary general meeting of shareholders for approval; and consider remuneration for the Managing Directors in accordance with the results of performance evaluation for submission to the Board of Directors for approval. In this regard, the Nomination and Remuneration Committee will review the criteria for nomination and consideration of remuneration for directors every year to keep it aligned with the Company's business strategies, and ensure that the criteria for consideration of remuneration stay at the same standard as those of other companies in the same industry so as to appreciate and retain the qualified directors.

The Company schedules the Nomination and Remuneration Committee's meetings to be held at least twice a year.

In 2020, the Nomination and Remuneration Committee held its three meetings to nominate qualified persons for appointment as the Company's directors to replace those directors who vacated office; and consider scrutinizing remuneration for directors for proposal of the same to the 2020 Ordinary General Meeting of Shareholders for consideration and approval; and consider reviewing the criteria for nomination and consideration of remuneration for directors.

2.3 Corporate Governance and Risk Management Committee

The Corporate Governance and Risk Management Committee will meet to follow up and evaluate the results of performance in compliance with the Corporate Governance Code; improve the guiding practices in line with the corporate governance policy for listed companies under the guidelines of the SET; consider risk management plan, risk management process; as well as monitor, inspect and review the Company's overall risks to stay at an appropriate level.

Furthermore, the Board of Directors has reviewed the Company's operations in compliance with the Corporate Governance Code for Listed Companies.

In 2020, the Corporate Governance and Risk Management Committee held its four meetings to monitor and review the good corporate governance practices in respect of shareholders' rights; treatment towards shareholders and stakeholders; information disclosure; and responsibilities in risk management. The Board of Directors has considered compliance with the annual risk management plan, reviewed and followed up the risk management plan on a regular basis. It was found that the Company was able to conduct risk management to meet the targeted plan, without any material impact on the Company's business operations. Furthermore, the 2021 annual risk management plan is sufficient and in line with the current business circumstances, together with proper action plan and risk management method.

2.4 Executive Board

The Executive Board of the Company meets to help provide suggestions and advice to the management, and review the operations in compliance with the Company's policies and work plans as well as to consider various matters within the scope of its authority and duties as assigned by the Board of Directors and to consider screening such matters to be proposed to the Board of Directors for consideration and approval.

In 2020, the Executive Board held its 12 meetings to consider scrutinizing the agenda items as proposed to the Board of Directors; consider approving transactions with a value not exceeding Baht 500 Million, and consider salaries and bonus for staff.

6. Board Self-Assessment

The Board of Directors has a policy to ensure the self-assessment of the Board of Directors and subcommittees at least once a year, including assessment of the performance in accordance with the Company's code of business ethics. In addition, the Managing Directors' performance must be assessed by the Board of Directors every year in accordance with the rules as specified by the Nomination and Remuneration Committee. Furthermore, the Board of Directors determines to review topics of assessment to ensure appropriateness and conformity to roles, duties, responsibilities, and its practices in accordance with the Corporate Governance Code.

Results of Board / Subcommittee Self-Assessment

In 2020, the Company delivered board and subcommittee self-assessment forms to each group of directors/subcommittee members to evaluate the overall performance of the Board of Directors and subcommittees, the results of which were proposed to the Board of Directors for consideration and improvement of performance.

In this regard, most of the opinions provided by directors/subcommittee members can be summarized as follows:

- 1) Structure and Qualifications of the Board of Directors / Subcommittees: The structure and qualifications of the Board of Directors and subcommittees are proper and suitable to the nature of business operations of the Company. The Board of Directors comprises personnel with sufficient knowledge and experiences in a variety of fields and performed their overall duties efficiently.

Moreover, the Board of Directors appoints four subcommittees, namely, the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Risk Management Committee and the Executive Board to perform the duties to help supervise, monitor the businesses, nominate qualified personnel as director with transparency, fairness, independence from any person's influence, including determination of reasonable and competitive remuneration to retain quality and competent directors, draw up operational policies and direction in respect of good corporate governance of the Company, code of business ethics, together with risk management, as well as taking care of and providing suggestions to the management, for the benefit of the Company's business operations based on good corporate governance.

2) Role, Duties, and Responsibilities of the Board of Directors / Subcommittees:

- The Board of Directors gives priority and contributes sufficient time to consider significant matters relating to the direction of the Company's business operations, reviews the good corporate governance policy of the Company, as well as ensures compliance with various policies, reviews the code of business ethics, and monitors to ensure that no conflict of interest arises from any connected transactions and transactions. The Board of Directors also follows the procedures as specified by taking into account the optimum benefit of the Company. Furthermore, the Board of Directors regularly reviews the internal control system to ensure good and sufficient internal control system and appropriate risk management, as well as follow up and monitor to ensure the performance of duties of management in accordance with the policies as assigned by the Board of Directors.
- The Audit Committee has ensured that the financial statements have been prepared in accordance with the generally accepted accounting standards; the internal audit tasks have been supervised and monitored for ensuring the appropriate and effective internal audit system; the execution of transactions which may have a conflict of interest has been considered under the specified procedures and for the utmost benefit to the Company; the Company has complied with the securities and exchange law and other applicable laws; and nomination of persons for appointment, determination of remuneration, and assessment of the auditor's performance are appropriate.
- The Nomination and Remuneration Committee has ensured that the appropriate criteria for nomination of directors have been determined; the qualified persons have been considered and nominated for appointment as the Company's directors; the appropriate and transparent criteria for consideration of remuneration for directors have been determined; remuneration for directors has been considered under the specified criteria for submission to shareholders; the results of the Managing Directors' performance have been assessed under the specified criteria; and remuneration for the Managing Directors has been considered in line with the results of assessment.
- The Corporate Governance and Risk Management Committee has conducted studies and followed up movement, tendency, and practice in respect of the good corporate governance; has improved and made suggestions on the good corporate governance policy of the Company, including the code of business ethics; has followed up and evaluated the results under the good corporate governance principles of the Company; has considered policies and work plans relating to risk management; has monitored and reviewed overall risk management of the Company, strategies for risk management and risk prevention system of all kinds; has reported on risks and actions taken to minimize risks to the Board of Directors.
- The Executive Board has provided guiding policies, supervised, made suggestions and advice for the Managing Directors and management; has set up business plan, budget and managerial power of the Company as assigned by the Board of Directors; has inspected and followed up the compliance with the Company's policies and plans with efficiency; has conducted feasibility studies on new projects; has approved justifiable juristic acts; has approved the appropriate appointment, and determination of remuneration for executives.

- 3) The Board of Directors' / Subcommittees' Meetings: The results of assessment are satisfactory, namely that directors/subcommittee members are given prior notice of the annual schedule' meetings so as to enable them to manage time to attend every meeting; the number of the meetings and agenda are suitable to support the performance of its duties efficiently and to supervise and monitor the Company's business operations successfully; directors/subcommittee members are also given supporting documents prior to each meeting and sufficient time to read such information in preparation for each meeting; the supporting documents contain sufficient information for their decision making; the Board of Directors/subcommittees can request any other necessary information in support of their decisions for the benefit to the Company; the atmosphere at each meeting allows all directors/subcommittee members to express constructive opinions without undue influence of any person; and directors/subcommittee members can fully discuss significant issues at each meeting.
- 4) Directors' / Subcommittee Members' Performance of Duties: The results of assessment are satisfactory, namely that directors/subcommittee members are well prepared and sufficiently study information prior to each meeting; have regularly attended the meetings; independently provide their opinions and impartially consider various matters and are independent in making decisions and passing resolutions; provide useful suggestions for the Company's operations, and understand the significance of each matter and properly contribute their time to consider such matters without wasting time on minor issues; and accept different opinions among them without conflict.
- 5) Relationship with Management: The results of assessment are satisfactory, namely that directors/subcommittee members may straightforwardly discuss with the Managing Directors; maintain a good relationship with management; the Managing Directors can request directors'/subcommittee members' advice as necessary; the Board/subcommittees do not intervene with management's performance of duties; and the Board/subcommittees participate in solving problems as appropriate in case management's performance does not meet the specified plans and budget.
- 6) Self-Development of Directors/Subcommittee Members and Executives: The results of assessment are satisfactory, namely that directors/subcommittee members understand their roles, duties, and responsibilities; directors/subcommittee members have sufficient knowledge and understanding relating to the Company's businesses; have paid attention to significant information or news relating to economic and industrial conditions, changes in rules and regulations and the status of competition, which allows them to efficiently perform their duties; all directors/subcommittee members undergo training to ensure their understanding of the performance of duties in their capacity as directors/subcommittee members; and in case of newly-appointed directors/subcommittee members, the Board monitors to ensure management provides documents or briefings for the new directors/ subcommittee members to understand the businesses and ensure performance of duties as directors/subcommittee members; and a succession plan has been set out to ensure continued performance of duties as high level management of the Company.

7. Assessment of Performance in Compliance with the Company's Code of Business Ethics

The Board of Directors sets out the Company's code of business ethics as principles and goals of the Company's business operations, and guidelines for performance of all directors, executives, and staff. Directors, executives, and staff will assess their performance in compliance with the Company's code of business ethics every year.

In this regard, the results of the assessment can be summarized as a whole that directors and executives have complied with the Company's code of business ethics, as follows:

- Compliance with the code of business ethics: Understanding and adhering to the guidelines as specified in the Company's code of business ethics.
- Guidelines for business operations: Strictly complying with applicable laws to the Company and the trading business under the desirable morality, including the Company's policies.

- Conflict of interests: Not disclosing any confidential information of the Company to any third party; refraining from any act which will give rise to a conflict of interest between their own interest and the Company's interest; not involving in nor holding any share in any business which may have a conflict of interest with the Company.
- Insider trading: Not disclosing any insider information which has not yet been disclosed to the public, which may affect the prices or trading of securities of the Company and its related companies.
- Commitments to shareholders: Making an effort in best to create value added to the organization to ensure its capability to accommodate the business growth and expand its businesses with continuity and create value added to the shareholders in the long run.
- Treatment towards counterparts and business contractual parties: Keeping counterparty's and contractual parties' information confidential for the purpose of fair and independent business operation; refraining from wrongful business operation between counterparts and contractual parties; refraining from offering any bribe to others or supplying them items in exchange for business benefits.
- Responsibilities for executives and staff: Setting out guidelines and practices for taking care of the working environment to ensure safety for their life and properties at all times.
- Treatment towards business competitors: Complying with the business policies in a fair manner by the rules and laws relating to trading competition.
- Commitments to communities, society, environment, and government sector: Providing cooperation in making benefits for the communities, society, environment and government sector on an occasional and ready basis.
- Gambling, drinking alcohol and drugs: Not possessing, purchasing-selling or drinking alcoholic beverages, drugs while being in the workplace or during doing businesses of the Company, except parties or other social gatherings held by the Company; and not playing or supporting all kinds of gambling activities during working times or in the area of the Company.
- Disclosure the information and confidentiality: Complying with the policy to efficiently manage the Company's information; and disseminating necessary, correct and proper information to the public on an occasional basis; and not disclosing the Company's information which has not yet been disclosed to the public, including any personal information, nor using any information as known from performance of duties for their own interest.
- The Company's assets: Setting out practices in taking care of the Company's assets to prevent them from loss, damage or misuse.
- Gifts and parties: Setting out practices regarding giving of gifts and holding of parties by refraining from receiving any item or benefit from counterparts, contractual parties or persons who have connection with the Company's businesses, except during festival or according to custom, in which case, at the reasonable value as shall be considered by recipient;
- Safety and hygiene: Strictly complying with the laws and regulations relating to safety and hygiene; and earnestly providing cooperation in preventing any accident, injury, and illness.
- Non-compliance with the code of ethics: Realizing and complying with the code of ethics of the Company by not committing any violence which may cause the violator to be held liable for punishments under applicable laws and disciplinary actions.

8. Assessment of Performance of the Managing Directors

All directors of the Company, except the Managing Directors, will constantly assess the performance of the Managing Directors on a yearly basis in accordance with the criteria specified by the Nomination and Remuneration Committee. The Nomination and Remuneration Committee is assigned by the Board of Directors to propose remuneration and other benefits as appropriate for the Managing Directors, taking into consideration the Corporate KPIs used in the annual assessment of performance in order to obtain the Board of Directors' approval.

9. Remuneration of Directors and Executives

Remuneration for directors	: The Company establishes a clear and transparent policy on remuneration for directors and the Managing Directors in line with the scope of duties and responsibilities of each director serving as chairman or subcommittee member, subject to review by the Nomination and Remuneration Committee. The remuneration is at the same level as that in the same industry and sufficiently high to retain the qualified directors.
Remuneration for Managing Directors	: The Nomination and Remuneration Committee considers remuneration for the Managing Directors in accordance with the Company's operational results under the Corporate KPIs and the Managing Directors' performance and propose the same to the Board of Directors for consideration each year.
Remuneration for executives	: Remuneration for executives, excluding the Managing Directors, is in accordance with the principles and policies determined by the Executive Board corresponding to the Company's operational results and performance of each executive.

Remuneration in 2020 is shown in the caption of Remuneration of Directors and Executives on pages 136 to 138.

10. Development of Directors and Executives

1) Directors and Executives Training

The Board of Directors has a policy to support and facilitate training and learning for its directors and executives to ensure their continued improvement and performance, involving both internal and external training courses. All directors must attend training for an understanding of the performance of their duties in their capacity as directors.

The Company's Board of Directors and high level executives realize the significance of their participation in training or seminars in various courses or development of their knowledge and skills. The Board of Directors attends training courses organized by the Thai Institute of Directors Association (IOD), namely, Director Certification Program (DCP), Director Accreditation Program (DAP), Board Performance Evaluation, The Role of Chairman (RCP), Audit Committee Program, Role of Compensation Committee (RCC).

In 2020, one of the Company's directors, namely, Mr. Vithaya Punmongkol, received training on the Director Accreditation Program (DAP 175/2020).

2) Orientation for New Directors

The Board of Directors determines the operational practices for the Company to arrange for orientation for newly-appointed directors and to provide documents or briefings for the new directors to understand the business and performance of duties as directors. The Board of Directors assigns the Managing Directors, the Company Secretary, and the Managing Director Office to arrange for orientation for newly-appointed directors by convening a meeting with the relevant directors and/or executives and/or officers for clarification and answering questions. In 2020, there was one new director, whereby the Company has complied with such operational practices, by briefing the new director about the Company's information as well as preparing documents and summary information for the new director, such as, information relating to the Company, listed company director's handbook, the Corporate Governance Code, the Company's code of ethics, power and duties of the Board of Directors, and the annual schedule of the Board of Directors' meetings. Furthermore, the Company also has its directors attend training courses, as suggested by the SEC Office, conducted by the Thai Institute of Directors Association (IOD).

11. Succession Plan

The Board of Directors prepares and reports on a succession plan for the positions of Managing Directors and the high-level executives and in the primary line, taking into account the performance, potentials, and readiness of each person. In this regard, the Company makes preparations for those potential successors in the development of their knowledge, competency, and skills as required for their work positions for succession in the event that the Managing Directors or executives in the key positions are not able to perform duties.

The Company sets out a succession plan for the high-level executives of the Company, particularly executives and work positions in the primary line, by emphasizing nomination from internal personnel, and the Company requires promotion to be considered every year under the specified criteria for development of personnel who have good performance and competency for their advancement to a higher position in accordance with the staff's line of command, both the middle level executives and staff. The consideration committee, comprising the Managing Directors and executives at the General Manager level or higher or the middle level executives, shall consider this matter in accordance with the clearly specified criteria. With regard to the implementation of strategy and succession plan of the high level executives, who may be changed or vacate office by rotation or retirement, the Nomination and Remuneration Committee's meeting shall review the criteria and select knowledgeable, competent and qualified persons, whereby the Board of Directors shall consider appointing candidates to hold the office of Managing Director, and the Executive Board shall consider appointing executives at the General Manager level or higher.

An executive who has been assigned to succeed to an office must not only be suitably qualified and experienced in such field, but must also have accepted transfer of knowledge and experience by rotation to other related work units, and have attended additional necessary training courses to be well prepared for performance of duties in a higher position in the future, and to ensure smooth succession and continued management. The Company sets up the human resource management system through adequate allocation, controlling, following up, performance assessment, that is, nomination process for qualified and knowledgeable persons as required, appropriate and fair remuneration, determination of duties and responsibilities, performance of personnel, performance standard, personnel development, and efficient communication, to ensure that staff have knowledge and skills; and the Company's human resource management is efficient and suitable, emphasizing development of staff competency and ensuring clarity of the performance assessment in support of consideration of remuneration appropriate for their capabilities and performance.

9.2 Board Structure

The Board structure comprises the Board of Directors and four subcommittees, namely, the Audit Committee, the Corporate Governance and Risk Management Committee, the Nomination and Remuneration Committee, and the Executive Board.

Details of such four subcommittees, their powers, and duties as well as the nomination procedures in accordance with their respective charters, are as follows:

9.2.1 Board of Directors as at December 31, 2020

The Board of Directors was comprised of a total of 14 qualified persons, divided into five executive directors, five independent directors and four non-executive directors, per the list given below:

1. Mr. Plew Trivisvavet *	Vice Chairman of the Board of Directors
2. Mr. Vitoon Tejatussanasoontorn	Director (Independent Director)
3. Gen. Chetta Thanajaro	Director (Independent Director)
4. Dr. Annop Tanlamai	Director (Independent Director)
5. Mrs. Vallapa Assakul	Director (Independent Director)
6. Mr. Supong Chayutsahakij	Director
7. M.L. Prasobchai Kasemsant	Director (Independent Director)
8. Mr. Phongsarit Tantisuvanitchkul	Director
9. Miss Arisara Dharamadhaj	Director
10. Mr. Panit Dunnvatanachit	Director
11. Mr. Vithaya Punmongkol	Director
12. Mrs. Natamon Bunnak	Director
13. Dr. Sombat Kitjalaksana	Director
14. Mrs. Payao Marittanaporn	Director

Remark: * Acting the Chairman of the Board of Directors.

The Board of Directors' Authority and Duties

- Monitoring and supervising the Company's operations to ensure compliance with laws, objectives and the Articles of Association, as well as resolutions of shareholders' meeting, and protecting the Company's interests based on the Corporate Governance Code, as well as complying with the rules and requirements stipulated by the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission.
- Establishing operational policies and directions of the Company, as well as supervising to ensure that management takes actions in compliance with the established policies with efficiency and effectiveness to contribute to economic value maximization for the business and the wealth maximization for shareholders.
- Convening the annual ordinary general meeting of shareholders by no later than four months from the Company's year-end account closing date and convening extraordinary general meetings of shareholders as required.
- Convening the Board of Directors' meetings on a quarterly basis; each meeting requires at least 50 percent of all directors. Decisions of each meeting are made by majority votes. In the case of an equality of votes, the chairman of the meeting has an additional casting vote.
- Considering approval for the budget for investment and the Company's annual business operations, including monitoring use of the Company's resources.

- Providing complete, correct and sufficient reports on financial information, the Company's information and general information which are important for shareholders, and verifying information in the reports.
- Introducing to the Company an internal control system, internal audit and risk management measures with effectiveness, as well as following up on such matters on a regular basis.
- Establishing subcommittees to ensure the good corporate governance.
- Considering clearly determining and separating roles, duties, and responsibilities among the Board of Directors, subcommittees and management, with regular communication regarding such roles, duties and responsibilities to the Board of Directors, subcommittees, management and staff of the Company.
- Supervising the Executive Board to comply with the specified policies, whereby the Executive Board is authorized to approve any transaction binding upon the Company in an amount not exceeding Baht 500 Million per transaction, excluding those transactions giving rise to a conflict or interest, including such transactions requiring approval from shareholders as per the regulations of the SEC Office and the SET.
- Appointing any persons to engage in the Company's business under the supervision of the Board of Directors, or, if applicable, authorizing such persons to have power for a period of time as the Board of Directors deems appropriate, provided that the Board of Directors may revoke, repeal, amend or change such authorization as appropriate.
- Appointing the Company's authorized signatory directors.

The Chairman of the Board of Directors' Authority and Duties

- Considering and setting out the business goals in conjunction with management.
- Monitoring the administration by management.
- Providing suggestions for the business operations through the Executive Board and the Managing Directors on a regular basis without interfering in the routine works under the responsibility of management. The Chairman of the Board of Directors also plays an important role in making decisions on the Company's policies.
- Having a duty to preside over both the Board of Directors' meetings and the shareholders' meetings to ensure the efficiency and effectiveness in such meetings, by encouraging all directors to participate in each meeting and independently provide opinions.
- Ensuring their strict compliance with the Corporate Governance Code and taking into account the shareholders' rights.

9.2.2 Audit Committee

The Board of Directors appoints the Audit Committee to assist in supervising the Company's businesses. Mr. Vitoon Tejatussanasoontorn, an independent director who has knowledge in the field of accounting and finance, was appointed to hold office as Audit Committee Chairman, and the General Manager of the Internal Audit Office serves as secretary to the Audit Committee. As at December 31, 2020, the Audit Committee comprised three independent directors as listed below:

- | | | |
|-------------------------------------|--------------------------|------------------------|
| 1. Mr. Vitoon Tejatussanasoontorn * | Audit Committee Chairman | (Independent Director) |
| 2. Gen. Chetta Thanajaro | Audit Committee Member | (Independent Director) |
| 3. Dr. Annop Tanlamai * | Audit Committee Member | (Independent Director) |

Remark: * served as audit committee members with knowledge in the field of accounting and finance.

The Audit Committee's Authority and Duties

- Reviewing to ensure that the Company's financial reports are accurate and adequate.
- Reviewing to ensure that the Company's internal control system and internal audit system are suitable and effective, considering the independence of the internal audit unit as well as granting approval on consideration for appointment, transfer, termination of employment of head of the internal audit unit or any other unit responsible for the internal audit.
- Reviewing to ensure the Company's performance in compliance with the securities and exchange law, requirements of the SET and the laws relating to the Company's business.
- Considering, selecting, submitting for appointment of a person who is independent to serve as the Company's auditor, and proposing remuneration and termination of employment of such person as well as meeting with the auditor without management at least once a year.
- Considering connected transactions or transactions which may involve a conflict of interest in compliance with the laws and requirements of the SET in order to ensure that such transactions are justified and of the utmost benefit to the Company.
- Preparing a report of the Audit Committee to be disclosed in the Company's Annual Report. Such report must be signed by the Audit Committee Chairman and comprise at least the following information:
 - (a) Opinions on correctness, completeness, and reliability of the Company's financial reports;
 - (b) Opinions on the adequacy of the Company's internal control system;
 - (c) Opinions on compliance with the securities and exchange law, requirements of the SET or laws relating to the Company's business;
 - (d) Opinions on the appropriateness of the auditor;
 - (e) Opinions on transactions which may involve a conflict of interest;
 - (f) Number of meetings of the Audit Committee and attendance of each Audit Committee member;
 - (g) Overall opinions or observations by the Audit Committee from the performance of duties in accordance with the Charter;
 - (h) Other matters that should be informed to shareholders and general investors within the scope of the duties and responsibilities assigned by the Board of Directors.
- Supervising and monitoring the internal audit tasks by reviewing missions, scope of works, independence and development plan and providing internal audit personnel training to catch up with the business changes and develop themselves on a continual basis, in order to accommodate the direction of the Company's operations and international standards, including consideration and approval of annual internal audit plans.
- Performing any other activities as assigned by the Board of Directors to independently provide opinions and suggestions in line with the requirements and the best practice guidelines for the audit committee of the SET.
- In performing its duties, should the Audit Committee find or should there be any doubt as to whether or not the following transactions or actions may have a material impact on the Company's financial position and operational results, the Audit Committee will report on its findings to the Board of Directors in order to improve and rectify the same within the time as the Audit Committee deems appropriate:
 - (a) Any transactions giving rise to a conflict of interest;
 - (b) Corruption or unusual occurrence or material fault in the internal audit system;
 - (c) Violation of the securities and exchange law, requirements of the SET or laws related to the Company's business.

9.2.3 Nomination and Remuneration Committee

The Board of Directors appoints the Nomination and Remuneration Committee to perform the duty to nominate and consider remuneration for directors and the Managing Directors to ensure transparency and fairness, and General Chetta Thanajaro, an independent director, was appointed as Chairman of the Nomination and Remuneration Committee in accordance with the Corporate Governance Code which states that the chairman of each subcommittee should be an independent director. As at December 31, 2020, the Nomination and Remuneration Committee comprised four members as follows:

- | | |
|-----------------------------------|--|
| 1. General Chetta Thanajaro | Nomination and Remuneration Committee Chairman
(Independent Director) |
| 2. Mr. Vitoon Tejatussanasoontorn | Nomination and Remuneration Committee Member
(Independent Director) |
| 3. Mr. Plew Trivisvavet | Nomination and Remuneration Committee Member |
| 4. Mr. Supong Chayutsahakij | Nomination and Remuneration Committee Member |

The Nomination and Remuneration Committee's Authority and Duties

- Considering criteria and procedures of nomination as well as selecting and proposing qualified persons to hold the position of the Company's directors to the Board of Directors so as to nominate them to the shareholders' meeting, or proposing the nomination to the Board of Directors for consideration and appointment.
- Considering selecting and proposing qualified persons to hold the positions of the Managing Directors to the Board of Directors for consideration and appointment.
- Considering and determining criteria for consideration of remuneration of directors and the Managing Directors.
- Considering and determining remuneration of directors and proposing the same to the shareholders' meeting for consideration and approval.
- Considering and reviewing salary rates and other remuneration for the Managing Directors and proposing the same to the Board of Directors for consideration and approval.
- Proceeding with other matters as assigned by the Board of Directors.

9.2.4 Corporate Governance and Risk Management Committee

The Board of Directors appoints the Corporate Governance and Risk Management Committee to perform the duty to formulate policies and directions of operations in respect of the good corporate governance of the Company, including business ethics, and to ensure performance of duties with transparency and independence in compliance with the guidelines of the good corporate governance, consider risk management plan, risk management process, as well as monitor, inspect and review the Company's overall risks to stay at an appropriate level. To this effect, the Company appointed Mrs. Vallapa Assakul, an independent director, to hold the position as the Corporate Governance and Risk Management Committee Chairman. As at December 31, 2020, the Corporate Governance and Risk Management Committee comprised four members as follows:

- | | |
|-------------------------------------|---|
| 1. Mrs. Vallapa Assakul | Corporate Governance and Risk Management Committee Chairman
(Independent Director) |
| 2. Mr. Phongsarit Tantisuvanitchkul | Corporate Governance and Risk Management Committee Member |
| 3. Dr. Sombat Kitjalaksana | Corporate Governance and Risk Management Committee Member |
| 4. Mrs. Payao Marittanaporn | Corporate Governance and Risk Management Committee Member |

The Corporate Governance and Risk Management Committee's Authority and Duties

- Studying and following up movement, tendency and performance in respect of the good corporate governance for submission to the Board of Directors for consideration as to appropriateness for adoption as guidelines for the Company's operations.
- Improving and proposing the good corporate governance policy of the Company, including business ethics, to the Board of Directors.
- Following up and evaluating the results under the good corporate governance principles of the Company as well as reporting the same to the Board of Directors.
- Considering policies and work plans relating to risk management for submission to the Board of Directors for consideration.
- Monitoring and reviewing overall risk management of the Company, strategies for risk management and alert system of all kinds of risks in order to deal with risks to stay at an acceptable level to ensure compliance with the risk management policy of the Company.
- Reporting on risks and operations for minimizing risks to the Board of Directors.
- Proceeding with other matters as assigned by the Board of Directors.

9.2.5 Executive Board

The Board of Directors appoints the Executive Board to assist in providing advice and suggestions to management and make other arrangements as assigned by the Board of Directors. As at December 31, 2020, the Executive Board comprised five directors as listed below:

1. Mr. Plew Trivisvavet	Chairman of the Executive Board
2. Mr. Supong Chayutsahakij	Executive Director
3. Mr. Phongsarit Tantisuvanitchkul	Executive Director
4. Dr. Sombat Kitjalaksana	Executive Director
5. Mrs. Payao Marittanaporn	Executive Director

The Executive Board's Authority and Duties

- Delivering guidelines for policy, supervising, providing suggestions and advice for the Managing Directors and management.
- Setting up a business plan, budget and managerial authority of the Company as assigned by the Board of Directors.
- Inspecting, following up to ensure compliance with the Company's policies and plans with efficiency.
- Conducting feasibility studies on investment in new projects for business expansion and prospects.
- Having power to approve any juristic act binding upon the Company in an amount not exceeding Baht 500 Million per transaction, excluding those transactions giving rise to a conflict or interest with the Company or its subsidiaries under the notifications of the Securities and Exchange Commission, including such transactions requiring approval from shareholders under the regulations of the Securities and Exchange Commission and the Stock Exchange of Thailand.
- Having power to approve, appoint, remove, and determine salary and other remunerations, including expenses and facilities of the Company's officers or staff in the position of General Manager or higher, but not including the Managing Directors.
- The Executive Board or the Chairman of the Executive Board has the power to convene the Executive Board's meetings and/or determine rules and regulations of the meetings as it deems appropriate.
- Reporting on the Company's operational results to the Board of Directors.
- Proceeding with other matters as assigned by the Board of Directors.

The Managing Directors' Authority and Duties

The Board of Directors determines the Managing Directors' authority and duties as follows:

- Controlling and managing main business of the Company.
- Monitoring all activities of the Company to ensure compliance with resolutions and policies as assigned and suggested by the Board of Directors.
- Conducting feasibility studies on new projects and having power to consider approving various projects as authorized by the Executive Board.
- Having power to approve, appoint, remove, and determine salary and other remunerations, including expenses and facilities of the Company's staff at the level of General Manager downwards.
- Having power to approve any juristic act binding upon the Company in an amount not exceeding Baht 5,000,000 per transaction.
- Having power to sign cheques without affixing the Company's seal, and having power to sign and affix the Company's seal for withdrawal of money from all accounts of the Company and utilize credit facilities available to the Company by all banks or financial institutions in the amount not exceeding Baht 5,000,000 per transaction.
- Having power to make a payment order by various electronic methods in the amount not exceeding Baht 5,000,000 per transaction, and having power to appoint a sub-attorney(s) to act on his/her behalf.
- Authorizing the Company's staff in the executive positions, namely, Deputy Managing Director, Assistant Managing Director, General Manager or equivalent to perform duties on behalf of the Managing Directors in certain matters (such as purchase order, procurement, payment order) as appropriate.
- Appointing any Deputy Managing Directors or any other persons acting in place of the Managing Directors from time to time in the event that the Managing Directors are unable to perform their duties, whereby such acting persons shall have the same authority as the Managing Directors.
- Having power to appoint any persons or groups of persons to engage in the Company's business under the supervision of the Managing Directors, or, if applicable, authorizing such persons to make arrangements as the Managing Directors deem appropriate and having power to change, amend, revoke and repeal such authorization.
- Proceeding with other matters as assigned by the Board of Directors or the Executive Board from time to time.

In this regard, the Board of Directors regularly evaluates performance of duties of the Managing Directors for comparison with the target as determined on a yearly basis, and the Nomination and Remuneration Committee considers remuneration of the Managing Directors by assessing their performance in the previous year and proposing the same to the Board of Directors for approval under the criteria.

Table of Approval Authority

Persons with Approval Authority	Details
Board of Directors	Having the approval authority in accordance with the objectives and the Articles of Association of the Company, exclusive of execution of any transactions which give rise to a conflict of interest or interest, including transactions which require the shareholders' approval in accordance with the regulations of the SEC Office and the SET.
Executive Board	The amount limit not exceeding Baht 500 Million per juristic act, exclusive of transactions which give rise to a conflict of interest or interest with the Company or its subsidiaries in accordance with the notifications of the Securities and Exchange Commission, including transactions which require the shareholders' approval in accordance with the regulations of the Securities and Exchange Commission and the Stock Exchange of Thailand.
Managing Directors	<ul style="list-style-type: none"> • The amount limit not exceeding Baht 5,000,000 per juristic act; • Having the authority to sign cheques without affixing the Company's seal, and having the authority to sign and affix the Company's seal for withdrawal of money from all accounts of the Company and utilization of credit facilities available to the Company by all banks or financial institutions in the amount not exceeding Baht 5,000,000 per transaction. • Having the authority to make a payment order by various electronic methods in the amount not exceeding Baht 5,000,000 per transaction, and having the authority to appoint a sub-attorney(s) to act on his/her behalf.

9.3 Nomination of Directors and Top Executives

(1) Nomination of Independent Directors

The Company establishes the structure of the Board of Directors which shall be composed of independent directors of at least one-third of all directors, but no fewer than three persons, whereby such independent directors can provide their opinions independently and perform the duty to safeguard benefits of the Company and shareholders in their best.

The Nomination and Remuneration Committee nominates directors who are qualified in terms of useful skills and experience for the Company and meet the qualifications of independent directors by the definition of the Company's independent directors, as follows:

1. Holding shares of not exceeding 0.5 percent of the total number of voting shares of the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company, including shares held by any related persons of each independent director;
2. Not being or having been a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or a controller of the Company, its parent company, subsidiaries, associated companies, subsidiaries of the same tier, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date, provided that such prohibited characteristics shall not apply to an independent director who was a public servant or an advisor to a government authority which is the Company's major shareholder or controller;
3. Not being a person having a relationship by blood or by legal registration in the capacity as parent, spouse, sibling and offspring, including spouse of the offspring of other director, executive, major shareholder, controller or person to be nominated as director, executive or controller of the Company or its subsidiaries;

4. Not having or having had any business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company in a manner which may prevent the exercise of his/her independent judgment; and not being or having been a substantial shareholder or controller of any person having a business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than 2 years prior to the appointment date;

The aforesaid business relationship shall include any transaction in the ordinary course of business for lease of immovable property, any transaction relating to assets or services or grant or receipt of financial assistance through receiving or extending any loan, guarantee, providing assets as collateral, including any other similar action, which causes the Company or contractual party to be subject to indebtedness payable to the other party in the amount of 3 percent or more of the Company's net tangible assets or in the amount of Baht 20,000,000 or more, whichever is lower. Such indebtedness shall be calculated according to the calculation method of connected transaction value under the Notification of the Capital Market Supervisory Board, Re: Rules on Connected Transactions, mutatis mutandis. However, the consideration of such indebtedness shall include the indebtedness incurred during the course of 1 year prior to the commencement of a business relationship with the same person;

5. Not being or having been an auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of an audit firm which employs the auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company, unless such independent director has no longer been in such capacity for not less than 2 years prior to the appointment date;
6. Not being or having been a professional service provider, including legal advisor or financial advisor which receives an annual service fee exceeding Baht 2,000,000 from the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of such professional service provider, unless such independent director has no longer been in such capacity for not less than 2 years prior to the appointment date;
7. Not being a director appointed as a representative of the Company's director, major shareholder or shareholder who is a related person of the major shareholder;
8. Not engaging in any business of the same nature as and in material competition with the business of the Company or its subsidiaries; or not being a substantial partner in a partnership or a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or holding more than 1 percent of the total number of voting shares of another company engaging in any business of the same nature as and in material competition with the business of the Company or its subsidiaries;
9. Not having any other characteristics preventing the provision of independent opinions on the Company's operations.

(2) Nomination of Directors and Top Executives

(2.1) Nomination of Directors

(2.1.1) Criteria

The Nomination and Remuneration Committee considers nominating persons to be appointed as directors to replace those directors who vacate office, both resignations prior to the end of term and retirement by rotation, in accordance with the following criteria:

- Having qualifications in compliance with the Public Limited Companies Act, the Securities and Exchange Act, rules of the SEC Office and rules of the SET.
- Having knowledge, ability, and experience in a variety of fields which will be beneficial and add value to the Company.
- Having characteristics supporting and promoting the corporate governance to create value to the Company, such as independence, willingness to share opinions, initiative, and performance of duties with responsibility, due care, integrity, and full-time contribution, etc.

- In case of a director who retires by rotation, the Nomination and Remuneration Committee considers from his past records whether he performed duties as a director with due care, integrity, and full-time contribution.
- In the nomination of directors, there should be consideration of the required qualifications taking into account the necessary skills for the Board and qualifications in line with the Company's business strategies.
- In case such vacancy is a director representing the Expressway Authority of Thailand or the Mass Rapid Transit Authority of Thailand under the conditions of the relevant Concession Agreements, the replacement director must be nominated by the said authority to fill the vacancy.

The Nomination and Remuneration Committee shall nominate such qualified persons to the Board of Directors for consideration for submission to the shareholders' meeting for appointment as directors.

(2.1.2) Nomination Procedures

The Board of Directors sets out the procedures for nomination of directors, and the Nomination and Remuneration Committee proceeds in accordance with the following procedures:

- Nominating qualified persons to fill the vacancy.
- Considering the qualifications of the directors who represent EXAT and MRTA in accordance with the conditions as specified in the Concession Agreements.
- Considering the qualifications of persons nominated by minor shareholders according to the Company's policy to allow shareholders to propose their nominations in advance (if any).
- Proposing the nominations to the Board of Directors for consideration and appointment (in case of interim vacancy).
- Considering proposing the nominations to the Board of Directors for consideration and approval for submission to the annual ordinary general meeting of shareholders for an appointment.

Pursuant to the Articles of Association, at every annual general meeting, one-third of the number of directors must vacate their offices. If the number of directors is not a multiple of three, then the number nearest to one-third must retire from office. Therefore, the directors have a term of three years, and a retiring director may be re-elected. In this regard, the Company does not fix the number of terms of holding office as a director or the number of other listed companies in which the directors will hold office as directors but considers the suitability of appointment of directors who are due to retire by rotation to resume office.

Pursuant to the Articles of Association, the criteria and procedures for appointment of directors by shareholders are as follows:

1. One shareholder has one vote for every one share held by that shareholder;
2. When electing directors, each shareholder shall exercise all of his or her votes to elect all directors to be elected on such occasion, or in case the shareholders' meeting deems it appropriate, the casting of votes is made to elect directors on an individual basis. In this regard, in casting votes, whether in the election of directors on an individual basis or the election of all directors, each such person elected by the shareholders must receive votes from shareholders according to the total number of shares held by each shareholder under clause 1., and no shareholder can allot his or her votes to any person in any number.
3. In case of the election of directors on an individual basis, persons receiving the most votes are those who are elected to be directors, in descending order, for the number of directors who are to be elected. If there is a tie for the last to be elected and this exceeds the said number of directors, the election shall be drawn by lots.

(2.2) Nomination of Managing Directors and Executives

1. The executives in the position of Managing Directors must be nominated by the Nomination and Remuneration Committee, which considers nominating qualified persons, namely, those who have knowledge and capacities and experience which are useful for management and operations to achieve objectives or targets as determined by the Board of Directors and have a good understanding of the Company's business, whereby the Nomination and Remuneration Committee shall propose the nominations to the Board of Directors for consideration and appointment.
2. For any executives at the level of Assistant Managing Director or higher, the Managing Directors propose the nominations to the Executive Board for consideration and appointment.

(2.3) Consideration on determination of holding a directorship in other listed companies

To ensure that each of the directors, Managing Directors and high level executives can dedicate their adequate time to performance of their duties with efficiency, the Board of Directors then considers determining the number of listed companies in which each of the directors, Managing Directors and high level executives is allowed to hold a directorship, as follows:

1. Holding a directorship in other listed companies by directors
Each director is allowed to hold a directorship in other listed companies not exceeding five companies to achieve efficiency in management.
2. Holding a directorship in other listed companies by the Managing Directors and the high level executives
Each of the Managing Directors and high level executives is allowed to hold a directorship or management position in other listed companies not exceeding five companies, provided that such Managing Director and high level executive must be approved by the Board of Directors.

9.4 Supervision of Operations of Subsidiaries

To ensure that supervision of operations of the Company's subsidiaries is conducted in compliance with the business policy specified by the Board of Directors of the Company and in line with the Corporate Governance Code, and to safeguard investment benefits of the Company and its shareholders, the Board of Directors of the Company thus sets out criteria and guidelines for supervision and control of management of the subsidiaries, as follows:

- 1) The subsidiaries are encouraged to put the Corporate Governance Code into practice.
- 2) The selection of any persons as representatives of the subsidiaries is subject to the approval of the Board of Directors of the Company, according to their respective shareholding percentage.
- 3) The subsidiaries shall be supervised through representative directors and executives and in compliance with the policies specified by the parent company.
- 4) Any significant matters, such as strategies, action plan, capital increase or reduction, company dissolution, including various important policies shall be considered. The guidelines for exercising the right to cast votes in the shareholders' meetings are also formulated.
- 5) The operational results shall be followed up through the management, executive board, for reporting to the Board of Directors of the Company.
- 6) The subsidiaries shall be monitored to ensure their compliance with laws, relevant regulations stipulated by the supervisory units, including generally acceptable accounting standards.

The Company requires its subsidiaries to yearly review the respective internal control systems to ensure adequacy and appropriateness, whereby the Internal Audit Office of the Company shall regularly review, follow up and evaluate compliance with the good internal control principles, which is specified in the annual audit plan.

In this regard, the Company has assigned the Managing Directors or his/her delegate(s) to monitor its subsidiaries, in the Company's capacity as their major shareholder, whereby the delegates have been appointed as directors or executives to supervise and monitor operations of its subsidiaries to ensure compliance with the action plans and consistency with the policies of the Company as their major shareholder.

9.5 Control of Inside Information Usage

The Company determines its written control of inside information usage in accordance with the Corporate Governance Code, as follows:

Inside Information Usage Policy

- (1) Due to the fact that the Company is listed on the Stock Exchange of Thailand, any sale or purchase of the Company's securities by any of its directors, executives or staff in a manner which may take advantage of a third party by using information material to changes in the prices of the securities which have not yet been disclosed to the public and to which he/she has access in the exercise of his/her duty or position in the Company, is then considered as unfair securities trading practices, subject to a criminal penalty under the law.

Therefore, the Company has set guidelines to prevent the use of insider information. Such guidelines will be revised from time to time as appropriate, and all directors, management, and staff of the Company will strictly adhere to these guidelines with accountability as well as causes and effects on a case by case basis. These guidelines or policies will be stricter than the provisions of applicable laws in a manner which, for example, the Company imposes the blackout periods on directors, management and staff, including their related persons.

- (2) Securities Sale and Purchase Using Insider Information

Persons who should not sell or purchase securities pursuant to the guidelines to prevent the use of insider information are as follows:

1. Directors and management of the Company;
2. Directors and management of the subsidiaries, including its affiliates;
3. All staff of the Company and of the Company's subsidiaries, who have perceived insider information of the Company;
4. Spouses and minor children of the directors, executives and staff, who have perceived insider information of the Company; and
5. Relatives who live with the directors, executives, and staff who have perceived insider information of the Company.

Securities refer to shares, share warrants, convertible debentures and transferable subscription rights issued by the Company.

General Practice

1. Any person who has perceived insider information of the Company should not sell or purchase the securities under any circumstances if such person knows or should have known the publicly undisclosed material information that may affect change in the market price of the Company's securities.
2. Any person who has perceived material insider information of the Company from their duties and positions as the Company's staff shall not disclose such information to any other person while such information has not yet been disclosed to the public unless it is done in the performance of their duties to the Company.

Specific Guidelines

In addition to the general guidelines to prevent the use of insider information, persons who have perceived insider information of the Company shall also comply with the following guidelines:

1. Any person who has perceived insider information of the Company and is directly involved in the preparation of the Company's financial statements and the balance sheet is prohibited from purchasing or selling the Company's securities during the period of 1 month prior to the public disclosure of the financial statements.
2. Any director, management or staff who has received the draft financial statements as referred to above, is prohibited from purchasing or selling the Company's securities during the period of 1 month prior to the public disclosure of the financial statements.
3. Any person who has perceived insider information of the Company and knows or should have known that the Company will disclose material information that may affect change in the market price of the Company's securities, is prohibited from purchasing or selling the Company's securities during the period of 1 month prior to the public disclosure.

(3) Report of Persons who have Perceived Insider Information of the Company

A. Duty to Prepare Reports

Directors, Managing Directors or persons who hold management positions as specified in the Securities and Exchange Act shall be required to prepare disclosure reports of their initial securities holdings, and changes in such holdings, pursuant to the relevant laws and regulations, together with such reports to the Company.

B. Reporting Procedures

Directors, Managing Directors or persons as specified in paragraph A. above who have the duty under law to disclose their securities holdings, their spouses' securities holdings, and their minor children's securities holdings to government agencies or regulators shall submit copies of such reports to the Company on the same day.

Protection and prevention of inside information usage

(1) The Company has policies and procedures for controlling the use of inside information by directors, executives and staff to prevent any occurrence of the use of inside information for personal interests or the interests of others. The work rules and regulations of the Company prohibit staff from disclosing the Company's confidential information to any third parties or abusing their positions for personal gains or others. Any violation is deemed a disciplinary misconduct. In addition, this obligation has been specified as an important condition in new employment agreements, whereby staff must keep confidential information relating to the Company's business to which they have access, whether directly or indirectly, and must refrain from disclosing it to any third parties or other unauthorized persons. In this regard, the confidential information relating to the Company's business refers to financial information, marketing plan or business plan, wages, etc.

(2) The Company has a control system for use of the Company's information by adopting such information security systems as the restriction of access to the Company's information by setting authorization level of staff's access to the Company's information to correspond to their responsibilities and setting user password for common use of data files with other persons via the computer system, provided that the password must be changed every three months.

The Company has obtained the certification of the ISO/IEC 27001:2013 international standard which describes the best practices relating to information security system which is applicable to improvement of the toll collection system at the control center to ensure compliance with the standard, and the Company also lays down standard for management of significant information to ensure continued operations of the business, with an aim of enhancing the organization's worldwide reputation for reliability.

(3) The Company prohibits executives who know insider information from taking any actions contrary to the prohibitions on securities trading by using the Company's insider information for his own or another person's benefit under Section 242 of the Securities and Exchange Act, including relevant rules and regulations.

9.6 Remuneration for Auditor

The Audit Committee and management jointly consider the qualifications of the auditor in respect of the reliability, independence, knowledge and experience in audit services, advice on accounting standards, certification of the financial statements in a timely manner, and appropriate remuneration, and then propose this matter to the Board of Directors for submission to the annual ordinary general meeting of shareholders to consider approving the appointment of the auditor.

The proposed auditor shall have neither relationship with nor interest in the Company or its subsidiaries, executives, major shareholders or their related persons.

Remuneration for auditor is divided into two categories, namely:

(1) Audit fee

The Company paid the audit fees for 2020 in the amount of Baht 4,240,000 to the EY Office Limited. When compared to the average audit fees of other listed companies in the same sector, the Company's audit fee was reasonable.

The Company's subsidiaries, namely, Northern Bangkok Expressway Company Limited ("NECL") and Bangkok Metro Networks Limited ("BMN"), paid the audit fees for 2020 amounting to Baht 990,000 and Baht 1,290,000, respectively.

(2) Non-audit fee

In 2020, the Company and its subsidiaries used other services from the EY Office Limited, incurring the non-audit fee in the amount of Baht 150,000.

9.7 Compliance with the Corporate Governance Code for Listed Companies

The Board of Directors has understood the roles, duties, benefits, and principles of the Corporate Governance Code for Listed Companies, whereby the Board of Directors has suitably applied the Corporate Governance Code to the contexts of the Company. The Corporate Governance and Risk Management Committee, which is deemed a subcommittee with the duty to supervise and monitor to ensure the Company's compliance with the Corporate Governance Code to promote and support the Company's business operations conducive to the sustainable value creation, requires that the appropriateness of compliance with the Corporate Governance Code shall be reviewed at least once a year. The Board of Directors has then authorized the Corporate Governance and Risk Management Committee to consider and evaluate the application of the same for proposal to the Board of Directors for further consideration.

The Board of Directors shall have the duty to establish the Company's visions and missions so that its executives and staff are intended to perform their works in the same direction. The Board of Directors will call its annual meetings to consider reviewing and approving the visions, missions, strategies, goals and directions of business operations of the Company, including review of significant policies to ensure that they shall be appropriate and consistent with the business operations in accordance with the Corporate Governance Code.

The Board of Directors has monitored and supervised to ensure the Company's strategies shall be practically implemented. In the Board of Directors' Meeting on a quarterly basis, the Board of Directors has followed up the management team's performance, which is required that there shall be report on performance and operational results of the Company, particular in respect of the financial goals and action plans, in order to achieve the formulated strategies.

9.8 Compliance with the Corporate Governance Code in other Matters

The Company has complied with the Corporate Governance Code for Listed Companies in order to achieve assessment in various aspects. The Company received the “Very Good” rating as a whole from corporate governance assessment in the Corporate Governance Report of Thai Listed Companies 2020 from the Thai Institute of Directors Association (IOD). The Company has conformed to all principles of the Corporate Governance Code for Listed Companies 2017, except for the following:

1. Determination of the number of terms of holding of office as director and independent director: The Board of Directors does not clearly determine any number of terms of holding of office as director. In regard to determination of a term of consecutive holding of office as independent director of not exceeding nine years, the Board of Directors considers and deems that the appointment of independent directors to resume office as directors will be useful for the Company and shareholders since the directors consecutively holding such office will have better knowledge and experience in the Company’s business operations and create more value for shareholders. In this regard, no director serves on the Board of Directors for more than nine years.
2. The composition of the Nomination and Remuneration Committee: It should be consisted mainly of independent directors (more than 50 percent): The Board of Directors establishes the composition of the Nomination and Remuneration Committee of the Company that it shall be comprised of four members, out of which not less than half shall be independent directors which have leadership, vision, independence in making decisions, skills and experience which are useful for the Company, prudence, honesty and dedication of their time to performance of their duties in an adequate manner.
3. The Board of Directors consisting of 5-12 directors: The Company gives priority to the good corporate governance together with the nomination of personnel who have knowledge and capability to conduct management. At this point, the Company realizes necessities and potential benefits from the nomination of personnel who have appropriate qualifications, knowledge, and capability to be appointed as additional directors. Currently, some directors serving on the Board of Directors are from the amalgamation between Bangkok Expressway Public Company Limited and Bangkok Metro Public Company Limited and from directors who are representatives from the Expressway Authority of Thailand and the Mass Rapid Transit Authority of Thailand in accordance with the conditions of the Concession Agreement, and as such, the Company has more than 12 directors.
4. The composition of the Board of Directors required that more than 50 percent of the Board shall be independent directors: The structure of the Board of Directors shall consist of persons engaging in the business and in various other fields, which have qualifications, skills, experience in administration and operating works which are useful for the Company, have knowledge in terms of concession agreement, out of which at least one director shall be experienced in the core businesses or industry currently operated by the Company, and shall include independent directors which have at least qualifications under the requirements stipulated by the SEC Office and the SET, namely, there must be at least one-third of the total number of directors as independent directors but not less than three persons. The Chairman of the Board of Directors shall be an independent director and shall not the same person as Managing Directors.

10. Corporate Social Responsibility

The convenient and efficient transportation systems are essential for an urban lifestyle, whether it be road or rail systems, all of which play a key role in integrating livelihoods of the people in the society from one side of the city to the other side. Bangkok Expressway and Metro Public Company Limited (the “Company”), as the expressway and metro service provider, has its commitment to development of the transportation system network to facilitate the people’s travelling and help mitigate traffic problems in Bangkok and its surrounding provinces to upgrade the quality of life of the service users. The Company has continued to improve and develop provision of the services to achieve efficiency, by giving priority to safe, convenient and rapid travelling to ensure delivery of services with modern transportation network and improved life quality to the people through the business operations always based on the social and environmental responsibility, the guidelines to which the Company has adhered for the sustainable business operations.

10.1 Policy Overview

The Company is committed to operating its businesses with particular emphasis on the society and environment in pursuit of the Company’s sustainable business growth. As such, the Company focuses on transparency and fairness in its operations with the aim of coordinating benefits and growing together with all groups of stakeholders. Therefore, the Company adopts and communicates its operating policy for sustainable development to all staff to ensure that they seriously implement and harmoniously incorporate it into their own work processes for sustainable growth of the Company and all its groups of stakeholders, as follows:

1. To be a leading organization for sustainable development through communication and exchange of best practices with all groups of the Company’s stakeholders;
2. To build up the culture and concept of the sustainable development for incorporation into every work process and decision-making process of the Company;
3. To promote training, learning, and counseling, focusing on practices according to sustainable development guidelines;
4. To support the operations, disseminate the guidelines, and ensure collaboration at the regional level as well as transferring the body of knowledge to achieve sustainable development on a continuous basis.

10.2 Corporate Social Responsibility and Sustainable Development

The Company, as the **expressway operator**, is committed to fulfilling the people’s requirements for their travelling via the expressway network which has been connected and stretched to the central business districts of Bangkok. The expressway service is considered the transportation service provided to the expressway users who need convenience, rapidity, and safety in their travelling. For that reason, the Company has continued to conduct the study and improvement of the expressways to ensure engineering safety in accordance with international standards; enhance efficiency in the service provision to the expressway users by the way of an addition of Easy Pass lanes, including relocation of the positions of the lane entrance gates to minimize traffic conflict points with the cash lanes, which will mitigate the traffic congestions in front of the toll plazas. Furthermore, the Company has conducted a study on new routes in response to the urbanization in the future.

With regard to the **metro system**, the Company has emphasized creativity and development of the modes of services to facilitate the passengers' travelling both peak and off-peak hours based on the Company's professional operations on the motto "Service above all else". The Company then sets out the aims for quality services, namely, convenience, fast, reliability, punctuality, and above all, safety which are the first priority of which all staff have to be aware. Moreover, to create an atmosphere of safety throughout the service users' travelling, staff shall strictly comply with the safety requirements of the Company, including public relations regarding safety via media and activities to ensure knowledge and understanding of the general people.

As for the commercial development business, it is considered as the Company's non-core business which the Company also gives importance other than its core businesses, thereby diversifying the Company's services which can fully satisfy the needs of the service users and those who live along the stations. The Company has developed spaces for retail shops and sale promotions to suit the convenience of the MRT service users.

With the Company's competency of and commitment to provision of the expressway and metro services, the Company always gives priority to provision of convenient, rapid and safe services which meet standards to the service users, in which the Company believe that it will be able to play a part in completing daily life for all persons for good.

Summary of Social Performance

Human Capital Development

The Company is determined to be a leading, fully-integrated transportation service provider in Thailand and ASEAN, with its social mission to provide the transport service with convenience, rapidity, and safety by engaging in the business with its commitment to social and environmental responsibility, attainment of value added creation and optimum benefits for all stakeholders with fairness and sustainability. Therefore, it is a clear policy of the Company to be responsible for the rights of all groups of stakeholders, as follows:

- Internal stakeholders, i.e., staff, executives of the Company and its subsidiaries, including their shareholders;
- External stakeholders, i.e., customers, business partners, lenders, counterparts, competitors, society, communities, schools located near the rights of way and the electric train routes, including government sector and relevant authorities.

BEM's Human Resource Development

At present, the Company has to continue facing the ongoing changes and business competitions. To enable the Company to create the **"Route of Happiness for Better Travelling Mode"**, the Company emphasizes the development of its personnel to ensure their readiness and capabilities which will not only create value for the Company, but also for the society as a whole.

1. The Source of Happiness

The Company appreciates the value and importance of its staff, rest assured that the qualified staff is an essential factor in contributing to the organization's sustainable growth and success, as well as being competitiveness indicating factor. Therefore, the Company is determined to look for talent and good persons and regularly and continuously support the development and training of staff at all levels. The Company is also committed to fair treatment towards its staff under the nondiscrimination policy and provision of equitable opportunity for employment pursuant to the work rules and regulations and laws. The Company treats all staff equally regardless of gender, age, race, religion, work position or physical abilities.

The Company has always treated and cared for its staff at all levels in all respects, for example, job description, safety, occupational health and work environment, including training and development of skills in various aspects, together with career opportunity and advancement, fair consideration and welfare through the clearly specified criteria for career path, and fair and appropriate remuneration based on benchmarking with the same industry. Furthermore, the Company has promoted a participatory work environment and teamwork as well as organizing the workplace on the occupational safety and health basis, not to mention the fact that staff are also allowed to show off their abilities.

Realizing the significance and development of personnel as mentioned above satisfy staff to work for the Company to achieve the Company's goals, and with the Company's notion that staff are regarded as valuable resources and its strong belief in their inner potential in order to make staff proud and determined to perform works as well as improving their own performance on a continual basis.

"Source of Happiness", the Company has regularly arranged for development of personnel in both main and supporting lines of work on a systematic basis. Regarding "Career Opportunity and Advancement", the Company is determined to restructure its organization, work positions, career paths, and salaries of staff to make them more appropriate and fairer, to create opportunities for their career advancement.

Therefore, the human resources management has become absolutely essential and necessary, and the Company must establish. More clear and concrete appropriate and fair direction for the retention of existing personnel, and recruitment of new staff for business expansion, as well as development of knowledge and skills for both existing and new staff, and update of job descriptions, including transfer of staff according to their knowledge and abilities, and promotion for career advancement.

Particularly staff in main line of work directly related to services on the expressway and rail systems, where quality and safety are compulsory, in order to achieve its goal of providing excellent service to the utmost satisfaction and impression of the expressway and MRT service users. The Company formulates training courses so that staff will have skills and ability to use equipment and devices for specific tasks, i.e., rescue operation, traffic management, toll collection and maintenance of the system and carriageway, including training courses relating to the metro system, various relevant rules and regulations, especially knowledge regarding work safety.

Moreover, the Company has nurtured innovative development by allowing staff to provide suggestions and opinions which are useful for the development of competency in work process as well as supporting varied studies and researches which are striving for benefits and value creation for the business, on a community, social and eco-friendly basis.

"Staff Capacity Building", the Company focused on personnel training and development, both inside and outside the organization, to maintain core knowledge within the organization, and to prepare our personnel to become the international standard service operator, as well as conveying important knowledge in other aspects to enable them to further knowledge in the future. Training courses provided for staff are described below.

1) Knowledge Management: KM

The Company implemented the knowledge management project as intermediate KM Roadmap, with the objectives to identify the body of core knowledge which was necessary and important for the organization, to ensure a systematic collection of knowledge for all staff to have wide access to the source of such knowledge, knowledge sharing for ensuring the optimum benefits, and furthering the Company's corporate transition into a learning organization. Other than the management of core knowledge for the Company's businesses, the Company also promoted a community of practices (CoPs) to ensure learning and sharing of work experiences, problem-solving, including solutions and improvement to work processes, in order to come up with the best practices.

2) Codes of Conduct and Business Ethics Training

This training course was intended to serve as guidance for all staff regarding their work responsibilities and duties and to ensure that they understand and also follow the preliminary guidance described in the Company's Codes of Conduct and Business Ethics handbook, which is in line with the Company's vision, mission, and corporate culture, in order to achieve goals for improved quality of work and life for staff. The Company also provides for refresher training to update staff's knowledge by the way of E-Learning & E-Exam, which all new staff are required to attend, including regular exams for the existing staff on a yearly basis.

3) Annual Training & Development

The Company put into practice the idea of developing staff competency by improving the Training Roadmap for all levels of staff, namely, executives, supervisors, and operating staff. The roadmap is intended to make sure that staff gain basic knowledge and skills required for their work performance, both technical and soft skills. These two types of skills are fostered in mandatory programs for new staff, e.g., an orientation program for new staff about the Company and about the **“Route of Happiness for Better Travelling Mode”** including rules, regulations, and requirements; a work safety program; and a quality management system program.

The existing permanent staff are given refresher training on knowledge every year. All of these training programs should enable staff to apply such knowledge to their work performance and adapt themselves to the corporate culture, so as to have a sense of pride and to conduct themselves properly and in line with the goals. In such training programs, staff are also encouraged to employ their own expertise.

- Rescue Operation and Traffic Management

The Company, in association with the Expressway Authority of Thailand (EXAT), has conducted rescue operation and assistance drills in case of serious accidents on the expressways, with safety training every year, including training on use of the rescue operation vehicles on the expressways, safe driving training, traffic volunteer training and on the job training; and the Company has arranged for three-months new staff orientation prior to actual operation on the expressways, as well as service mind training. However, due to the situation of the epidemic of the COVID-19 in 2020, the Company and EXAT postponed the drills as originally scheduled for February - June 2020 to July - October 2020, during which the COVID-19 situation had been ameliorated. In this regard, such drills were under the social spacing measures, with all staff being screened strictly.

- Toll Collection Operation

The Company's personnel in charge of this field comprises of personnel with the duty to collect tolls of the Si Rat - Outer Ring Road Expressway, whereby the Company provides the personnel training in toll collection to ensure that tolls are correctly and completely collected to facilitate the expressway users' toll payment with convenience and rapidity. The Company's personnel in charge of toll revenue operation are responsible for ensuring that tolls are correctly, transparently and precisely collected, in collaboration with the government sector, namely, EXAT. The Company provides the internal on the job training regarding the role and responsibilities of toll collection controllers, emphasizing that tolls must be collected punctually, and verification of data on vehicle counting and collection records must be made correctly and accurately.

In addition, the condition of toll collection equipment must be checked to get it ready for full-time service and to ensure the accuracy of toll collection, which will help assure the Company's complete revenue streams and equally protect the interests of shareholders and stakeholders. The Company also arranges for overseas study visits on toll collection systems.

- Structure Maintenance Operation

This is to ensure that the expressways will be ready and safe for service. The Company is internationally recognized as a company specializing in the inspection and maintenance of the Segmental Box Girder structures, with regular inspection, monitoring, and surveillance all year round.

- MRT Control Officer and MRT Operation Control Officer Training

The MRT control officer training takes at least 600 hours of training and the MRT operation control officer training takes at least 1,100 hours of training, which are provided in theory and in practice by the way of actual train driving and train-driving simulator, training to use equipment in train operation control room, emergency response drills and exercises, including on the job training, where safety is given the top priority, whereby professional trainers are provided to closely monitor staff's training. Moreover, the Company's staff are given refresher training on a yearly basis to ensure that all trained staff will be able to discharge their duties in the metro service provision with safety, convenience, rapidity, reliability, punctuality, and efficiency in order to improve the quality of life of residents.

Enhancement of Quality of Life

2. On the Route of Happiness

The expressway users and MRT users are the heart of the Company. The Company is then ready to deliver and improve the expressway services to ensure the most efficiency as the **"Route of Happiness for Better Travelling Mode"** of rapid and safe transportation, uplift the quality of life, and play a role in developing Thai society. The Company appreciates innovations which will help minimize the impact of the operations on society, environment and stakeholders from construction to repair and maintenance of the expressways to stand ready for service to users to ensure their convenience and safety both under normal and emergency situations.

To maintain the Route of Happiness, the Company emphasizes taking care of the delivery process and improvement of services in detail on a regular basis, as follows:

- The delivery process and improvement of services in detail of **the expressway service**

- 2.1 Expressway Construction: The Company adopted the internationally recognized Segmental Box Girder technology, which meets the AASHTO (American Association of State Highway Transportation Officials) standards, and which was considered a sophisticated technology at the time it was adopted. As a result, the Company was able to minimize the impact on at-grade traffic and dust and noise pollution during the construction. The construction was then completed according to plan without any protests from society and nearby communities. The expressways are safe, meet standards and effectively respond to users' transportation needs.
- 2.2 Expressway Maintenance: The Company carries out regular inspection and maintenance of the main structures of the expressways, under the independent consulting engineer's supervision and quality assessment of the expressways. The expressways are in a stable condition, meet standards and safety requirements, and the expressway users are able to enjoy convenient, rapid and safe transportation to their destinations.
- 2.3 Expressway Services: The expressways, by physical characteristics, mostly are elevated and linked as a network with a total length of approximately 268 kilometers. The expressways have become effective strategic routes for sending aid to disaster victims, transporting equipment and supplies, and travelling by both public and private sectors, during the occurrence of any event or disaster which may impede the at-grade roads. Those events in the past have perfectly confirmed the strategic route status. Therefore, the Company, in its capacity as the operator of the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway, sets out practical guidelines for dealing with unusual occurrences, so as to make the expressways available for service under emergency situations and return to normal as soon as possible. In this regard, the Company is ready to take various actions as follows:

- o **Expressway Control Center:** The Company's communications staff in the Control Center monitor traffic condition on the expressways and provide travelling information to the expressway users. CCTV surveillance systems are installed on the expressways, along with radio-communications systems through the Control Center working 24 hours in close collaboration with other relevant authorities. The Company's rescue operation teams are patrolling the expressways at all times, therefore, they are ready to instantly assist service users in any incident on the expressways. In addition, the teams also coordinate with police officers on duty on the expressways and at-grade roads in order to facilitate traffic management 24 hours a day. The traffic condition on the expressways is viewable by at-grade police officers from the video signals connected with the Company's CCTVs.
 - o **The automatic toll collection system or Easy Pass:** This system was implemented by the Company's collaboration with the government sector beyond the terms and conditions of the relevant Concession Agreements, with the intention to improve services and minimize environmental impact from traffic congestion. This system has helped save travelling time and fuel for the expressway users, protect the environment, minimize pollution at the toll plazas, reduce fuel consumption, and improve the quality of life.
 - o **Toll payment service with Contactless EMV at the cash payment tolls (Manual Toll Collection:** The Company, in association with EXAT and Krungthai Bank, developed the contactless credit or debit card payment system in accordance with an Europay Mastercard Visa (EMV) standard to facilitate the expressway users, by starting the trial service on the Si Rat - Outer Ring Road Expressway from June 2020, and it was officially opened for service at the Si Rat - Outer Ring Road Expressway and the Udon Ratthaya Expressway on January 26, 2021, with the service opening at the Si Rat Expressway scheduled for April 2021.
 - o **With respect to safety innovations:** The Company sets up a dedicated unit responsible for research and development (R&D) to regularly improve the safety of the expressways by means of road safety audits. The audit results are used for the expressway improvements for greater safety.
- The delivery process and improvement of services in detail of the MRT service
 - 2.4 Value added to safety: The Company's business operations give priority to the safety of passengers, staff, contractors, including everyone in the MRT system, as evidenced by the adoption of the international standard safety management system as a guideline for operations, namely, ISO 45001. Moreover, Ricardo (Thailand) Company Limited is engaged as a safety consultant to evaluate the Company's operations in accordance with the safety management system standard after opening the MRT Purple Line for service, and provide suggestions on improvement of the risk management process, system assurance, and review of the train operation service process to achieve greater efficiency and to accommodate the growth in the future.
 - 2.5 Value added to convenience: As the metro is a mass rapid transit system with rapidity and definite service schedule for the service users' commute convenience as they can somewhat precisely anticipate the service schedules and sets out their commute plans, the Company thus gives priority to value added in convenience in its services from making an entrance to the stations, utilization of services until leaving the stations. This effect, the Company has made various preparations to suit the convenience of the passengers and the service users in all respects such as information services, common ticketing system, and facilities within the stations.

2.6 Value added to rapidity: As the metro is a mass rapid transit system which offers the rapid services, a main reason that people select to commute by the metro, therefore, the Company supports other services from the passengers' entering into the stations until leaving the services with rapidity by means of development of the efficiency in service provision from where the passengers make an entrance to the stations and during the services, deletion of certain repeated steps which cause any unnecessary delay or increase in certain steps which more impress the passengers such as the passenger volume management system during rush hours on platforms, rapid services in the time when the passengers are so crowded or during the exhibitions, ticket issue or stored value card services are provided by staff who are active in providing clear suggestions, etc.

1) Value added to reliability: The Company is committed to the regular services of the required standard to build the reliability in the metro system in respect of safety, convenience, and rapidity, whereby the Company continues to improve the quality of the services, for instance, maintenance and test of equipment are planned in a preventive and corrective manner, annual rehearsals for handling various emergency stimulations together with internal and external rescue agencies, improvement of safety system, ethical and equitable treatment towards passengers. Moreover, the Company accepts any comments or complaints from customers for further taking remedial actions to ensure improved services.

2) Value added to punctuality: The clear and punctual schedule of the MRT service enables passengers to manage their travelling time and do various activities more easily, not to mention that it results in their quality of life and mind health. The punctual services can be assessed based on the train service availability and punctuality. In 2020, the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line)'s train service availability delayed by not more than 3 minutes during peak hours and not more than 6 minutes during off-peak hours, accounting for 99.46 percent from the target of 99.00 percent, and its train service punctuality delayed by not more than 5 minutes accounting for 99.68 percent from the target of 99.00 percent.

As for the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), its train service availability with a delay of not more than 2 minutes during peak hours and not more than 5 minutes during off-peak hours, accounting for 99.97 percent from the target of 99.25 percent; and its train service punctuality with a delay of not more than 5 minutes, accounting for 99.98 percent from the target of 99.25 percent.

Moreover, the Company's membership in NOVA Group of Metros, a consortium of international metro service operators in a program of railway benchmarking, has inspired the development and improvement of service operations to achieve a higher level of success. Other than the standard out of service performance indicators, the Company has set out benchmarking indicators that are comparable to those of other members of the NOVA Group of Metros in various aspects in order to share knowledge and experience which will result in improvement and development of the services. Furthermore, in comparison with information in the NOVA Group, the Company's operational results are excellent in various respects, such as train punctuality as compared with the train schedule, repair and maintenance to ensure the availability of trains for service, and work safety of staff, etc.

Other than the safety, efficiency in the services and new technology as employed to satisfy the service users' needs, the Company has also realized the significance of its traders which are considered as a business supply chain as comparable to the service users.

The Company formulates a policy to fairly treat its business partners and promotes the knowledge, understanding, practice, development in accordance with the framework for sustainable development in the Company's business sector, building reliability through the fair business operations with its traders and financial supporters, regarded as key success factor which enables the Company to deliver the quality services to the expressway and MRT service users even during a crisis. The Company then set out the practices towards traders in a way of the business operations with fairness to ensure that acquisition of goods and services meet standards, together with the commitment to developing and maintaining sustainable relationships with traders, and having the clear objective regarding quality of goods and services as suitable for monetary value, technical quality and trust in each other.

The Company has arranged for the procurement process with equality and fairness for its traders in all systems, which is in accordance with the operating process governing procurement under the requirements of the ISO 9001 quality management system, by methods and measures adopted in against unfair competitions, determined the guidelines to promote respect for intellectual property rights of traders and safeguard the rights in assets, as well as the business operations with the supply chain in strict compliance with the international standards of the ISO 9001 quality management system and the ISO 14001 environmental management system through provision of knowledge, understanding and close monitoring system, to rest assured that the Company's supply chain transacting a business with the Company has carried out its operations with environmental care to ensure sustainability in mutual business operations. As for the group of financial supporters, it included lenders, debenture holders, creditors, the Company is determined to comply with agreements and commitments and maintain the financial discipline on a strict basis.

Regarding safety for staff and contractors, the Company has conducted its work safety in accordance with Thai laws and local and international safety standards, e.g., ISO 45001, as assessed by TUV NORD (Thailand) Limited. The main objective is to supervise welfare for work performance in respect of occupational safety, health, and environment of staff and persons in connection with operations in the metro system. The Company also prepared Plod Online E-magazine for communication with its staff to ensure their awareness of safety, quality, and environment.

- The delivery of services with social responsibility under **the Company's crisis management measures against the COVID-19 situation**

In 2020, the world had been faced with the widely-growing crisis due to the epidemic of the COVID-19 which eventually caused an enormous problem on a global level. In the midst of such situation, the Company remained committed to "safety", one of the Company's missions which the Company has always strived to achieve, with the Company's concerns for the health and safety of the expressway users and MRT users, along with stakeholders of the Company, while fulfilling the Company's role as the expressway and mass rapid transit service provider to ensure the business continuity with excellence. In each phase of such crisis, the Company monitored the situation of the outbreak of the COVID-19 from the beginning of the overseas outbreak, by considering the local and global outbreak situations from the number of infected persons, the rising rate of infected persons, relevant reports and recommendations of the Department of Disease Control. The Company's evaluation of the situations was conducted based on the information so obtained to set the level of measures which needed to be taken to contain and prevent the spread of the COVID-19 in the metro system to make it suitable for the situation and the severity level of the disease outbreak, in order to rapidly and timely cope with the potential impacts of the disease outbreak, with the Company adapting measures to suit the situation of the outbreak during any such period, namely:

- Performing the train operation work in which a suitable manpower plan must be prepared to ensure the continuous train service, and the work shift pattern must be adjusted as appropriate to prevent the spread of the disease, and replacement personnel must be made available in the case of closure of the stations.
- Implementing measures to clean areas inside the MRT trains, station buildings, as well as cleaning with spraying disinfectants at the toll plazas and toll booths.
- Adopting methods of screening before entering the train system, body temperature measurement before entering the areas of the Company.
- Monitoring the illness of staff and contractors suspected of being infected with the disease.
- Increasing the frequency of the train service during peak hours so as not to cause the crowded trains.
- Implementing the social distancing measures within the stations.

Each of the aforesaid measures had been reviewed by the Safety Committee, consisting of executives in various work fields. Meetings were held to regularly monitor the situation of the outbreak every day during the periods of high domestic infections. Meanwhile, the Company has always issued orders/announcements in support of the government measures to prevent infection and guide all staff and contractors to follow such practical rules while preparing the Business Continuity Plan before the occurrence of the COVID-19 outbreak. More importantly, the Company has also requested cooperation from its executives and staff to remain vigilant and strictly observe the preventive measures by way of a suspension of business leave, annual leave for travel to other countries during May 2020, refraining from participating in activities, parties, or entering risk-prone areas, wearing medical face masks at all times when being in communication with others, ensuring the social distancing, and behaving themselves during COVID-19.

The Company became keenly aware that the epidemic of the COVID-19 does not only affect the Company's business, but also affects all stakeholders involved with the Company such as staff and their families, customers, business partners, shareholders, together with communities and societies. The Company therefore drew up the guidelines to alleviate the impacts or turn this crisis into an opportunity to benefit all concerned stakeholders with a view of building long-term trust-based relationships and maintain good relationships with stakeholders of various sectors as well as fulfilling the Company's role as good citizenship, per details below:

o **Staff and their families**

- Taking care of staff's hygiene and providing adequate relevant equipment for them.
- Providing assistance not only in pecuniary terms but also four requisites, such as, special grants or low-interest loans for staff whose families are affected, scholarships for staff's children, food or accommodation, cost assistance in case of infection, etc.

o **Customers**

- Offering payment deferrals/reduction of payment rates
- Organizing programs for customers to buy goods at special prices; relieving the burden of living cost of the people by maintaining the MRT "Blue Line" fares at the original rates, starting from Baht 16 up to Baht 42, continuously until December 31, 2020, regardless of the fare revisions originally scheduled for July 2, 2020 under the MRT Blue Line Concession Agreement.
- BEM has granted toll exemptions on the three expressways: "the Chalerm Mahanakorn - Si Rat - Udon Rattaya Expressways", every public holiday; toll reductions under the respective new Concession Agreements, currently scheduled for 19 days. In addition, BEM has reduced the tolls at "At Narong 1 Toll Plaza" from the Chalong Rat Expressway access to the First Second Expressway heading to Bangna at the rate of Baht 25 baht per trip for vehicles of all types for one year, effective from July 1, 2020 to June 30, 2021

o **Traders:** Shortening payment terms to traders in case of postponement of order for goods and services from traders/business alliances, under fairly agreed conditions, etc.

o **Shareholders:** Under the circumstances of the COVID-19, the Company strictly implemented the preventive measures in accordance with the order of the Center for COVID-19 Situation Administration (CCSA), i.e., asking for shareholders' cooperation to appoint the Company's independent director as their proxy to attend the meeting instead of their attendance in person, setting up screening points for shareholders, arranging for seats at least one meter apart from one another, and requiring attendees to wear medical face masks throughout the meeting, requiring for checks-in and checks-out on the Thai Chana Application before the registration to attend the meeting, organizing an online shareholders' meeting, providing channels for opinions and communication on guidelines for risk management and responses in the situation of the COVID-19 epidemic in order to build confidence among shareholders, etc.

o **Communities or society:** The Company has played a part in helping communities or society from the situation of the COVID-19 epidemic, by organizing the **Healthy Journey with BEM** project giving away free one million cloth masks to the MRT users and communities surrounding the expressways and the MRT routes.

Despite the fact that the situation of the COVID-19 epidemic would be likely to improve, the Company still has to continue the containment and prevention of the disease outbreak to cope with the situation of the outbreak of other serious communicable diseases which may arise at any time, and to that effect, the Company may need to adjust the operating plans of its work units to suit and conform to the local and international situations. As BEM operates the business of mass rapid transit system service provision, particularly the metro business, the metro passengers are at risk from a serious infection, as a result, the service users may be more concerned and cautious in using the service, thereby having an impact on the Company's business operations. Therefore, the Company needs to continuously adjust the business guidelines accordingly to assure the service users and concerned parties of the Company's services and business operations, whereby the occupational hygiene measures must be strictly observed.

o **BEM's care for society, promotion of measures against the spread of the COVID-19**

With the Company's realizing the importance of contributing to society in the crisis of the COVID-19 epidemic which has forced people to rigorously adjust their daily lifestyle in social coexistence under the government measures, the Company, as one of organizations which provides the mass rapid transit services, has then organized the **"HEALTHY JOURNEY WITH BEM"** project during the months of June - August 2020. Such project was aimed to support the government policies in campaign for people to wear medical or fabric masks, ensure a social distancing in public spaces for their good health and hygiene and ensure conformity to the government announcements to ease or relieve the lockdown measures due to the situation of the COVID-19 epidemic which allowed people to return to normal life. The Company has established various activities and preventive measures to contain the disease epidemic and allay the service users' anxieties about the use of the services, boost their confidence in the greater safety of the metro services. Meanwhile, the Company has provided cooperation with the government sector in providing assistance to mitigate the burdens and sufferings of the people surrounding the MRT routes, namely:

1) One Million Fabric Masks Giveaway Activities

The Company, in association with the Ministry of Transport, the Mass Rapid Transit Authority of Thailand, undertook a one million fabric mask giveaway activity to campaign for awareness-raising and providing knowledge about hygiene care and self-protection to both the MRT Blue and Purple Line passengers, at all 53 stations, for their good health and hygiene, as well as campaigning for passengers to always wear medical or fabric masks in the public transport systems to prevent the spread of the disease throughout the period of the service use.

2) Delivery of Fabric Masks and Consumable Goods Activities

The Company provided assistance to alleviate the burdens and sufferings of the people, in cooperation with government agencies and communities surrounding the MRT routes, both the MRT Blue and Purple Lines, serving as a representative in receiving the assistance provided by the Company for further forwarding to the people. There were several related agencies, namely, District Offices, Local Administration Organizations, schools, and hospitals. In the meanwhile, the Company also sent its representatives to distribute free fabric masks to the people residing adjacent to the MRT stations. Such assistance could be provided through such activities to a total of 130 locations, with the Company providing consumable goods for the communities surrounding the MRT routes to support the "Pantry of Sharing" project of the government sector.

3) Activities under Measures to Maintain Cleanliness in MRT Stations and Trains (Big Cleaning)

- The Company undertook the “Big Cleaning Day” activity at MRT Sanam Chai and Tha Phra Stations under the “Healthy Journey with BEM” project to achieve the safety and good hygiene in response to the measures to prevent the spread of the COVID-19 with cooperation from more than 70 executives and volunteer staff who jointly cleaned up the frequently touched points, both inside and outside the station areas, including stair handrails, passenger elevators, doors and various automatic machines, to build the people’s confidence in the use of MRT services.
- The Company, in association with the RTA Chemical Department, Royal Thai Army, sprayed disinfectants against the COVID-19 in all 53 stations of the MRT Blue and Purple Lines after the service closure.
- The Company’s executives and staff, in association with government agencies, organized the cleaning activities to prevent the spread of the COVID-19 to encourage confidence of the service users in various areas surrounding the MRT routes.
- The Company, in association with the Ratchathewi District Office and the Huai Khwang District Office, cleaned up the areas to prevent the disease epidemic at MRT Phetchaburi Station.
- The Company, in association with the Wattana District Office, cleaned up buildings, places at Asoke Intersection on Sukhumvit Road, in front of Terminal 21 Shopping Center, and frequently touched surfaces at MRT Sukhumvit Station.

4) Service Users’ Confidence Building Activities

The Company has established a **wear-press-away** measure by campaigning for all passengers to always wear face masks on board in the MRT systems in order to contain the spread of the COVID-19, adding more than 800 service points for using free hand sanitizers in the stations thoroughly, both at entries and exits of the stations, as well as establishing the social distancing measures, setting a distance of at least one meter while using the service both inside the trains and stations, forming the orderly queues to access the service in case of crowded passengers, increasing the service frequencies of the additional trains during the morning and evening peak hours to relieve overcrowding, and increasing the cleaning frequencies of the frequently touched surfaces in every half to one hour inside the stations and trains, whereby the Company additionally engaged special part-time staff at 100 rates with the duty to be responsible for cleaning the frequently touched surfaces inside the stations and trains, with the Company’s aim of helping unemployed people who had been affected and suffered from layoffs during the COVID-19 epidemic crisis to ensure that they are employed and can earn enough income to sustain themselves through such crisis together.

5) Pecuniary and In-Kind Donations in Aid of Communities and Society due to the COVID-19 Epidemic Situation

- BEM, in association with CH. Karnchang Public Company Limited (CK) and TTW Public Company Limited (TTW), donated Baht 5,000,000 to the Chaipattana Foundation to support the Chaipattana COVID-19 Aid Fund (and Other Pandemics) in aid of hospitals and medical personnel to purchase necessary equipment and supplies for treatment of the COVID-19 patients.
- BEM, in association with CH. Karnchang Public Company Limited (CK) and TTW Public Company Limited (TTW), donated Baht 5,000,000 to the Fund for Education and Procurement of Medical Equipment under the Project to Prevent and Provide Assistance in the Situation of the COVID-19 Epidemic of the Faculty of Medicine, Ramathibodi Hospital.
- BEM made pecuniary donations in aid of people affected by the COVID-19 situation, by distributing 1,000 survival bags to communities underneath the expressway vicinities in Ratchathewi and Phayathai District.
- BEM undertook activities granting scholarships to students with good academic performance, scholarships for school development and purchase of the COVID-19 prevention devices, i.e., medical masks, hand sanitizer dispenser stands, and alcohol, hand sanitizer, dispenser stand, and alcohol hand sanitizer under the “Healthy Journey with BEM” project, to 24 schools adjacent to the vicinities of the Si Rat Expressway and the Udon Rattaya Expressway, and the Si Rat - Outer Ring Road Expressway. Other than that, BEM also provided the COVID-19 prevention devices to 56 schools surrounding the MRT routes, Siriraj Hospital, Kanchanaphisek Medical Center, Ramathibodi Hospital, RTA Chemical Department (RTACD), and 23 district offices, including communities surrounding the stations in order to build good relationship with them, support education for youths and contribute to helping the communities from the COVID-19 epidemic situation.

6) Other Activities

The Company, in association with the Ministry of Public Health, provided knowledge as to prevention of the spread of the COVID-19:

- Supporting the Department of Disease Control, Ministry of Public Health, in providing knowledge of proper cleanliness at MRT Yaek Nonthaburi 1 Station and Talad Bang Yai Station.
- Supporting the Department of Health Service Support, Ministry of Public Health, in providing recommendation as to proper cleanliness as well as giving away medical face masks and gel-based hand sanitizers to passengers at MRT Tao Poon Station.
- Supporting private-sector agencies, such as Siam University Medical Service Center, in giving away medical masks and alcohol hand sanitizers gel to passengers at MRT Phetchaburi and Bang Wa Stations.

7) Various Measures to Prevent the Spread of the COVID-19

The Company has heightened measures in terms of hygiene and screening for passengers within the metro system areas while taking measures for cleanliness and health care of staff/contractors as follows:

- Arranging staff to make temperature screening for passengers with a handheld thermometer at the baggage checkpoints of the entrances to the stations.
- Requesting passengers to always wear medical or fabric masks along the journey with the MRT system.
- Providing health care advice to passengers with a fever higher than 37.5 degrees Celsius.
- Ensuring the social distancing by which the MRT has determined a one-meter standing distance at the ticket office areas in front of the ticket vending machines, platforms, passenger elevators, and inside the trains.
- Increasing the cleaning frequencies with disinfectants in all MRT stations.
- Cleaning with disinfectants inside all MRT trains during, after, and before service every day.
- Increasing the frequencies of cleaning with disinfectants in the areas frequently touched by passengers, such as, ticket vending machines, stair handrails, escalators, escalator handrails, fare collection gates, elevators, handrails inside the trains, seats, etc.
- Providing alcohol-based hand sanitizers at the baggage checkpoints and ticket offices in all MRT stations and at every entrance-exit of Metro Mall in all stations.
- Providing health care for staff who provide services in the stations and trains with health check-ups, body temperature measurement before on duty every time.
- Requiring staff to wear medical or cloth fabric masks at all times on duty.
- Cleaning and disinfecting tokens before being circulated in every MRT station.
- Increasing public relations to build knowledge and understanding of self-practices to passengers to avoid the transmission of pathogens, through media, such as, billboards, digital information displays inside the stations and trains, sound public relations inside the MRT stations, and social media of the Company.
- Establishing practical guidelines for staff and contractors to prevent the transmission of pathogens, such as, a policy requiring staff to refrain from travelling to risk countries, as well as monitoring the situation and various government measures to ensure the Company's readiness to adjust various measures to be appropriate, efficient for strict compliance.

3. Happy Society

Throughout the period of the business operations, the Company is committed to being the **“Route of Happiness for Better Travelling Mode”** and the pursuit of happiness of travelers, the following matters are given priority:

- **Family:** Spending quality family time can be made in various manners, one of which is travelling together as a family on expressway route or metro route, to see and experience new stories of community lifestyles and to ensure income distribution to their destinations;
- **Education of children and youth:** The Company aims to promote children’s outdoor learning experience by organizing outdoor learning activities to allow children to gain important first-hand experience and apply such gained experience to their lives in the future, and meanwhile, the Company has provided educational opportunities for underprivileged children and youth with good academic records, by distribution of scholarships to them as a cost for their sustainable careers.
- **Public interest assistance** and alleviation of hardships from various disasters: The Company has always provided assistance in this matter to play a part in healing of the suffered society from such disasters.

4. Summary of Environmental Performance

Environmental Quality Promotion and Environmental Impact Reduction (More Quality and Less Impact)

The Company, in its capacity as the expressway and metro service provider, has realized the business operations based on sustainable development in three aspects, namely, economy, continuously developing quality of services; society, taking care of the Source of Happiness to ensure that they have the improved quality of life, with the readiness to transfer value to society nearby and as a whole; and environment, emphasizing prevention and control of pollution and impacts which may occur.

The Company is determined to develop the quality of the services, with the commitment to environmental responsibility; therefore, the environmental management policy has been formulated, with the guidelines as follows:

Environmental Policy

1. Giving the priority to prevention and control of pollution to ensure compliance with the international standards and taking into account the environmental impacts of the service users, staff and communities;
2. Instilling the awareness on the utilization of natural resource energy in an efficient manner in our staff and promoting them to do so;
3. Performing duties in compliance with laws and other requirements in relation to the environment;
4. Reviewing the objectives and goals for improving the environmental management system on a regular basis;
5. Disseminating the environmental policy to the public and other concerned parties.

It is deemed to be all staff’s and traders’ responsibility to strictly and regularly adhere to this policy for ensuring a good environment for the service users, staff, traders, and nearby communities.

The Company has a policy and is determined to continuously take care of every sector of society in respect of the management of improved operational results, creation of value added to shareholders, and giving priority to nearby communities as well as taking care of both nearby and remote communities. In 2020, the Company then organized the corporate social and environmental contribution activities as follows:

1) Activities for Development of Quality of Life on Safe Travelling

The safety lies at the heart of the Company’s success to which the Company gives foremost priority in order to help prevent and reduce potential accidents on roads, including expressways, as well as ensuring the greater safety to motorists and their companions. The Company has therefore organized travelling safety promotion activities, as follows:

“Provision of Facilities and Safety for People’s Travelling during New Year and Songkran Festivals”

The Company, in association with EXAT, conducted a campaign for safe driving during the Songkran festivals under Road Safety Measure 777 “Driving Slowly, Daytime Headlight Switching on, Seat Belt Fastening”, and also provided for the public service points on the expressways in order to facilitate the people’s travelling during the New Year festival.

2) Activities for Moral and Ethical Awareness for Corporate Social Responsibility**“Blood Donating”**

It is to give blood to give life as the greatest giving. The Company, in association with the Faculty of Medicine Vajira Hospital, Navamindradhiraj University, then held a blood donation activity at the Si Rat - Outer Ring Road Expressway Control Center, two times, (usually held 3 times a year, but this year the activity was suspended in April 2020 due to the situation of the epidemic of the COVID 19), with active cooperation of a lot of executives, staff and residents nearby.

“Listening to Dhamma with BEM”

To create a positive work environment in the organization by applying Dharma or the principles of Buddhism to promote the proper fulfillment of an individual's role with all's mutual cooperation in order to bring workers happiness and efficient performance, and to that effect, the Company invited Phra Bai Dika Worawat Worawattano, Assistant Abbot of Tanot Temple, to deliver them a Buddhist sermon on the “Happy People Happy Work” topic.

3) Activities for Good Relationships with Related Authorities**“Thai Farmer Lifestyle Learning in Suphan Buri Province with BEM”**

The management and staff of the toll collection division of EXAT and the toll collection division of the Company participated in an activity to strengthen relationships with each other at the Lifestyle and Spirit of Thai Farmers-Na Here Chai Learning Center in Suphan Buri Province, one of the important tourist attractions in Suphan buri Province, where had compiled fascinating stories and new knowledge about the valuable way of life of Thai farmers for study and learning.

4) Activities for Promotion of Youth Learning

The youth are the vital force of the nation. Education is the cornerstone of the youth's sustainable development of knowledge, abilities, perspectives, and virtues to ensure that they become good and quality citizens of the society. The Company has then continued to encourage and support the youth's education every year through various activities as follows:

“Scholarships for Students of Adjacent Schools”

The Company undertook activities to grant scholarships to students with good academic records, together with school development scholarships, to 9 schools adjacent to the Si Rat Expressway, the Udon Rathaya Expressway and the Si Rat - Outer Ring Road Expressway, to provide the youth educational opportunities and foster good relationships with communities nearby, and to provide educational support to the youth.

“Scholarships for Children of the Expressway Police Station 2's Police Officers”

The Company granted scholarships to children of the Expressway Police Station 2's police officers, who collaborated with the Company to ensuring convenience and safety of the expressway users.

5) Activities for Support of the Outdoor Learning Experience

Outdoor experience opens up an opportunity for children to fully engage in learning by themselves, giving them a deep and clear understanding and enabling them to apply the gained knowledge to their life in the future. The Company thus organized outdoor learning experience activities as follows:

National Children's Day 2020 Activities **"Wonderland AI World"**

The Company undertook the 2020 National Children's Day activities in the atmosphere of "Wonderland AI World", with a lot of students from schools adjacent to the expressway vicinities, staff's descendants and children from nearby communities joining in fun activities, including AI invention, LEGO building, plaster painting, Bozo balloons, smart robot competition. The event atmosphere was filled with happiness, brightness of the children who enjoyed closely learning about Artificial Intelligence technologies at the Si Rat Expressway Control Center Building.

"MRT Delivers Happiness on the Children's Day 2020" Activity

On the occasion of the National Children's Day 2020, the Company, in association with Museum Siam, undertook an activity to enhance the development of ideas for children under the concept of "Thai Banjerd: Kerd Ideas" at the Activity Hall at Museum Siam, MRT Sanam Chai Station, Exit 1, where children joined in various skill-building activities, enjoyed the MRT quiz games through the knowledge station of the use of metro cards, skill-enhancing station in image link of MRT network map, flair-developing station in spellings, color separation, alphabet learning, and knowledge station about the correct and safe use of the MRT, as well as enjoying eating a wide variety of sweets, ice creams and winning prizes. Other than that, in the Museum Siam event, there were also everyday problem-solving games, i.e., folding paper airplanes with secret messages inside station, drought conquest station, cooling down station, Museum Commercial station, in order to build knowledge and understanding about how to tackle different problems correctly. The event atmosphere was filled with happiness, enjoyment and smiles of more than 2,000 children and their families who joined in the activities persons.

"MRT Happy Blue Line" Activity

The Company realized the significance of the youth and communities surrounding the MRT routes, and therefore undertook an activity to promote the new route of the M.R.T. Chaloe Ratchamongkhon Line (MRT Blue Line Extension), Tao Poon - Tha Phra Section, for the youth, people and communities surrounding the MRT route so that they learned on how to use the MRT system correctly and safely, together with a free trial trip with the new MRT line to the four most exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, which were elaborately designed and decorated with the Thai style architectures in the Rattanakosin era perfectly reflecting the arts, cultures, and livelihoods of communities nearby. The activities were held throughout January-February 2020, as follows:

- A group of 490 students in schools nearby participated in the MRT's trial runs with accuracy and safety, and there was a creating of awareness and public relations for the opening of the M.R.T. Chaloe Ratchamongkhon Line (MRT Blue Line Extension), Tao Poon - Tha Phra Section, by organizing a safety knowledge promotion activity, "MRT Safety Share, Safety You Can Do", and introduction of the MRT routes through "Bangkok MRT Application".
- A group of 135 residents in communities nearby participated in the MRT's trial runs with accuracy and safety and continuously travelled to important cultural attractions, learned how to correctly use the MRT system, elevators, escalators, and minimize travel accidents for the elderly, along with enjoying the free trial trip with the new MRT line to visit the spectacular architecture within the stations and continued to Wat Mangkon Kammalawat (Leng Nei Yi Temple) to pay homage to Buddha images. Such activities were considered a part of promoting people's travelling with the MRT system and promoting the cultural tourism around the MRT routes.

“Share 2 Child” Activity

With the Company's commitment to contributing to promoting educational development for children and youth through learning and trial of the trial of the MRT system as well as enhancing their outdoor learning experiences, the Company therefore continued to undertake the “Share2Child” activity. In 2020, activities were organized for children to join in a field trip to visit learning centers surrounding the MRT Blue Line, namely:

- **Study Tour of Museum Siam:** By bringing a group of more than 100 teachers and students from Wat Chat Kaew Chongkolnee School (located near MRT Bang O Station) and Wat Paolohit School (located near MRT Sirindhorn Station) to do a study tour for outdoor learning experience around the MRT Blue Line, Tao Poon Station - Tha Phra Station, learn how to ride the MRT correctly and safely, along with learning how to issue tokens through the Ticket Vending Machines (TVM), as well as taking the students to visit the Decoding Thainess exhibition at Museum Siam: Discovery Museum, and enjoy the magnificent Thai architecture of the MRT Sanam Chai Station, regarded as one of the most exquisite underground stations, all of which received the children's great attention. The children gained a lot of knowledge and experience from these activities.
- **Study Tour of Energy Learning Center:** By bringing a group of 80 teachers and students from Wat Samakkhi Sutthawat School (located near MRT Bang Phlat Station) to do a study tour for outdoor learning experience around the MRT Blue Line, Bang Phlat Station - Bang O Station, learn how to ride the MRT correctly and safely, along with learning how to issue tokens through the Ticket Vending Machines (TVM), as well as taking the children to go on a study tour of the EGAT Learning Center, a learning center of Thailand's energy and a learning center of energy conservation buildings of international standard, encouraging the youth to realize the efficient energy use. This study tour activity provided the children with the overwhelming impression and broadened their knowledge of energy.

“MRT Bring Nong to Conquer TCAS Year 12”

The Company has valued the youth who are a driving force of the nation, and therefore, in association with the Mass Rapid Transit Authority of Thailand (MRTA) and Bangkok Metro Networks Company Limited (BMN), organized the giving back to society activities in terms of improving the quality of life in education, by providing opportunities for high school students nationwide to participate in the activity under the name of “MRT Bring Nong to Conquer TCAS” Year 12 to enable them to apply the knowledge so gained for the higher education entrance examination, which was given a great honor by three highly qualified tutors to share knowledge, provide free intensive tutorials about TCAS exams, namely, Teacher Somsri Thammasarn Sophon in English, Teacher P'Wiset Keesukphan (Teacher P'Ae) in PAT1 Mathematics, and Teacher Surachet Phichitphongphao (Teacher P'Yu) in GAT, at C ASEAN, 10th Floor, CW TOWER.

Such activity attracted the attention of students nationwide, by receiving feedbacks from over 200 students from 54 schools to participate in the live learning activity and over 10,000 students for the online learning activity. Moreover, BEM continued to further the activity, by passing on knowledge to secondary school students in Bangkok under the “MRT Jaidee Give Away TCAS Exam Preparation Books” activity at the MRT Chatuchak Station, between October 9-10, 2020, with more than 300 students providing attention to the activity and travelling to receive the books in person, and BEM also provided opportunities to students of all regions who missed out on free tutorial courses to gain knowledge, by delivering TCAS exam preparation books for all the three subjects, together with VDOs, to more than 70 schools via the mail channels for enabling students to have prepared for the examination for entrance to universities of dream with confidence, and grow up to become a major force of the nation.

“Making Dream Come True with Learning Center for Kids by BEM” Activity

The Company remained committed to continuing the policy to promote and develop the quality of life in education for children and youth in educational institutions/communities surrounding the MRT routes of the M.R.T. Chaloen Ratchamongkhon Line and the M.R.T. Chalong Ratchadham Line, by undertaking a “Making Dream Come True with Learning Center for Kids by BEM” activity for educational institutions or little child development centers to ensure their greater competency and readiness as a modern learning center, in order to promote Thai children’s reading habits, strengthen physical development to ensure they would grow up to become a driving force of the nation, by granting educational materials, scholarships, and a set of playground equipment for child development. Meanwhile, the Company’s executives and staff volunteered to participate in recreational activities, activities for learning and skill practice station, and provided free lunch for children, with representatives from the Bangkok Yai District Office, Director of Wat Pradu Chimplee School giving a welcome at Wat Pradu Chimplee School in Bangkok, located adjacent to the MRT Blue Line (Tha Phra Station).

6) Support for Other Social Activities

• “Thot Kathin Ceremony 2020”

The Company has upheld the good culture and tradition, and maintained while fostering the Buddhism by regularly organizing a Thot Kathin ceremony every year, which in 2020, it was held at Wat Samakkhi Sutthawat, Bang Phlat District, Bangkok, adjacent to the MRT Bang Phlat Station, by collecting donated money from executives, staff, service users of the M.R.T. Chaloen Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line) to fund the restoration of the sermon hall of Wat Samakkhi Sutthawat for upholding the Buddhism, together with contribution of scholarships to Wat Samakkhi Sutthawat School, located adjacent to the MRT Bang Phlat Station, as scholarships for the underprivileged students.

• “BEM’s Felicitation Activities in Honor of the Monarch and His Royal Family Members”

To express the Company’s unswerving loyalty to the Monarch and his royal family members on auspicious occasions of their birthday anniversaries, the Company set up celebratory arches and blessing books to provide opportunities executives, staff, MRT passengers, together the general public, to join in the blessings on various occasions, as follows:

- o On the auspicious occasion of Her Majesty the Queen’s birthday anniversary on June 3, 2020 at the Company’s office building and MRT Phahon Yothin Station and Sam Yan Station;
- o On the auspicious occasion of His Majesty the King’s birthday anniversary on July 28, 2020 at the Company’s office building and MRT Sanam Chai, Sam Yan, Chatuchak and Tao Poon Stations;
- o On the auspicious occasion of Her Majesty Queen Sirikit the Queen Mother’s birthday anniversary on August 12, 2020 at the Company’s office building and MRT Sanam Chai, Sam Yan, Chatuchak and Tao Poon Stations.

• “Activities in Commemoration of the Royal Grace of His Majesty the late King Rama IX”

- o On the occasion of His Majesty King Bhumibol Adulyadej The Great’s death anniversary on October 13, 2020, the altar tables where the pictures of the late King were positioned, together with royal worship, were set up at the Company’s office building and MRT Sam Yan station;
- o On the occasion of His Majesty King Bhumibol Adulyadej The Great’s birthday anniversary, the National Father Day, on December 5, 2020, the altar tables where the pictures of the late King were positioned, together with royal worship, were set up at the Company’s office building and MRT Sam Yan station.

10.3 Anti-Corruption Policy

The Company realizes and gives priority to anti-corruption and fraud prevention, both inside and outside its organization. The Company thus formulates guidelines for the proper conduct of directors, management and staff via the code of business ethics of the Company. Furthermore, with the potential damage from corruption in mind, the Company then formulates anti-corruption policy containing the key practical guidelines as follows:

1. The Company's directors, executives, and staff at all levels should carry out activities with fairness, integrity, and transparency in business dealings with various agencies, provided that such activities must be in accordance with laws, proper policies, regulations, rules, announcements or work processes.
2. The Company promotes and supports comprehensive and fair treatment with integrity towards all of its traders and compliance with any contractual commitments made with the Company's stakeholders.
3. The Company promotes and supports awareness-raising of directors, executives and staff to refrain from committing any fraud or corruption and become aware of adverse impacts of corruption.
4. The Company promotes and encourages directors, executives, and staff not to accept, agree to accept, or offer any reception, gifts, and any other payments which are extravagant and inappropriate for those who have business dealings with the Company.
5. The Company arranges for staff training to educate them regarding the anti-corruption policy, practices, and guidelines.

The Company which operates the expressway business and the metro business did formulate and implement the respective anti-corruption policies, which can be summarized as follows:

- **Anti - Corruption Guidelines**

The Company sets out measures, based on both disciplinary and legal actions, against corruption. The fact-finding must be conducted by a committee comprising representatives from the human resources department, from the department of the offender and from other units. The Managing Director is authorized to consider imposing disciplinary actions in case of written warning and termination of employment. Should the misconduct constitute embezzlement, legal action will be undertaken to protect the Company's interests. Guidelines under this policy are as follows:

1. No business dealings may be entered into with any organization or unit which is involved in corruption.
2. Disciplinary and legal actions will be imposed and instituted against such staff who are involved in corruption.

- **Additional Anti-Corruption Practices**

The Company intends to operate its business with transparency without involvement with any corruption, in accordance with the corporate governance policy. All directors, executives and staff must perform their duties with integrity, due care, prudence and in the best interests of the Company and fairness to stakeholders, as well as free from corruption, both internal and external.

1. The Company and its subsidiaries set out policy and measures for anti-corruption and prevention of payments or acceptance of bribery, including any actions contrary to morality and customary practices, which are written in the corporate governance policy, the Company's code of business ethics, and the work rules and regulations, for compliance by all directors, executives and staff.

2. The Company is aware of business risks from both internal and external factors which may affect its operations. The Company therefore sets out a systematic risk management, monitoring and measures to continuously minimize risks. The Corporate Governance and Risk Management Committee was thus appointed to consider the policy level while the Management has the duty to supervise the overall risk management process and perform the day-to-day operation on behalf of the Corporate Governance and Risk Management Committee. Such duties include monitoring, evaluation and preparation of a risk management report at the department level for submission to the Board of Directors for information. Moreover, the risk management manual and plan are prepared as operational guidelines, including risk monitoring, evaluation and review in line with the internal and external circumstances. All work units must also prepare emergency plans for any emergency situation so as to be ready to resolve problems forthwith.
3. In order to comply with the written anti-corruption policy, the Company also builds up recognition of anti-corruption practices in the organization through physical and mental development training to have a positive attitude because the Company believes that decency emanates from inside out. In preparation for the application for certification of membership in Thailand's Private Sector Collective Action Coalition Against Corruption, the Company also had various departments conduct a self-assessment to identify potential improvements in compliance with the anti-corruption measures in Thailand's Private Sector Collective Action Coalition Against Corruption. Moreover, the Company assigned two representatives, who are responsible for the corporate governance and the internal audit, to attend the Anti-Corruption: The Practical Guide (ACPG 15) course, organized by the Institute of Directors Association (IOD).
4. The Company surveys the compliance with the code of business ethics yearly for the management to review their conduct in accordance with the code of business ethics.
5. The Company treats misconduct relating to fraud and corruption as serious disciplinary misconduct, which, if any misconduct is committed, is subject to severe disciplinary action, up to termination of employment without prior warning. The details of such misconduct are described as follows:
 - Disclosure of the Company's confidential information to any third parties;
 - Breach of duty and/or fraudulent acts towards the Company, including a conspiracy with others to do so;
 - Abuse of position for personal interest or for the interest of others;
 - Acceptance of undue consideration in relation to assigned tasks;
 - Showing offensive behaviors or use of aggressive, threatening, insulting words or causing bodily injury to supervisors, including third parties who contact or are related to the Company.

11. Internal Control and Risk Management

11.1 Internal Control

The Board of Directors continues to realize the significance of its good and effective internal control system, including its good corporate governance guidelines, in the belief that a good internal control system lies in a good performance process, organization chart and work system, which can help the Company achieve its goals or missions with efficiency and effectiveness, as well as minimize risks and prevent possible risks and damage in the Company's business operations. The Board of Directors has thus authorized the Audit Committee comprising independent directors to audit the evaluation of the effectiveness of the internal control system. The Internal Audit Office, which independently performs its duty and directly reports to the Audit Committee, shall have the duty to audit the work operation systems in various departments of the Company as per the annual audit plan approved by the Audit Committee, with an aim of ensuring each department's efficient and effective performance of work and optimum use of the Company's resources, as well as ensuring corruption control and prevention. This also includes the control of the work performance, and the accurate, reliable and timely financial reporting, as well as the compliance with the policies as well as laws and regulations of the government agencies and relevant authorities. Furthermore, the effectiveness of the internal control system is regularly reviewed to ensure the optimum benefit to the shareholders from the business operation based on fairness in terms of benefits to all stakeholders. In addition, the Audit Committee shall have the duties to consider, select and submit for the appointment of the auditor, including remuneration of the auditor, consider accurate and complete disclosure of the Company's connected transactions or any transactions which may give rise to any conflicts of interest.

11.2 Risk Management

The Board of Directors has realized the significance of using the risk management system in the administration by assigning the Corporate Governance and Risk Management Committee to supervise and review the Company's overall risks, risk management strategies, and risk alert system. This is to ensure proper and timely response to various challenges, as well as to provide training for executives and staff about the risk management guidelines for their understanding and engagement in the firmwide risk management, covering both corporate level and operational level. The Company's management takes into account various risk factors currently sustained or threatened to be sustained in the future by the Company to analyze an impact and possibility of such risks and to determine measures to prevent and deal with such risks to stay at an acceptable level in line with the Company's policy, and to report to the Corporate Governance and Risk Management Committee to consider the adequacy and appropriateness. The risk management plan shall be reviewed every year, and the effectiveness of the risk management system shall be monitored and evaluated at any time when the risk level has changed, to monitor incidents which constitute both internal and external risk factors in order to take precautions against any risks which affect the Company and to prevent, mitigate possible damage. The results are regularly followed up on a quarterly basis by the secretary to the Corporate Governance and Risk Management Committee and then reported to the Corporate Governance and Risk Management Committee for acknowledgment and further report to the Board of Directors. The Company's significant risk factors and management are described in Risk Factors on pages 103 to 111.

11.3 The Board of Directors has evaluated the adequacy of the internal control system based on the Internal Control Adequacy Evaluation Form, taking into consideration five components, i.e., corporate internal control, risk assessment, control measures, information and communication system, and follow-up system. It was concluded that the Company's internal control system was considered adequate and appropriate to the business operations; no material defect in the internal control system was found; and control and prevention of corruption and improper or unauthorized use by executives or employees of the property of the Company and the subsidiaries could be efficiently conducted; the financial reports of the Company were accurate and reliable in accordance with the generally accepted accounting standards and the financial reporting standards; and the Company's business operations were in full compliance with the law on securities and exchange and other applicable laws.

The Board of Directors, the Audit Committee and the auditor's opinions coincide that the Company's business operations are based on good corporate principles, transparency, with the Company having the suitable and effective internal control system which is capable of preventing improper or unauthorized use by executives or employees of the property of the Company.

The Head of the Internal Audit Unit is Miss Vasana Wattananukulchai, General Manager of the Internal Audit Office. The Audit Committee is of the view that she has knowledge, abilities and work experience and is suitably and adequately qualified to efficiently perform duties as the Head of the Internal Audit Unit. The appointment, removal, and transfer of the person holding an office as Head of the Internal Audit Unit shall be subject to the Audit Committee's approval. (Her detailed information is described on page 243.)

The Head of the Compliance Unit is Mr. Phakpoom Thaweewittayarut, Deputy Managing Director - Administration and Company Secretary, having knowledge in the fields of law and accounting, abilities and long experience in the position as Company Secretary, who shall be responsible for compliance matters. (His detailed information is described on page 244.)

12. Connected Transactions

12.1 Criteria and Procedures for Approval of Execution of Connected Transactions

Transactions with persons who may have a conflict of interest are subject to the conditions and criteria in the ordinary course of business. The execution of connected transactions and transactions with a conflict of interest are in accordance with the regulations of the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission.

In the consideration and approval of any connected transaction, the Company shall propose such matter to the Board of Directors' Meeting, in which the directors having any involvement which may give rise to a conflict of interest shall not be entitled to attend and vote on such matter. Furthermore, the Audit Committee, as assigned by the Board of Directors, shall consider the disclosure of the Company's information in respect of the connected transaction or the transaction which may have a conflict of interest, to ensure accuracy and completeness.

In respect of connected transactions with general commercial terms which the Company and its subsidiaries have or may have in the future, the Company already requested approval in principle from the Board of Directors' Meeting.

12.2 Policy or Trend of Future Connected Transactions

The Company shall comply with the requirements and regulations of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, as well as the rules on disclosure of information on connected transactions and acquisition and disposition of material assets of the Company and its subsidiaries, including the accounting standards as prescribed by the Federation of Accounting Professions. Should there be any transaction which may have a conflict of interest in the future, for example, engagement of a group of persons who may have a conflict of interest for construction, project management, maintenance, the Board of Directors, together with the Audit Committee, will consider the necessity and justification for execution of such transaction, as well as pricing and conditions on the execution of such transaction whether they are in the ordinary course of business, and in comparison with third party prices or market price, provided that the interested parties shall not take part in the consideration and approval for execution of the transaction. The Company has no policy for lending loans or providing guarantee to any person who may have a conflict of interest in accordance with the definition of the SEC Office.

In case that the Audit Committee has no expertise to consider any potential connected transaction, the Company will arrange for an independent expert or the Company's auditor to provide an opinion on such connected transaction in support of the decision-making by the Board of Directors and/or the Audit Committee or shareholders, as the case may be. In this regard, the Company discloses its connected transactions in the Company's notes to the financial statements as audited or reviewed by the Company's auditor.

12.3 Connected Transactions of the Company and the Subsidiaries with Persons who May Have a Conflict of Interest for 2020 and 2019

1. Transactions of the Company and its Subsidiary with CH. Karnchang Public Company Limited ("CK")

CK engages in the construction business and a full range of development, investment and management of large-scale infrastructure concession projects within the country and the region. CK is also the Company's related company since CK is the Company's major shareholder, holding shares in the Company representing 31.32¹ percent of the Company's registered and paid-up capital. CK and the Company also have common directors and executives, namely, (1) Mr. Plew Trivisvavet, (2) Mr. Phongsarit Tantisuvanitchkul, and (3) Mrs. Payao Marittanaporn, the spouse of Mr. Prasert Marittanaporn.

Note : ¹ Information as at the latest closing date of the share register for suspension of the share transfer of the Company on June 26, 2020.

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2020	Accounting Period Ended December 31, 2019	
Inspection, Repair and Improvement of the Structures and System Works of the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway - Construction cost - Costs of inspection and repair of the structures of the expressways - Trade payable	814.24 35.50 12.14	742.88 209.55 92.01	<p>The Company engaged CK to carry out inspection, repair, and improvement of the structures and system works of the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway, as follows:</p> <p>1) No. 4, Phase 2:</p> <p>The contract was executed on August 17, 2018 in the total value of Baht 32 Million, with a contract term of 12 months from the date of the contract signing.</p> <p>2) Construction and Improvement of the Structures:</p> <p>The contract was executed on January 23, 2019 in the total value of Baht 780 Million, with a contract term of 12 months from the date of receipt of the Notice to Proceed.</p> <p>3) No. 4, Phase 3 and Improvement of the Structures:</p> <p>The contract was executed on August 16, 2019 in the total value of Baht 233 Million, with the contract term of 12 months from the date of the contract signing.</p> <p>Subsequently, on July 17, 2020, the Company executed the Variation Order for the Repair Work No. 4, Phase 3, and the Improvement Work of the Structures; as a result, the contract's value was changed to Baht 237 Million, with the extension of the work period ending in December 2020.</p> <p>4) Construction and Improvement of the Structures and System Works of the Si Rat Expressway:</p> <p>The contractor was executed on April 14, 2020 in the total value of Baht 831 Million, with the contract term of 12 months from the date of the contract signing.</p> <p>5) No. 4, Phase 4 and Repair and Improvement of the Structures and System Works:</p> <p>The contract was executed on December 21, 2020 in the total value of Baht 920 Million, with a contract term of 12 months from the date of receipt of the Notice to Proceed.</p> <p>The work prices were reasonable and lower than the prices as appraised by the Company and the independent certification engineer.</p>

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2020	Accounting Period Ended December 31, 2019	
Management of Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line)			
- Cost of maintenance of civil infrastructure and electrical and mechanical systems	329.03	165.85	<p>On November 17, 2015, the Company executed the Project Management Agreement engaging CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) for a period of 8 years, with the total contract value of Baht 1,270 Million.</p> <p>Subsequently, on August 29, 2018, the Company executed the Amendment Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Blue Line Extension Project, for a period of 8 years and 6 months, together with the extension of the contract term of the M.R.T. Chaloem Ratchamongkhon Line Project for another 3 years and 5 months to end at the same time as the Agreement for the MRT Blue Line Extension Project, as well as adjustment and replacement of the expired M&E Systems of the M.R.T. Chaloem Ratchamongkhon Line Project, with the total contract value of Baht 2,778 Million, which was considered an integral part of the aforesaid Project Management Agreement. Such work value was reasonable and lower than that as appraised by the independent certification engineer.</p>
- Replacement of M&E Systems and cost of preparation for repair	467.91	4.50	
- Trade payable	324.10	82.93	
Civil Infrastructure and Electrical and Mechanical Systems Maintenance, including Maintenance of Elevators and Escalators inside the Metro Stations, Elevated Structures and Depot, as well as Supply of Equipment, Tools, Spare Parts and Personnel for Maintenance Services for the MRT Purple Line Project			
- Cost of maintenance of civil infrastructure and electrical and mechanical systems	220.00	220.00	<p>On November 17, 2015, the Company executed the Project Management Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance, including maintenance of elevators and escalators inside the metro stations, elevated structures and depot, as well as supply of equipment, tools, spare parts and personnel for maintenance services for the MRT Purple Line Project, for a period of 8 years from November 17, 2015 to November 16, 2023, with the contract value of Baht 1,520 Million.</p> <p>Subsequently, on December 14, 2016, the Company additionally executed the Project Management Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Purple Line Project, with the contract value of Baht 155 Million, for a period of 7 years from January 1, 2017 to December 31, 2023. Such work value was reasonable and lower than that as appraised by the independent certification engineering.</p>
- Trade payable	65.39	121.57	

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2020	Accounting Period Ended December 31, 2019	
Project Management, as well as Supply, Installation, and Test Run and Commissioning of M&E Equipment for the MRT Blue Line Project - Project management cost - Trade payable	1,523.14 -	5,560.61 455.40	<p>On June 20, 2017, the Company executed Project Management Agreement with CK for Project Management, as well as Supply, Installation, and Test Run and Commissioning of M&E Equipment for the MRT Blue Line Project, in the total amount of Baht 19,643 Million.</p> <p>Subsequently, on February 9, 2018, the Company executed the Variation Order engaging CK for management of construction and improvement of the administrative building in the area of Huai Khwang Depot, as well as supply and installation of the (additional) M&E Equipment for the MRT Blue Line Project, for a total value of Baht 558 Million, whereby it shall be deemed as an integral part of the aforesaid Project Management Agreement.</p> <p>Later, on July 12, 2018, the Company executed the Variation Order for expediting the opening of the train operation ahead of schedule and installation of the telecommunication network system inside metro stations of the MRT Blue Line Extension Project, in the total amount of Baht 898 Million, and the scope of works under the existing Agreement remained unchanged.</p> <p>On January 7, 2020, the Company executed the Variation Order for the M&E Equipment and the Civil Work as assigned by MRTA which were beyond the scope of works under the existing Agreement in the total amount of Baht 293 Million. The work value was reasonable and lower than that as appraised by the independent certification engineer.</p>
Office Space Lease in Viriyathavorn 2 Building - Office space rental and service charge - Trade payable	8.79 0.09	8.44 0.09	<p>The subsidiary: Bangkok Metro Networks Limited ("BMN") entered into the office space lease agreement in Viriyathavorn 2 Building with CK, for the term of 3 years, ending on July 9, 2022.</p> <p>The office rental rate was comparable to the rental rates charged by the lessor to third party lessees.</p>

2. Transactions of the Company and its Subsidiary with Mass Rapid Transit Authority of Thailand (“MRTA”)

MRTA engages in mass rapid transit business and other business for the benefit of Mass Rapid Transit Authority of Thailand and the people in using the mass rapid transit service. MRTA is connected with the Company since MRTA holds shares in the Company representing 8.22² percent of the Company's registered and paid-up capital. In this regard, MRTA's executives, namely: 1. Mrs. Natamon Bunnak and 2. Mr. Vithaya Punmongkol, are directors of the Company.

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2020	Accounting Period Ended December 31, 2019	
Remuneration from Farebox Revenue and Commercial Development Revenue			
- Remuneration from farebox revenue and commercial development revenue	350.69	393.65	The transaction was in accordance with the conditions of the Concession Agreement with which the Company is required to comply.
- Prepaid project remuneration	7,307.90	5,086.37	
- Building and land taxes	1.87	14.81	
- Trade and other payables	224.99	213.21	
Space Lease for Billboard Installation			
- Remuneration for space use	9.90	9.21	BMN took a lease on the space for billboard installation and retail shop development, with the rental rate at the market price.
- Building and land taxes	0.86	1.32	

Note : ² Information as at the latest closing date of the share register for suspension of the share transfer of the Company on June 26, 2020.

13. Financial Highlights

Summary of Auditor's Report

EY Office Limited, as the auditor for the Company and its subsidiaries, has audited the consolidated statement of financial position as at 31 December 2020, which comprise the consolidated statement of financial position, and the related consolidated statement of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information. The auditor is of the opinion that the financial statements referred to above present fairly, in all material respects, the financial position of Bangkok Expressway and Metro Public Company Limited and its subsidiaries, their operational results and cash flow in accordance with Thai Financial Reporting Standards.

(Unit : Baht)

Statement of financial position	2020		2019		2018	
	Amount	Percent	Amount	Percent	Amount	Percent
Assets						
Current assets						
Cash and cash equivalents	1,613,584,108	1.42	703,750,307	0.63	526,200,490	0.51
Bank deposit for unearned fare box revenue	224,486,696	0.20	205,697,086	0.18	150,016,110	0.14
Trade and other receivables	548,903,316	0.48	481,786,671	0.43	514,055,818	0.50
Current portion of receivable under the concession agreement	1,649,683,274	1.45	1,649,683,274	1.48	1,649,683,274	1.59
Current tax assets	125,377,096	0.11	128,148,743	0.11	-	-
Other current financial assets	761,275,133	0.67	1,157,746,702	1.04	1,282,474,987	1.24
Other current assets						
Prepaid expenses	90,825,229	0.08	83,599,640	0.08	78,021,423	0.07
Advance payment for service contracts	17,783,816	0.02	24,639,141	0.02	4,008,809	-
Others	11,835,188	0.01	12,526,757	0.01	12,128,257	0.01
Total current assets	5,043,753,856	4.44	4,447,578,321	3.98	4,216,589,168	4.06
Non-current assets						
Receivable under the concession agreement, net of current portion	7,561,048,340	6.65	9,210,731,614	8.25	10,860,414,888	10.46
Other non-current financial assets	15,840,737,472	13.94	17,096,827,328	15.31	6,688,646,612	6.44
Investments in associates	-	-	-	-	6,368,744,918	6.13
Investment properties	120,357,493	0.11	120,357,493	0.11	120,357,493	0.12
Building and equipment	379,278,437	0.33	311,376,837	0.28	323,936,668	0.31
Right-of-use assets	86,514,411	0.08	-	-	-	-
Rights to operate expressway sectors	31,701,521,503	27.90	32,253,366,737	28.88	35,146,019,997	33.85
Rights to use sites for expressway construction	-	-	61,467,080	0.06	390,198,219	0.38
Intangible asset under concession agreement of the MRT Blue Line Project	44,683,719,344	39.33	42,338,899,443	37.91	35,427,555,680	34.12
Project cost of the MRT Chalong Ratchadham Line	660,436,487	0.58	644,950,810	0.58	654,691,451	0.63
Prepaid project remuneration	7,307,904,942	6.43	5,086,367,785	4.54	3,495,195,243	3.37
Other intangible assets	63,165,051	0.06	74,027,004	0.06	84,777,999	0.08
Deferred tax assets	13,651,112	0.01	6,951,994	0.01	6,312,191	0.01
Other non-current assets	153,669,851	0.14	43,867,537	0.03	47,468,811	0.04
Total non-current assets	108,572,004,443	95.56	107,249,191,662	96.02	99,614,320,170	95.94
Total assets	113,615,758,299	100.00	111,696,769,983	100.00	103,830,909,338	100.00

(Unit : Baht)

Statement of financial position (continued)	2020		2019		2018	
	Amount	Percent	Amount	Percent	Amount	Percent
Liabilities and shareholders' equity						
Current liabilities						
Short-term loans from financial institutions	3,000,000,000	2.64	3,250,000,000	2.91	2,814,594,224	2.71
Trade and other payables	1,744,651,781	1.53	1,938,481,838	1.74	1,683,472,969	1.62
Current portion of long-term loans from financial institutions	3,745,161,069	3.30	3,166,120,069	2.83	3,041,760,069	2.93
Current portion of lease liabilities	45,512,736	0.04	-	-	-	-
Current portion of debentures	4,615,000,000	4.06	2,500,000,000	2.24	5,000,000,000	4.82
Unearned fare box revenue	228,290,262	0.20	212,234,424	0.19	163,117,129	0.16
Deposits on stored value ticket	87,727,497	0.08	79,946,797	0.07	65,265,286	0.06
Income tax payable	41,623,582	0.04	25,467,515	0.02	69,746,084	0.07
Current portion of provision for compensation for site acquisition cost	-	-	-	-	1,546,891,698	1.49
Current portion of derivative financial liabilities	11,860,783	0.01	-	-	-	-
Other current financial liabilities	64,602,760	0.06	56,227,880	0.05	27,735,192	0.03
Other current liabilities						
Value added tax payable	64,913,271	0.06	61,238,396	0.05	76,044,732	0.07
Withholding tax deducted at source payable	59,123,553	0.05	99,118,066	0.09	90,510,248	0.09
Others	25,094,642	0.02	40,071,839	0.04	27,701,626	0.02
Total current liabilities	13,733,561,936	12.09	11,428,906,824	10.23	14,606,839,257	14.07
Non-current liabilities						
Long-term loans from financial institutions, net of current portion	23,670,054,666	20.83	21,745,560,898	19.46	18,373,779,608	17.70
Lease liabilities, net of current portion	40,912,590	0.03	-	-	-	-
Debentures, net of current portion	34,057,924,287	29.98	35,670,826,818	31.94	33,169,822,210	31.95
Derivative financial liabilities, net of current portion	173,936,021	0.15	112,685,174	0.10	21,808,675	0.02
Provision for long-term employee benefits	932,330,697	0.82	886,390,430	0.79	686,898,092	0.65
Deferred tax liabilities	2,959,530,701	2.60	3,025,459,610	2.71	1,353,842,048	1.30
Other non-current liabilities	13,782,769	0.02	3,758,883	0.01	5,892,925	0.01
Total non-current liabilities	61,848,471,731	54.43	61,444,681,813	55.01	53,612,043,558	51.63
Total liabilities	75,582,033,667	66.52	72,873,588,637	65.24	68,218,882,815	65.70

(Unit : Baht)

Statement of financial position (continued)	2020		2019		2018	
	Amount	Percent	Amount	Percent	Amount	Percent
Shareholders' equity						
Share capital						
Registered						
15,285,000,000 ordinary shares of Baht 1 each	15,285,000,000	13.45	15,285,000,000	13.68	15,285,000,000	14.72
Issued and paid-up						
15,285,000,000 ordinary shares of Baht 1 each	15,285,000,000	13.45	15,285,000,000	13.68	15,285,000,000	14.72
Premium on ordinary shares	5,816,938,084	5.12	5,816,938,084	5.21	5,816,938,084	5.60
Capital deficit from change in shareholding in subsidiaries	(264,641,165)	-0.23	(256,942,521)	-0.23	(75,770,451)	-0.07
Retained earnings						
Appropriated - statutory reserve	1,464,000,000	1.29	1,379,090,000	1.23	1,232,890,000	1.19
Unappropriated	15,572,592,087	13.71	15,052,068,973	13.48	12,133,780,735	11.69
Other components of shareholders' equity	117,510,065	0.10	1,504,565,153	1.35	1,105,927,958	1.06
Equity attributable to shareholders of the Company	37,991,399,071	33.44	38,780,719,689	34.72	35,498,766,326	34.19
Non-controlling interests of the subsidiaries	42,325,561	0.04	42,461,657	0.04	113,260,197	0.11
Total shareholders' equity	38,033,724,632	33.48	38,823,181,346	34.76	35,612,026,523	34.30
Total liabilities and shareholders' equity	113,615,758,299	100.00	111,696,769,983	100.00	103,830,909,338	100.00

Note : Financial statement of the year 2019 and 2018 was reclassified in accordance with the change of financial presentation in 2020.

(Unit : Baht)

Income statement	2020		2019		2018	
	Amount	Percent	Amount	Percent	Amount	Percent
Revenues						
Revenue from expressway business	8,144,975,668	56.87	10,302,412,750	50.49	10,173,901,910	53.30
Revenue from rail business	4,519,840,374	31.56	5,022,100,349	24.61	4,736,002,363	24.81
Revenue from commercial development business	824,644,414	5.76	782,564,040	3.84	704,536,036	3.69
Other income						
Gains on sale of investments	3,530,367	0.02	181,078,813	0.89	499,393,573	2.62
Gain on reclassification of investment	-	-	3,408,628,533	16.71	2,496,266,396	13.08
Interest income	296,044,829	2.07	392,633,384	1.92	450,618,868	2.36
Dividend income	482,715,660	3.37	257,868,552	1.26	-	-
Others	50,809,869	0.35	56,312,532	0.28	26,601,445	0.14
Total revenues	14,322,561,181	100.00	20,403,598,953	100.00	19,087,320,591	100.00
Expenses						
Cost of expressway business	1,738,365,018	12.14	1,991,458,088	9.76	1,837,541,483	9.63
Cost of rail business	4,713,365,429	32.91	3,796,981,929	18.61	3,541,571,456	18.55
Cost of commercial development business	226,069,501	1.58	210,292,457	1.03	169,940,207	0.89
Amortisation on rights to operate completed expressway sectors and compensation for site acquisition cost	1,389,661,862	9.70	4,048,131,964	19.84	4,036,823,398	21.15
Amortisation on intangible asset under concession agreement of the MRT Blue Line Project	359,429,944	2.51	263,394,239	1.29	188,047,080	0.99
Selling expenses	169,847,473	1.19	139,622,388	0.68	111,421,323	0.58
Administrative expenses	1,176,670,273	8.21	1,196,759,191	5.87	1,252,317,805	6.56
Total expenses	9,773,409,500	68.24	11,646,640,256	57.08	11,137,662,752	58.35
Profit from operating activities	4,549,151,681	31.76	8,756,958,697	42.92	7,949,657,839	41.65
Share of profit from investments in associates	-	-	172,910,981	0.85	432,797,238	2.27
Finance cost	(2,112,506,968)	-14.75	(1,723,062,346)	-8.45	(1,857,460,775)	-9.74
Profit before income tax expenses	2,436,644,713	17.01	7,206,807,332	35.32	6,524,994,302	34.18
Income tax expenses	(381,919,095)	-2.66	(1,754,942,103)	-8.60	(1,189,146,759)	-6.23
Profit for the year	2,054,725,618	14.35	5,451,865,229	26.72	5,335,847,543	27.95
Profit attributable to:						
Equity holders of the Company	2,051,090,045	14.32	5,434,819,325	26.64	5,317,038,037	27.86
Non-controlling interests of the subsidiaries	3,635,573	0.03	17,045,904	0.08	18,809,506	0.09
	2,054,725,618	14.35	5,451,865,229	26.72	5,335,847,543	27.95
Basic earnings per share						
Profit attributable to equity holders of the Company	0.13		0.36		0.35	

(Unit : Baht)

Statement of comprehensive income	2020		2019		2018	
	Amount	Percent	Amount	Percent	Amount	Percent
Profit for the year	2,054,725,618	14.35	5,451,865,229	26.72	5,335,847,543	27.95
Other comprehensive income						
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>						
Gain (loss) from cash flow hedges, net of income tax	(58,489,304)	-0.41	(72,701,199)	-0.36	24,916,559	0.13
Gain on valuation of available-for-sale securities, net of income tax	-	-	482,287,536	2.36	1,112,425,756	5.83
Share of other comprehensive income of associate recognised due to reclassification of investment	-	-	(9,019,502)	-0.04	(37,094,724)	-0.19
Share of other comprehensive income from associates	-	-	(1,929,640)	-0.01	33,256,127	0.17
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax	(58,489,304)	-0.41	398,637,195	1.95	1,133,503,718	5.94
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>						
Losses on investments in equity designated at fair value through other comprehensive income, net of income tax	(1,359,788,928)	-9.49	-	-	-	-
Actuarial gain (loss), net of income tax	26,618,808	0.18	(77,357,601)	-0.38	10,711,355	0.06
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax	(1,333,170,120)	-9.31	(77,357,601)	-0.38	10,711,355	0.06
Other comprehensive income for the year	(1,391,659,424)	-9.72	321,279,594	1.57	1,144,215,073	6.00
Total comprehensive income for the year	663,066,194	4.63	5,773,144,823	28.29	6,480,062,616	33.95
Total comprehensive income attributable to:						
Equity holders of the Company	659,430,621	4.60	5,755,875,433	28.21	6,461,253,110	33.85
Non-controlling interests of the subsidiaries	3,635,573	0.03	17,269,390	0.08	18,809,506	0.10
	663,066,194	4.63	5,773,144,823	28.29	6,480,062,616	33.95

(Unit : Baht)

Cash flow statement	2020	2019	2018
Cash flows from operating activities			
Profit before tax	2,436,644,713	7,206,807,332	6,524,994,302
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:			
Amortisation and depreciation	1,857,979,562	4,026,462,692	3,866,567,954
Allowance for expected credit losses (reversal)	(548,274)	(3,971,546)	(272,590)
Withholding tax deducted at source written off	605,265	-	-
Gain on sale of investment in financial assets	(3,530,367)	(181,078,813)	(499,393,573)
Gain on fair value adjustments of financial instruments	(14,508,454)	(24,997,738)	(10,442,237)
Gain on reclassification of investment	-	(3,408,628,533)	(2,496,266,396)
Gain on disposals/write-off of equipment, right-of-use assets and intangible asset under concession agreement of the MRT Blue Line Project	(2,876,113)	(1,331,425)	(1,639,242)
Project remuneration expense	350,690,055	393,651,735	355,662,416
Compensation for site acquisition cost	61,467,080	397,839,441	464,364,839
Provision for long-term employee benefits	109,639,862	102,201,396	220,232,028
Share of profit from investments in associates	-	(172,910,981)	(432,797,238)
Unrealised loss on exchange rate	22,541	276	102,702
Effect of reduction in rental expenses	(19,715)	-	-
Interest income	(296,044,829)	(392,633,384)	(450,618,868)
Dividend income	(482,715,660)	(257,868,552)	-
Interest expenses	2,080,911,700	1,670,220,735	1,662,162,353
Financial fees	-	-	98,665,000
Profit from operating activities before changes in operating assets and liabilities	6,097,717,366	9,353,762,635	9,301,321,450
Operating assets (increase) decrease			
Bank deposit for unearned fare box revenue	(18,789,610)	(55,680,976)	(150,016,110)
Trade and other receivables	(55,567,070)	(7,760,875)	(43,104,677)
Receivable under the concession agreement	1,649,683,274	1,649,683,274	1,649,683,275
Other current assets	12,089,492	(11,393,416)	85,434,222
Other non-current assets	11,443,912	(3,048,985)	(3,438,527)
Cash paid for project remuneration	(2,559,221,912)	(1,894,886,245)	(1,350,459,625)
Operating liabilities increase (decrease)			
Trade payables and other payables	157,100,847	181,841,193	21,244,663
Unearned fare box revenue	16,055,838	49,117,295	24,855,415
Deposits on stored value ticket	7,780,700	14,681,511	10,897,739
Other current liabilities	(41,394,911)	34,359,081	27,513,762
Other non-current liabilities	11,563,379	(2,134,042)	(14,318,960)
Cash paid for long-term employee benefits	(36,876,553)	(11,000,415)	(10,325,738)
Cash paid for compensation for site acquisition cost	-	(1,616,000,000)	(1,600,000,000)
Net cash flows from operating activities	5,251,584,752	7,681,540,035	7,949,286,889
Cash received from interest income	296,045,709	392,634,064	452,272,207
Cash paid for income tax	(196,270,863)	(332,798,583)	(334,491,602)
Net cash flows from operating activities	5,351,359,598	7,741,375,516	8,067,067,494

(Unit : Baht)

Cash flow statement (continued)	2020	2019	2018
Cash flows from investing activities			
Cash received from sales of financial assets designated at FVTPL	3,904,702,827	-	-
Cash paid for purchase of financial assets designated at FVTPL	(3,492,504,112)	-	-
Cash received from sale of financial assets designated at FVOCI	2,310,374	-	-
Cash paid for purchase of financial assets designated at FVOCI	(526,342,927)	-	-
Cash received from sales of current investments	-	17,447,889,696	13,949,038,431
Cash paid for purchase of current investments	-	(17,290,610,050)	(13,767,671,038)
Cash paid for purchase of investments in subsidiary	(11,470,313)	(269,240,000)	(60,284,267)
Cash received from sales of investments in associate	-	398,386,200	540,351,710
Cash received from sales of other long-term investments	-	78,219,853	2,075,443,606
Increase in other long-term investment	-	(400,000,000)	(107,436,375)
Cash received from sales of equipment, right-of-use assets and intangible asset under concession agreement of the MRT Blue Line Project	5,355,862	1,695,689	3,215,729
Purchase of equipment	(127,506,633)	(46,552,497)	(23,042,080)
Cash received from interest income	-	-	4,676,477
Cash received from dividend income	482,715,660	488,801,682	493,938,904
Cash paid for project cost of the MRT Chalong Ratchadham Line	(39,120,693)	(29,307,405)	(390,955)
Cash paid for intangible asset under concession agreement of the MRT Blue Line Project	(2,987,424,067)	(6,840,809,764)	(9,963,513,656)
Cash paid for expressway construction	(827,337,637)	(706,974,948)	(284,809,045)
Interest expenses capitalised as cost of projects	(90,275,175)	(378,623,301)	(181,764,061)
Increase in other intangible assets	(17,419,060)	(15,722,417)	(30,649,444)
Net cash flows used in investing activities	(3,724,315,894)	(7,562,847,262)	(7,352,896,064)
Cash flows from financing activities			
Cash received from short-term loan from financial institution	9,300,000,000	4,882,000,000	10,000,000,000
Repayment of short-term loans from financial institution	(9,550,000,000)	(4,448,000,000)	(10,816,000,000)
Cash received from long-term loans from financial institutions	5,299,998,000	6,530,000,000	5,300,000,000
Repayment of long-term loans from financial institutions	(2,853,940,069)	(3,041,760,069)	(13,475,010,069)
Cash payment for lease liabilities	(44,427,542)	-	-
Cash received from debentures	3,000,000,000	5,000,000,000	10,000,000,000
Cash paid for redemption of debentures	(2,500,000,000)	(5,000,000,000)	-
Cash paid for financial fees	(8,815,078)	(11,516,532)	(181,553,849)
Interest paid	(1,984,375,214)	(1,618,951,836)	(1,655,419,747)
Dividend paid	(1,375,650,000)	(2,292,750,000)	(1,987,050,000)
Net cash flows used in financing activities	(717,209,903)	(978,437)	(2,815,033,665)
Net increase (decrease) in cash and cash equivalents	909,833,801	177,549,817	(2,100,862,235)
Cash and cash equivalents at beginning of year	703,750,307	526,200,490	2,627,062,725
Cash and cash equivalents at end of year	1,613,584,108	703,750,307	526,200,490

Significant Financial Ratios

	Unit	2020	2019	2018
LIQUIDITY RATIO				
1. Liquidity Ratio	Time	0.28	0.28	0.20
2. Quick Ratio	Time	0.26	0.26	0.19
3. Cash Flow Ratio	Time	0.31	0.50	0.52
PROFITABILITY RATIO				
4. Gross Profit Margin	%	37.53	35.99	37.40
5. Cash to Profitability Ratio	%	56.30	62.66	65.58
6. Net Profit Margin	%	14.60	18.66	20.35
7. Return on Equity	%	5.35	8.38	9.90
EFFICIENCY RATIO				
8. Return on Total Assets	%	2.00	3.24	3.76
9. Return on Fixed Assets	%	5.16	9.80	10.57
10. Assets Turnover	Time	0.14	0.17	0.18
FINANCIAL POLICY RATIO				
11. Interest Bearing Debt to Equity Ratio	Time	1.50	1.37	1.34
12. Interest Coverage Ratio	Time	3.37	7.06	7.43
13. Net Debt to EBITDA	Time	10.58	6.65	5.98
Per Share DATA				
14. Book Value per Share	Baht	2.49	2.54	2.32
15. Net Earnings per Share	Baht	0.13	0.36	0.35
16. Dividend per Share	Baht	0.10	0.15	0.15

Note : The Company has not presented Accounts Receivable Turnover, Average Collection Period, Accounts Payable Turnover, Average Debt Servicing Period and Cash Cycle because these ratios are not appropriated for consideration of the Company's operation according to the amount of accounts receivable and accounts payable which are not significant for the Company's nature of operation.

Not include transaction related to the novation of the M&E systems under the concession agreement of the MRT Chalong Ratchadham Line Project which the MRTA is fully responsible for both loan repayment and interest expense in accordance to the concession agreement and gain on fair value adjustment of investment due to reclassification.

Report on Responsibilities of the Board of Directors towards the Financial Report

The Company's Board of Directors realizes the significance of its duties and responsibilities in supervising the Company's business to ensure good management in accordance with laws, objectives and the Company's Articles of Association, as well as resolutions of the shareholders' meetings with integrity and prudence. The Board of Directors protects the benefits of the Company, shareholders and general investors by ensuring that the Company's financial report contains accurate and full accounting records that reflect the Company's actual financial status and operational results.

The Company's Board of Directors appointed the Audit Committee comprising independent directors fully qualified in accordance with the requirements of the Stock Exchange of Thailand to review and ensure accuracy and sufficiency of the financial report, including accurate and complete disclosure of connected transactions or transactions with possible conflict of interest, in compliance with the requirements of the Stock Exchange of Thailand and relevant rules and regulations. In this regard, the Audit Committee has already reported its performance to the Company's Board of Directors.

The Company's Board of Directors is of the opinion that the financial statements for 2020 of the Company and the Subsidiaries, which have been reviewed by the Audit Committee in conjunction with the management, and audited by the Company's auditor, reflect accurate financial status and operational results as appropriate in material aspects in accordance with generally accepted accounting principles.



Mr. Plew Trivisvavet

Acting Chairman of the Board of Directors

24 February 2021



Dr. Sombat Kitjalaksana

Managing Director

24 February 2021

14. Management Discussion and Analysis

Significant events in the year 2020

February 20, 2020 : the Company/the subsidiary and Expressway Authority of Thailand (EXAT) signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) which extend the concession to end in October 2035. However, the Company/the subsidiary is entitled to full renewal of the concession as stated in the previous agreements after October 2035. In addition, the Company/the subsidiary is eligible for fixed toll revision every 10 years in accordance with the concession which revenue sharing remained as current proportion.

The Company/the subsidiary has cooperated to waive the toll fees on annual public holidays as announced by the Office of the Prime Minister in 3 expressways, the First Stage Expressway, the Second Stage Expressway and the Bang Pa-In - Pak Kret Expressway.

March 30, 2020 : the Company has fully commercial operated MRT Blue Line Project for the total distance of 48 kilometers and 38 stations, which connects as a circle line for center of Bangkok and connects with Thonburi side with 35 additional trains from 19 to 54. Moreover, MRT Blue Line also connects with other rail lines such as Green Line, Purple Line, Orange Line, Red Line and Airport Rail Link which is convenience for the passengers.

The effect of the Corona Virus Disease 2019 outbreak (COVID-19)

The COVID-19 outbreak affected the domestic and international travelling which resulted to revenue from main business of the Company due to the government and private companies allowed the employees to work at home to prevent the further spread of the virus, together with other government's measures such as the restriction of international trip, closing the risk-prone areas, no activity in crowded places, curfew and social distancing resulted in the decrease in travelling trips starting from February and the lowest was in April with the average traffic volume at 589,900 trips/day and the average ridership at 78,500 trips/day which was decreased from the previous year by 50 percent and 74 percent, respectively. After the government relaxed measures in May, the travelling trips continued to increase but the recovery of ridership was slower than that of traffic volume due to the social distancing measures in the MRT and the anxiety to use public transport.

Since the international travel has not opened up to normal as before the COVID-19 outbreak in Thailand, the current travelling trips were from the local only which gradually increased from the lowest in April. Compared to April 2020's, the traffic volume and ridership numbers in December 2020 increased by 88 percent and 243 percent, respectively. However, when compared to December 2019, the traffic volume was at 92 percent and the ridership numbers were at 75 percent.

Overview Operational Results Between the year 2020 and 2019

(Unit: Million Baht)

Description	2020	2019	2020 vs. 2019 % Change	2018	2019 vs. 2018 % Change
Revenue from expressway business	8,145	10,302	-20.9	10,174	1.3
Revenue from rail business	4,520	5,022	-10.0	4,736	6.0
Revenue from commercial development business	825	783	5.4	705	11.1
Total revenue from main business	13,490	16,107	-16.2	15,615	3.2
Interest income from the MRT Purple Line Project	277	380	-27.1	435	-12.6
Gains on sale of investments	4	181	-97.8	499	-63.7
Gain on reclassification of investment	-	3,409	-100.0	2,496	36.6
Other income	552	327	68.8	43	660.5
Total revenues	14,323	20,404	-29.8	19,088	6.9
Cost of service	8,426	10,311	-18.3	9,775	5.5
Selling and administrative expenses	1,347	1,336	0.8	1,364	-2.1
Total expenses	9,773	11,647	-16.1	11,139	4.6
Profit before finance cost and tax expenses	4,550	8,757	-48.0	7,949	10.2
Finance cost	1,820	1,343	35.5	1,422	-5.6
Interest expense from the MRT Purple Line Project *	293	380	-22.9	435	-12.6
Profit before income tax expenses	2,437	7,034	-65.4	6,092	15.5
Income tax (revenue) expenses	382	1,755	-78.2	1,189	47.6
Profit before share of profit from associates and NCI	2,055	5,279	-61.1	4,903	7.7
Share of profit from investments in associates, net	-	173	-100.0	433	-60.0
NCI	(4)	(17)	76.5	(19)	10.5
Profit attributable to Equity holders of the Company	2,051	5,435	-62.3	5,317	2.2
Basic earnings per share (Baht)	0.13	0.36		0.35	

Note : * According to the adoption of Thai Financial Reporting Standard No.9 Financial Instruments since January 1, 2020, the Company reclassified loan from financial institution for the MRT Purple Line Project (the MRTA is fully responsible for both loan repayment and interest expense in accordance to the concession agreement) to financial liabilities which measured at amortized cost with effective interest rate. The Company recorded interest expense from the MRT Purple Line Project in the year 2020 in the amount of Baht 293 Million whereas recorded interest income as actual receipt in the amount of Baht 277 Million.

In the year 2020, the Company had the net profit attributable to equity holders of the Company in the amount of Baht 2,051 Million, representing a decrease from the previous year by Baht 3,384 Million or 62.3 percent mainly from one time gain on reclassification of investment in TTW Public Company Limited (TTW) in the year 2019 at the net amount of Baht 2,334 Million but there was no such transaction in this year. Comparing with the net profit of the year 2019 excluded the one time gain, the Company has net profit decreased by Baht 1,050 Million or 33.9 percent mainly from the effect of COVID-19 outbreak in the year 2020 resulting to the decrease in toll revenue and farebox revenue whereas there was an increase in expenses related to the operation of the MRT Blue Line which was operated in full commercial service on March 30, 2020.

The Company had revenue from main business of Baht 13,490 Million representing a decrease from the previous year by Baht 2,617 Million or 16.2 percent. Toll revenue decreased by Baht 2,157 Million, revenue from Rail business decreased by Baht 502 Million whereas revenue from Commercial Development business increased by Baht 42 Million. Other revenue of Baht 833 Million representing a decrease from the previous year by Baht 55 Million or 6.2 percent due to no gain on sale of investment in this year. Moreover, the Company recorded dividend income from TTW instead of share of profit from investment in associates after the reclassification of the investments in the second quarter of the year 2019.

Cost of service amounted to Baht 8,426 Million representing a decrease from the previous year by Baht 1,885 Million or 18.3 percent mainly from the decrease in amortization expense as cost of rights to operate expressway sectors of Si Rat Expressway Sector A, B, C were fully amortized in the first quarter of the year 2020 whereas there was an increase in expenses related to the operation of the MRT Blue Line which was operated in full commercial service on March 30, 2020. Although the Company had expenses related to the anti-COVID-19 measures, selling and administrative expenses slightly increased from the previous year due to efficient cost management.

Finance cost, after the full operation in commercial service of the MRT Blue Line, the Company recorded interest cost of the project, which formerly recorded as cost of construction, as interest expenses in the income statement in accordance to accounting standard, resulting to the increase of interest expense from the previous year.

Segmental performance

1. Expressway business

The Company had revenue from Expressway business of Baht 8,145 Million, representing a decrease from the previous year by Baht 2,157 Million or 20.9 percent mainly from 3 factors, 1) the Company is responsible for value-added tax for motorists after the extension periods of concession agreements starting from March 1, 2020 amounted to Baht 322 Million for the year 2020, 2) the Company cooperated to waive the toll fee on official holiday, amounted to Baht 305 Million for the year 2020 and 3) the effect of the COVID-19 outbreak amounted to Baht 1,530 Million, since there was the limited travelling trips and work from home starting from March 2020 and the government's measures according to the Emergency Decree on Public Administration in Emergency Situations B.E.2548 (2005) such as closing the risk-prone areas, no activity in crowded places and EXAT limited service time on expressway from 10 p.m. to 4 a.m. starting from April 3 to June 14, 2020 resulting to the major decrease in traffic volume especially in April 2020. However, after the government relaxed measures in May and cancelled the curfew in June, the traffic volume continued to increase. Therefore, the average traffic volume for the year 2020 was at 1,050,000 trips/day representing a decrease from the previous year by 15 percent.

Cost of service for operation of Expressway business consisted of costs of toll and amortization on rights to operate completed expressway sectors. For the year 2020, the cost was at Baht 3,128 Million, representing a decrease from the previous year by Baht 2,912 Million or 48.2 percent mainly from the decrease in amortization due to cost of right to operate expressway sector A, B, C were fully amortized in the first quarter of the year 2020 and amortization of sector D, the Si Rat-Outer Ring Road Expressway (SOE) and the Udon Rattaya Expressway (C+) decreased in line with traffic volume regarding to the COVID-19 effect, as well as efficient cost management which suitable for the situation resulted to the decrease in cost of service.

2. Rail business

The Company had revenue from Rail business of Baht 4,520 Million, representing a decrease from the previous year by Baht 502 Million or 10 percent. Revenue from O&M services of the Purple Line Project was as stated in the agreement. Although the Company has fully commercial operated MRT Blue Line Project, farebox revenue from the MRT Blue Line Project decreased significantly from the COVID-19 effect, work from home and social distancing measure resulted to the decrease in ridership especially in April and gradually increased after the government eased measures. Therefore, average ridership for the year 2020 was at 260,500 trips/day representing a decrease from the previous year by 23 percent and the average ridership per working day was at 308,800 trips/day representing a decrease by 21 percent.

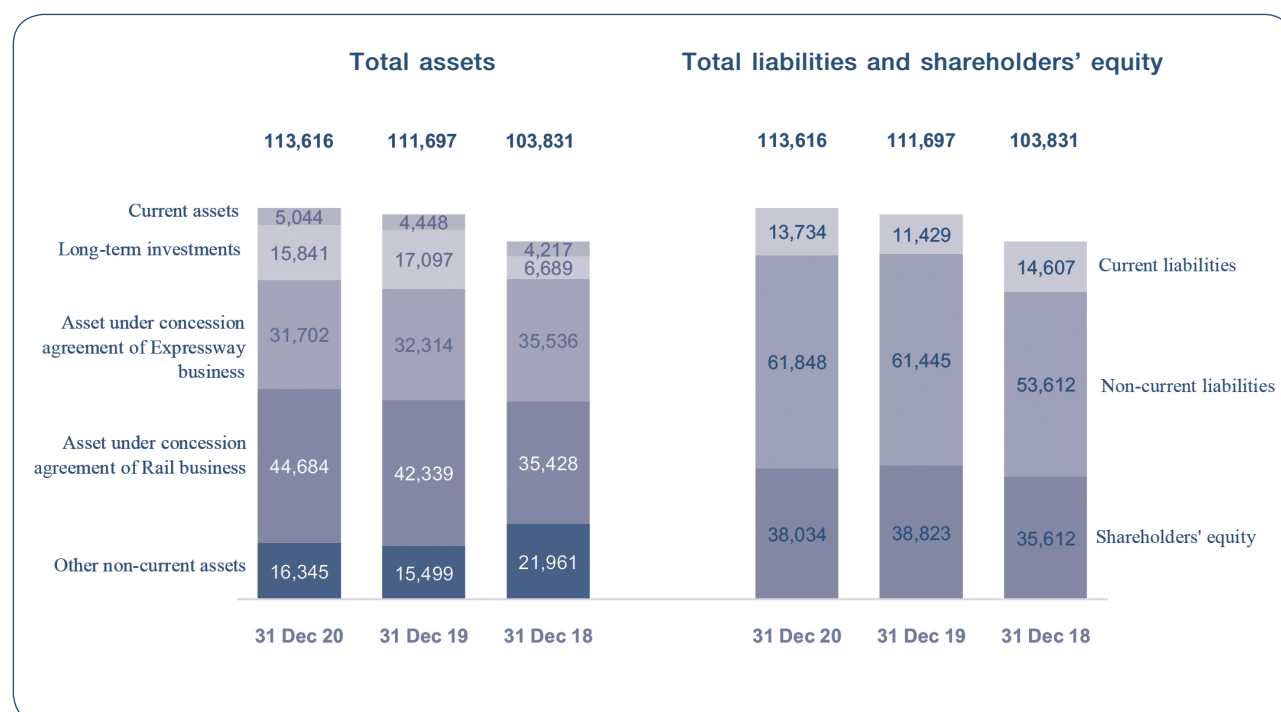
Cost of Rail business consisted of costs of farebox, O&M cost and amortization on intangible asset under concession agreement of the MRT Blue Line Project. For the year 2020, the cost was at Baht 5,009 Million, representing an increase from the previous year by Baht 1,001 Million or 25 percent mainly from expenses related to the full operation of the MRT Blue Line Extension on March 30, 2020.

3. Commercial Development business

In the year 2020, total Commercial Development revenue was at Baht 825 Million, representing an increase from the previous year by Baht 42 Million or 5.4 percent, mainly from the increase in telecommunication and advertising revenue from the operation of the MRT Blue Line Extension Project. Cost of Commercial Development business was at Baht 289 Million representing an increase from the previous year by Baht 26 Million or 10 percent.

Financial Position

(Unit: Million Baht)



As at December 31, 2020, the Company and its subsidiaries had total assets amounted to Baht 113,616 Million, representing an increase by Baht 1,919 Million or 1.7 percent when compared with total assets as at December 31, 2019 mainly from the increase in the construction of the Blue Line Extension Project which was completed and operated in full commercial service on March 30, 2020. Total liabilities amounted to Baht 75,582 Million, representing an increase from the previous year by Baht 2,708 Million or 3.7 percent from the withdrawal of loan for the Blue Line Extension Project. Total shareholders' equity amounted to Baht 38,304 Million, representing a decrease from the previous year by Baht 789 Million or 2 percent when compared to the end of the year 2019 mainly from fair value adjustment of long-term investments in financial assets in accordance with the current stock market.

Cash Flows

As at December 31, 2020, the Company and its subsidiaries had cash and cash equivalents amounting to Baht 1,614 Million, representing an increase from the end of the previous year by Baht 910 Million.

(Unit: Million Baht)

Description	2020	2019	2018
Net cash flows operating activities	5,351	7,741	8,067
Net cash flows investing activities	(3,724)	(7,562)	(7,353)
Net cash flows financing activities	(717)	(1)	(2,815)
Net increase in cash and cash equivalents	910	178	(2,101)
Cash and cash equivalents at beginning of the year	704	526	2,627
Cash and cash equivalents at end of the year	1,614	704	526

In the year 2020, cash from operating activities decreased when compared to the previous year according to the decrease in revenue from COVID-19.

Cash used in investing activities mainly resulted from payment for the M&E equipment of the MRT Blue Line Extension Project in the amount of Baht 3,117 Million, payment for constructions of the expressway and fixed asset for the operation in the amount of Baht 967 Million, additional investment in the net amount of Baht 123 Million and dividend receipt in the amount of Baht 483 Million.

Cash from financing activities resulted from the issuance of debenture and the withdrawal of loan in the net amount of Baht 2,696 Million, interest payment and financial cost in the amount of Baht 2,037 Million and dividend payment in the amount of Baht 1,376 Million.

Significant Financial Ratios*

Description	Unit	2020	2019	2018
Net Profit Margin ratio (NPM)	%	14.60	18.66	20.35
Return on Equity ratio (ROE)	%	5.35	8.38	9.90
Return on Total Assets ratio (ROA)	%	2.00	3.24	3.76
Debt to Equity ratio (D/E)	Time	1.76	1.62	1.59
Net Interest Bearing Debt to Equity ratio (Net IBD/E)	Time	1.50	1.37	1.34

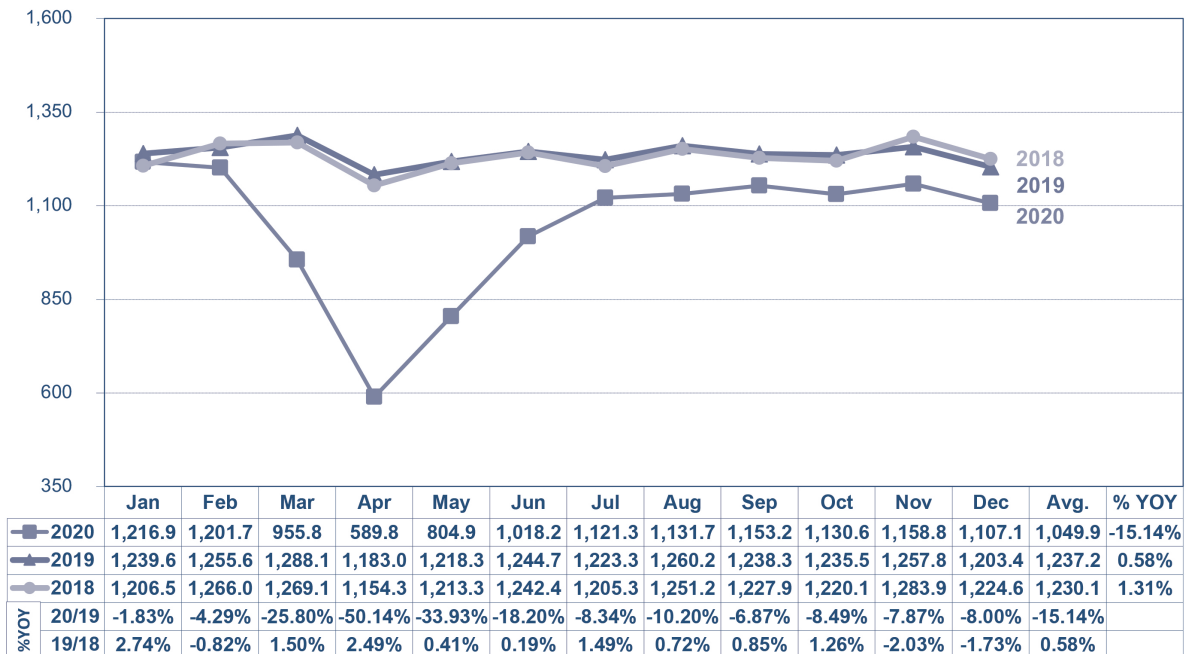
Net Profit Margin ratio, ROE and ROA decreased from the previous year as a result from the decrease in net profit which affected from the COVID-19. D/E ratio increased from the withdrawal of loan for the Blue Line Extension Project but lower than 2.5 times as stated in loan and debenture agreement.

Note : * The operational results were calculated based on the consolidated financial statements which consist of the Expressway Business, Rail Business, Commercial Development Business, and return on investment in other companies. Therefore, there was no similar type of business in the industry that can be used as a benchmark for comparison.

Not include transaction related to the novation of the M&E systems under the concession agreement of the MRT Chalong Ratchadham Line Project which the MRTA is fully responsible for both loan repayment and interest expense in accordance to the concession agreement and gain on fair value adjustment of investment.

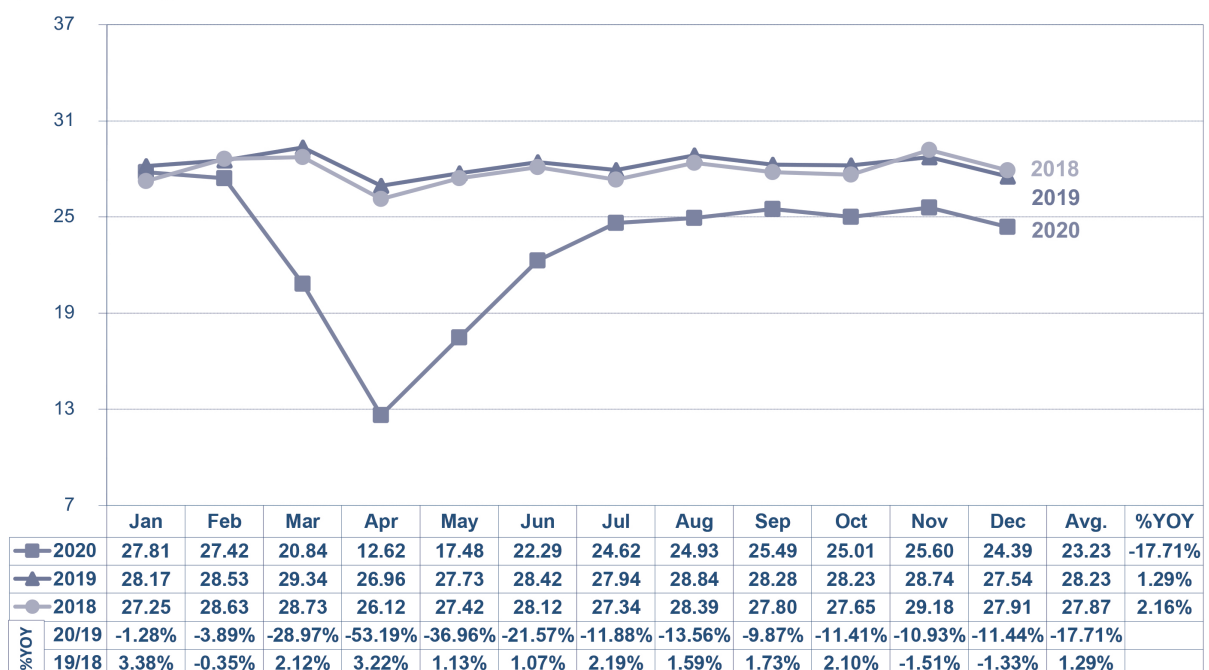
Average Daily Traffic Volume for the First Stage Expressway, the Second Stage Expressway, the Si Rat-Outer Ring Road Expressway and the Bang Pa-in - Pak Kret Expressway

(Thousand Trips / Day)



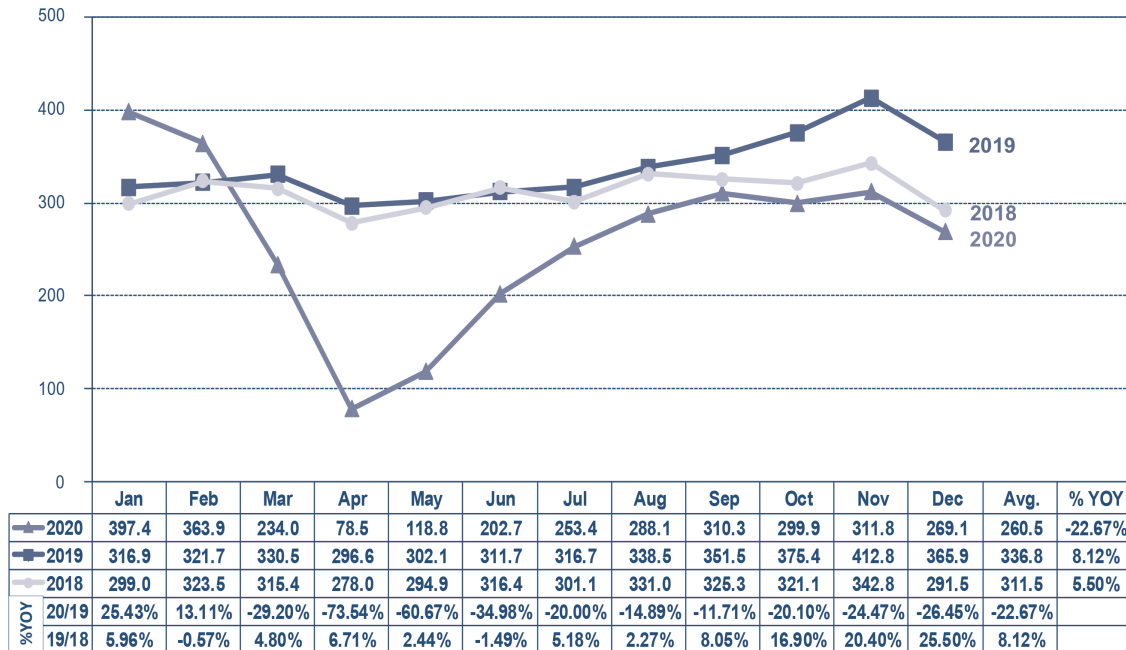
Average Daily Toll Revenue for the First Stage Expressway, the Second Stage Expressway, the Si Rat-Outer Ring Road Expressway and the Bang Pa-in - Pak Kret Expressway

(Million Baht / Day)



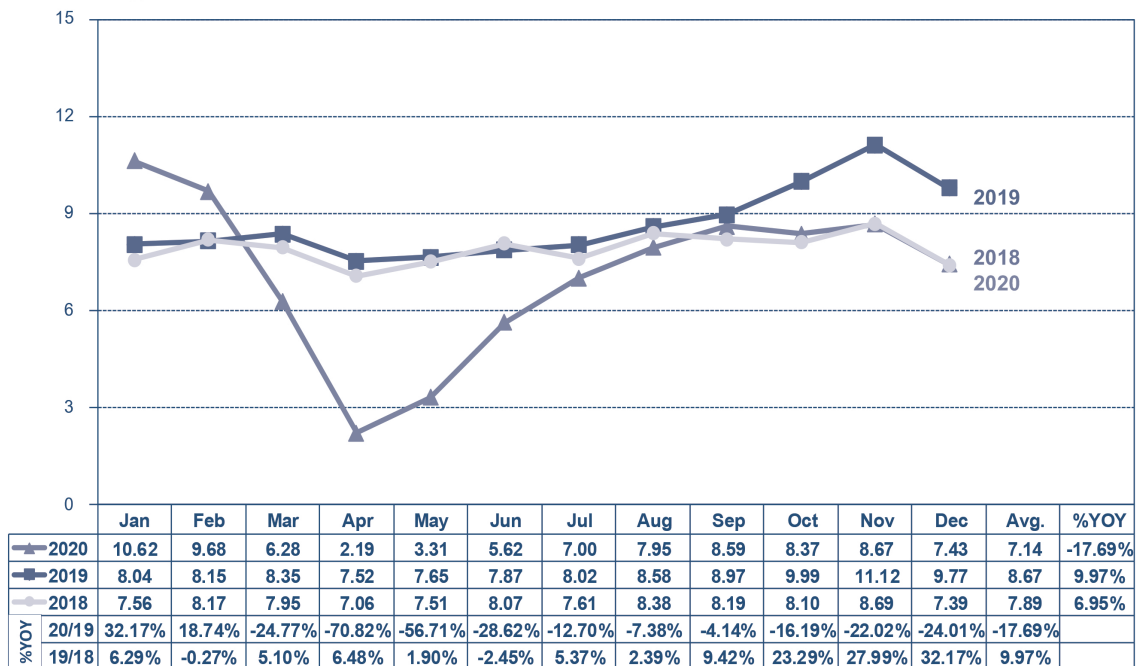
Average Daily Ridership for Blue Line

(Thousand Trips / Day)



Average Daily Farebox Revenue for Blue Line

(Million Baht / Day)



Information of Company Executives (As of December 31, 2020)

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
1 Mr. Plew Trivisvavet - Acting Chairman of the Board of Directors ⁽¹⁾ - Vice Chairman of the Board of Directors - Chairman of the Executive Board - Nomination and Remuneration Committee Member - Authorized Signatory Director (appointed on December 30, 2015)	75	<ul style="list-style-type: none"> - Honorary Doctorate of Civil Engineering, Kasetsart University - Honorary Doctorate of Civil Engineering, Nakhon Phanom University - Honorary Doctorate of Civil Engineering, Rajamangala University of Technology Isan - Honorary Doctorate of Science (Engineering) Thai-Nichi Institute of Technology - M.Sc. (Electrical Engineering), Osaka University, Japan - B.Sc. (Electrical Engineering), Osaka University, Japan - National Defence Course for the Joint State Private Sector, Class 366, National Defence College - Director Certification Program (DCP 50/2004), Thai Institute of Directors Association - Director Accreditation Program (DAP 18/2004), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 13/2004), Thai Institute of Directors Association - Capital Market Academy Leader Program (CMA Program), Class 4/2007, Capital Market Academy 	0.1832% (28,009.405 shares) (0.1675% held by himself, 0.0157% held by his spouse)	-	2011 - Present	- Director	Listed Companies: CK Power Public Company Limited
					2012 - Present	- Chairman of the Executive Board	
					2009 - Present	- Director	TTW Public Company Limited
					2008 - Present	- Vice Chairman of the Board of Directors	
					2007 - Present	- Corporate Governance and Risk Management Committee Member	CH. Karnchang Public Company Limited
					2003 - Present	- Nomination and Remuneration Committee Member	
					1994 - Present	- Chairman of the Executive Board	
					1994 - 2015	- Chief Executive Officer	
					1994 - 2015	- Director	Bangkok Expressway Public Company Limited
						- Chairman of the Executive Board	
						- Nomination and Remuneration Committee Member	
					2004 - 2015	- Chairman of the Board of Directors	Bangkok Metro Public Company Limited
						- Chairman of the Executive Committee	
						- Nomination and Remuneration Committee Member	
2 Mr. Vitoon Tejatassanasoontorn - Director (appointed on December 30, 2015) - Chairman of the Audit Committee (appointed on February 25, 2016) - Nomination and Remuneration Committee Member (appointed on December 30, 2015)	80	<ul style="list-style-type: none"> - B.A. in Commerce and Accountancy, Thammasat University - Director Certification Program (DCP 2/2000), Thai Institute of Directors Association - IOD Chartered Directors, Thai Institute of Directors Association, Class 1/2007 - Audit Committee Program (ACP 27/2009), Thai Institute of Directors Association - Advanced Audit Committee Program (AACP 3/2010), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 12/2011), Thai Institute of Directors Association 	-	-	2014 - Present	- Chairman of the Nomination and Remuneration Committee	Listed Companies: CH. Karnchang Public Company Limited
					2007 - Present	- Chairman of the Corporate Governance and Risk Management Committee	
					1999 - Present	- Director and Chairman of the Audit Committee	
					2007 - 2014	- Nomination and Remuneration Committee Member	
					1991 - Present	- Deputy Senior Managing Director	AGC Flat Glass (Thailand) Public Company Limited
					2005 - 2015	- Independent Director, Audit Committee Member, and Nomination and Remuneration Committee Member	Bangkok Metro Public Company Limited
					2004 - Present	- Director	Other Companies: Asahi Glass Foundation of Thailand
					1988 - Present	- Director and Executive Director	Kiarti Thanee Country Club Co., Ltd.
					1988 - Present	- Director and Executive Director	Pattaya Estate Co., Ltd.
					1987 - Present	- Director	Diachrome Chemicals Limited
					1988 - 2019	- Director and Executive Director	Kiarti Land Co., Ltd.
					2015 - 2018	- Director and Chairman of the Audit Committee	Thaisri Insurance Public Company Limited
					1991 - 2018	- Director	Glass Way Co., Ltd.
					1988 - 2017	- Director and Executive Director	Sriracha Resort Co., Ltd.
					1986 - 2017	- Director and Executive Director	Sakata-Thai Corporation Ltd.

Remark: ⁽¹⁾ Mr. Plew Trivisvavet has held the position as Acting Chairman of the Board of Directors to replace Dr. Virabongsa Ramangkura who resigned from his position as director on April 2, 2020.

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
3 Gen. Chetta Thanajaro - Director - Chairman of the Nomination and Remuneration Committee - Audit Committee Member (appointed on December 30, 2015)	82	- Master of Arts (Political Science), Ramkhamhaeng University - Bachelor of Science, Chulachomklao Royal Military Academy, Class 9 - Infantry Basic Officer Leadership Course, United States Army Infantry School - The Royal Thai Army Command and General Staff Course - National Defence Course for The Joint State Private Sector, Class 6, National Defence College, - Director Certification Program (DCP 33/2003), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 7/2003), Thai Institute of Directors Association	-	-	2005 - 2015 1999 - 2003 2005 - Present 2004 2003 - 2004	- Independent Director, Chairman of the Audit Committee - Chairman of the Nomination and Remuneration Committee - Audit Committee Member - Director - Minister of Defence - Minister of Science and Technology	Listed Companies: Bangkok Metro Public Company Limited Bangkok Expressway Public Company Limited Other Companies: Double A (1991) Public Company Limited Ministry of Defence Ministry of Science and Technology
4 Dr. Annop Tanlamai - Director - Audit Committee Member (appointed on February 25, 2016)	70	- Ph.D. Engineering Management, University of Missouri, USA - M.B.A. (Quantitative Business Analysis), Indiana University, Bloomington, USA - M.S. in Engineering Management, University of Missouri, USA - Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University - Director Certification Program (DCP 154/2011), Thai Institute of Directors Association - The Audit Committee's Role in Compliance and Ethical Culture Oversight Program, Thai Institute of Directors Association	-	-	2012 - Present 2001 - 2015 2001 - 2015 2011 - 2015 2011 - 2015 2016 - Present 2012 - 2016 2007 - 2011 1999 - 2007	- Director and Chairman of the Audit Committee - Director - Audit Committee Member - Nomination and Remuneration Committee Member - Corporate Governance and Risk Management Committee Member - Dean of Faculty of Business Administration - Dean of College of Management - Dean of Faculty of Commerce and Accountancy - Director of the Committee of Master of Business Administration Program (MBA), Faculty of Commerce and Accountancy	Listed Companies: MK Restaurants Group Public Company Limited Bangkok Expressway Public Company Limited Other Companies: Chitralada Technology College Mahidol University Chulalongkorn University
5 Mrs. Vallapa Assakul - Director (appointed on December 30, 2015) - Chairman of the Corporate Governance and Risk Management Committee (appointed on December 18, 2019)	70	- Master of Economics, University of Detroit, USA - Bachelor of Economics (Second Class Honors), Chulalongkorn University - Audit Committee Program (ACP 21/2008), Thai Institute of Directors Association - Director Certification Program (DCP 86/2007), Thai Institute of Directors Association - Director Accreditation Program (DAP 37/2005), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 5/2008), Thai Institute of Directors Association	-	-	2006 - Present 2012 - 2016 2010 - 2015 2009 - 2015 2012 - 2015 2005 - 2007 2004 - 2007 2013 - Present 2013 - Present 2010 - Present 2006 - 2016 2008 - Present 2010 - 2016	- Director - Supervision Committee Member - Director - Director and Executive Director - Independent Director - Chairman of the Risk Committee - Director - Senior Executive Vice President, Corporate and Investment Banking Group - Director - Director - Director - Chairman of the Nomination and Remuneration Committee - Director - Director and Executive Director	Listed Companies: Ocean Life Insurance Public Company Limited Vinythai Public Company Limited Bangkok Expressway Public Company Limited Bangkok Metro Public Company Limited TMB Bank Public Company Limited Other Companies: Ocean Property Co., Ltd. Ocean Development Co., Ltd. Siam Estate Co., Ltd. Ocean Life Insurance Public Company Limited Amphan Co., Ltd. Northern Bangkok Expressway Company Limited

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
6 Mr. Supong Chayutsahakij - Director - Nomination and Remuneration Committee Member - Executive Director - Authorized Signatory Director (appointed on December 30, 2015)	79	- Honorary Ph.D. (Management Science), Phranakhon Rajabhat University - Master of Political Science (Politics and Government), Sukhothai Thammathirat Open University - Executive Master of Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University - Master of Engineering (Electrical), University of Tokyo, Japan - Bachelor of Engineering (Electrical), University of Tokyo, Japan - Director Certification Program (DCP 8/2001), Thai Institute of Directors Association - Audit Committee Program (ACP 17/2007), Thai Institute of Directors Association	-	-	2006 - Present 2013 - 2016 1994 - 2015 2003 - 2015 2007 - 2015 2009 - 2015 2002 - 2015 2008 - Present 2008 - Present 2006 - Present 1996 - Present 2014 - Feb 29, 2020 2009 - 2017 2011 - 2013	- Director and Audit Committee Member - Director - Director - Vice Chairman of the Executive Board - Nomination and Remuneration Committee Member - Corporate Governance and Risk Management Committee Member - Vice Chairman of the Board of Directors - Director and Executive Committee Member - Director - Director - Chairman of the Institute - Director and Executive Director - Director - Chairman of the Board of Directors - Director	Listed Companies: Siam Steel International Public Company Limited CK Power Public Company Limited Bangkok Expressway Public Company Limited Bangkok Metro Public Company Limited Other Companies: SouthEast Asia Energy Limited Nam Ngum 2 Power Company Limited Thai-Nichi Institute of Technology Northern Bangkok Expressway Company Limited Xayaburi Power Company Limited Bangkok Metro Networks Limited CK Power Limited
7 M.L. Prasobchai Kasemsant - Director (appointed on December 30, 2015)	65	- M.S. (Civil Engineering) and M.S. (Operations Research), Stanford University, USA, 1979 - B.S. (Civil Engineering, Mathematics), Virginia Military Institute, Virginia, USA, 1976 - Thailand Energy Academy Course for Management, Class 3, 2013 - National Defence Course, Class 50, National Defence College - Director Certification Program (DCP 33/2003), Thai Institute of Directors Association	-	-	1994 - 2015 Oct 2015 - Present 2013 - Sep 2015 2012 - 2013 2009 - 2010	- Director and Executive Director - Retired Military Officer - Chairman of the Defence Advisory Board - Deputy Permanent Secretary for Defence (Energy and Defence Industry) - Director-General, Office of Defence Logistics, Office of Permanent Secretary for Defence	Listed Companies: Bangkok Expressway Public Company Limited Other Company: Ministry of Defence
8 Mr. Phongsarit Tantissuvanitchkul - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Authorized Signatory Director (appointed on December 30, 2015)	48	- Master of Engineering (Construction and Management), University of Michigan - Ann Arbor, USA - Bachelor of Engineering (Mechanical Engineering), Kasetsart University - Director Certification Program (DCP 155/2012), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 35/2007), Thai Institute of Directors Association - Understanding the Fundamental of Financial Statements (UFS 9/2007), Thai Institute of Directors Association	-	-	2016 - Present Oct 2020 - Present 2016 - Present 2011 - 2015 2014 - 2015 2020 - Present 2016 - Present Oct 2017 - Present 2009 - Oct 2017 2019 - Present 2012 - 2015	- Director and Chairman of the Executive Committee - Director - Senior Executive Vice President: Operation Group - Executive Vice President: Business Development - Director and Executive Director - Chairman of the Board of Directors - Director and Executive Director - Chairman of the Board of Directors - Director - Director	Listed Companies: TTW Public Company Limited CH. Karnchang Public Company Limited Bangkok Metro Public Company Limited Other Companies: Pathum Thani Water Company Limited Northern Bangkok Expressway Company Limited Bangkok Metro Networks Limited Eastern High-Speed Rail Linking Three Airports Company Limited Transit Expert Co., Ltd.

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
9 Miss Arisara Dharamadhaj - Director (appointed on April 26, 2019)	62	- M.B.A., Roosevelt University, USA - Bachelor of Economics Program (Second-Class Honors) University of the Thai Chamber of Commerce - Director Certification Program (DCP 75/2006), Thai Institute of Directors Association - National Defence Course for the Joint State Private Sector, Class 24, National Defence College, National Defence Studies Institute	-	-	2014 - Sep 2018 2012 - 2014 2005 - 2012 Jan 2016 - Present Apr 2014 - Apr 2019	- Senior Executive Vice President - Managing Director, Government & State Enterprise Relations Group - First Executive Vice President - Managing Director, Government & State Enterprise Relations Group - Executive Vice President - Director Corporate Banking Sector 2 - Director - Chairman of the Board of Directors	<u>Listed Companies:</u> Krung Thai Bank Public Company Limited <u>Other Companies:</u> KTB General Services and Security Co., Ltd. Krung Thai IBJ Leasing Co., Ltd.
10 Mr. Panit Dunnvatanachit - Director (appointed on December 30, 2015)	64	- M.B.A. (Finance), Washington University, St. Louis, USA - Bachelor of Arts & Science, Washington University, St. Louis, USA - Board and CFO Assessment Program, Thai Institute of Directors Association - Director Certification Program (DCP 10/2001), Thai Institute of Directors Association - Capital Market Academy Leader Program, Class 14/2012, Capital Market Academy - Broadcasting Executive Forum, Class 1/2013, Office of the National Broadcasting and Telecommunications Commission - Thailand Energy Academy Course for Management, Class 4/2014, Thailand Energy Academy - Public-Private Partnerships for Executive Program (PEP 1/2016)	-	-	2000 - Present 2003 - 2015 2003 - 2012 2006 - Present 1994 - Present 2003 - 2016 2000 - 2010	- Executive Vice President - Director - Executive Director - Director - Director - Director and Executive Director - Director and Member of the Executive Committee	<u>Listed Companies:</u> Bangkok Bank Public Company Limited Bangkok Expressway Public Company Limited <u>Other Companies:</u> Thai Yamaha Motor Co., Ltd. Krungthep Engineering Consultants Co., Ltd. Northern Bangkok Expressway Company Limited CBNP (Thailand) Limited
11 Mr. Vithaya Punmongkol - Director (appointed on April 9, 2020)	49	- Master of Science in Civil Engineering, New Jersey Institute of Technology, USA - Bachelor of Engineering (Civil Engineering), Chulalongkorn University - Director Accreditation Program (DAP 175/2020), Thai Institute of Directors Association	-	-	2019 - Present 2015 - 2019 2015	- Deputy Governor (Operation) - Assistant Governor - Director of Construction Management 1	<u>Listed Companies:</u> - None - <u>Other Company:</u> Mass Rapid Transit Authority of Thailand

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
12 Mrs. Natamon Bunnak - Director (appointed on April 20, 2018)	56	<ul style="list-style-type: none"> - Master of Economics (Business Economics), University of the Thai Chamber of Commerce - Master of Public and Private Management Program (Honors), National Institute of Development Administration - Bachelor of Science (Agricultural Economics), Kasetsart University - Director Accreditation Program (DAP 152/2018), Thai Institute of Directors Association - National Defence Course, Class 61, National Defence College, National Defence Studies Institute 	-	-	2019 - Present 2015 - 2019 2013 - 2015	<ul style="list-style-type: none"> - Deputy Governor (Finance) - Assistant Governor and Acting Deputy Governor (Finance) - Director of Office of the Governor 	<u>Listed Companies:</u> - None - <u>Other Company:</u> Mass Rapid Transit Authority of Thailand
13 Dr. Sombat Kitjalaksana - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	63	<ul style="list-style-type: none"> - Dr. Techn. (Soil Mechanic), University of Innsbruck, Austria - Bachelor and Master of Engineering (Civil), Chulalongkorn University - Director Certification Program (DCP 81/2006), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 19/2005), Thai Institute of Directors Association - Director Accreditation Program (DAP 36/2005), Thai Institute of Directors Association 	0.0196% (2,999,141 shares)	-	2000 - Present 2006 - 2015 2014 - 2015 2011 - 2014 2004 - 2015 2004 - 2011 2001 - 2010 2000 - 2011 Jan 1, 2021 - Present 2016 - Present 2009 - Present	<ul style="list-style-type: none"> - Director and Executive Director - Director - Managing Director and Executive Director - Vice Chairman of the Executive Committee - Director - Executive Committee Member - Executive Vice President: Business Development - Managing Director - Acting Managing Director - Director and Executive Director - Director 	<u>Listed Companies:</u> TTW Public Company Limited CH. Karnchang Public Company Limited Bangkok Metro Public Company Limited CH. Karnchang Public Company Limited Bangkok Metro Public Company Limited <u>Other Companies:</u> Northern Bangkok Expressway Company Limited Bangkok Metro Networks Limited
14 Mrs. Payao Marittanaporn - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	63	<ul style="list-style-type: none"> - M.B.A., Chulalongkorn University - Higher Diploma in Auditing, Thammasat University - Bachelor of Accountancy, Chulalongkorn University - Director Certification Program (DCP 48/2004), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 9/2009), Thai Institute of Directors Association - Capital Market Academy Leader Program (CMA Program), Class 11/2010, Capital Market Academy 	-	-	2015 - Present 2007 - 2015 2019 - Jul 2020 2015 - Jul 2020 2013 - 2014 2007 - Dec 31, 2020 2004 - Present 2011 - 2014	<ul style="list-style-type: none"> - Director - Risk Management and Corporate Governance Committee Member - Director and Executive Director - Managing Director - Chairman of the Risk Management Committee - Nomination and Remuneration Committee Member - Director - Nomination and Remuneration Committee Member - Risk Management Committee Member - Acting Managing Director - Director and Executive Director - Director 	<u>Listed Companies:</u> TTW Public Company Limited Bangkok Expressway Public Company Limited TTW Public Company Limited <u>Other Companies:</u> Northern Bangkok Expressway Company Limited Xayaburi Power Company Limited

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
15 Mr. Sanguan Kunatinun - Deputy Managing Director - Expressway Engineering (appointed on December 30, 2015)	60	- M.B.A., Thammasat University - Bachelor of Engineering, Chulalongkorn University - Director Certification Program (DCP 101/2008), Thai Institute of Directors Association	-	-	2015 - Present 2014 - 2015 2006 - 2014	- Deputy Managing Director - Expressway Engineering - Deputy Managing Director, Engineering - Assistant Managing Director, Engineering	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited <u>Other Company:</u> - None -
16 Mrs. Sudruthai Prommart - Deputy Managing Director - Expressway Operation (appointed on December 30, 2015)	57	- M.B.A. (Financial Accounting), Northrop University, Inglewood, California, USA - Bachelor of Business Administration, Assumption University - Director Certification Program (DCP 151/2011), Thai Institute of Directors Association	-	-	2015 - Present 2014 - 2015 2007 - 2014	- Deputy Managing Director - Expressway Operation - Deputy Managing Director, Operation - Assistant Managing Director, Operation	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited <u>Other Company:</u> - None -
17 Mr. Phakpoom Thaweewittayarat - Deputy Managing Director - Administration - Company Secretary (appointed on December 30, 2015)	54	- M.B.A., Thammasat University - Bachelor of Laws, Chulalongkorn University - Bachelor of Accountancy, Chulalongkorn University - Certified Public Accountant (CPA) - Certified Internal Auditor (CIA) - Director Certification Program (DCP 102/2008), Thai Institute of Directors Association - Company Secretary Program (CSP 9/2005), Thai Institute of Directors Association	-	-	2015 - Present 2014 - 2015 2012 - 2014 2008 - 2015 2011 2008 - 2011	- Deputy Managing Director - Administration - Deputy Managing Director, Administration - Assistant Managing Director, Administration - Company Secretary - Senior General Manager of Administration Division - Senior General Manager of Managing Director Office	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited <u>Other Company:</u> - None -
18 Miss Panan Tosuwanthaworn - Deputy Managing Director - Finance (appointed on December 30, 2015)	53	- Master of Accountancy, Thammasat University - Bachelor of Accountancy, Thammasat University - Director Certification Program (DCP 158/2012), Thai Institute of Directors Association - CFO Certification Program, Class 1/2004, The Institute of Certified Accountants and Auditors of Thailand - Corporate Secretary Development Program, Class 13, Faculty of Commerce and Accountancy, Chulalongkorn University	-	-	2015 - Present 2014 - 2015 2012 - 2014 2008 - 2011 Nov 2017 - Present	- Deputy Managing Director - Finance - Deputy Managing Director, Finance - Assistant Managing Director, Finance - Senior General Manager of Finance Division - Director	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited <u>Other Company:</u> Bangkok Metro Networks Limited

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
19 Mr. Witoon Hatairatana - Deputy Managing Director - Railway System Operation and Engineering (appointed on December 30, 2015)	63	- Master of Science (Business Administration), California University of Pennsylvania, USA - Bachelor of Engineering (Civil), Chulalongkorn University - Anti-Corruption for Executive Program (ACEP 13), Thai Institute of Directors Association	-	-	2015 - Present	- Deputy Managing Director - Railway System Operation and Engineering	Listed Companies: Bangkok Expressway and Metro Public Company Limited
					2014 - 2015	- Deputy Managing Director - Acting Assistant Managing Director, Train Operation Group	Bangkok Metro Public Company Limited
					2012 - 2014	- Assistant Managing Director, Operations	
					2007 - 2012	- Acting Marketing & Commercial Development Director	
					2005 - 2015	- Risk Committee Member	
					2004 - 2012	- Operations Director	
					2002 - 2004	- Traffic Manager	
					Nov 2017 - Present	- Director	Other Company: Bangkok Metro Networks Limited
20 Mr. Alvin Gee - Deputy Managing Director - Operation Support (appointed on December 30, 2015)	49	- Bachelor of Science in Finance, Boston College, USA - Director Certification Program (DCP 165/2012), Thai Institute of Directors Association	-	-	2015 - Present	- Deputy Managing Director - Operation Support	Listed Companies: Bangkok Expressway and Metro Public Company Limited
					2013 - Feb 2016	- Director	CK Power Public Company Limited
					2013 - Feb 2016	- Director, Executive Director and Managing Director	SouthEast Asia Energy Limited
					2011 - 2013	- Deputy Managing Director, Accounting and Finance Department	
					2008 - 2011	- Investor Relations Officer	Bangkok Metro Public Company Limited
					2013 - Feb 2016	- Director, Executive Director and Managing Director	Other Companies: Nam Ngum 2 Power Company Limited
					2011 - 2013	- Deputy Managing Director	
					2007 - 2008	- Business Analyst, Corporate Finance	TMB Macquarie Securities (Thailand) Limited
21 Dr. Vites Techangam - Deputy Managing Director - Technology & E-Business (appointed on October 1, 2017)	63	- Ph.D. in Computer Science, University of South Western Louisiana, USA - M.Sc. in Computer Science, University of California, USA - Bachelor of Engineering (Computer Engineering), Chulalongkorn University	-	-	2017 - Present	- Deputy Managing Director - Technology & E-Business	Listed Companies: Bangkok Expressway and Metro Public Company Limited
					Jun 2017 - Sep 2017	- Senior Executive Vice President - Managing Director, Special Projects	Krung Thai Bank Public Company Limited
					Jan 2015 - May 2017	- Senior Executive Vice President - Managing Director, Technology Group	
					Jun 2013 - Jan 2015	- Senior Executive Vice President - Managing Director, Electronic Banking & Cash Management Group	
					2011 - Jun 2013	- President	
					2007 - 2010	- Vice President	Other Company: KTB Computer Services Co., Ltd.

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
22 Mr. Anawash Suwanarit - Deputy Managing Director - Business Development (appointed on January 1, 2018)	46	- Master of Telecommunications, Northwestern University, Illinois, USA - Bachelor of Engineering (Electrical Engineering), Chulalongkorn University	-	-	Jan 2019 - Present	- Deputy Managing Director - Business Development	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited
					2017 - Dec 2017	- Assistant Managing Director - Acting Deputy Managing Director - Business Development	
					2015 - 2017	- Assistant Managing Director - Project Development	Bangkok Metro Public Company Limited
					2012 - 2015	- Director of Special Project Management Division	
					2019 - Present 2009 - 2012 2007 - 2009	- Director - Deputy Managing Director - Operations Director	<u>Other Companies:</u> Bangkok Metro Networks Limited Metro Mall Development Limited
23 Miss Saranya Lertjiraprasert - General Manager of Accounting Division (appointed on December 30, 2015)	50	- Master of Business Administration, Ramkhamhaeng University - Higher Diploma in Auditing, Chulalongkorn University - Bachelor of Business Administration, Rajamangala University of Technology Thanyaburi	-	-	Dec 1, 2020 - Present 2015 - Nov 30, 2020	- General Manager of Accounting Division - General Manager of Accounting Division	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited <u>Other Company:</u> - None -

Information of Directors in the Subsidiaries and Related Companies

Names of Directors and Executives			The Company	Related Companies												
				1	2	3	4	5	6	7	8	9	10	11	12	13
1	Mr. Plew	Trivisvavet	3,4		2,4	1,4,5	1	1,4	1	2	1	3	1,4	1,4	1,4	2
2	Mr. Vitoon	Tejatussanasoontorn	1			1										
3	Gen. Chetta	Thanajaro	1													
4	Dr. Annop	Tanlamai	1													
5	Mrs. Vallapa	Assakul	1													
6	Mr. Supong	Chayutsahakij	1,4		1,4								1	1	1	
7	M.L. Prasobchai	Kasemsant	1													
8	Mr. Phongsarit	Tantisuvanitchkul	1,4	2	1,4	1,5				1		1,4				
9	Dr. Sombat	Kitjalaksana	1,4	1	1,4							1,4				
10	Mrs. Payao	Marittanaporn	1,4		1,4							1				
11	Miss Arisara	Dharamadhaj	1													
12	Mr. Panit	Dunnvatanachit	1													
13	Mrs. Natamon	Bunnak	1													
14	Mr. Sanguan	Kunatinun	5													
15	Mrs. Sudruthai	Prommart	5													
16	Mr. Phakpoom	Thaweewittayarut	5													
17	Miss Panan	Tosuwanthaworn	5	1												
18	Mr. Witoon	Hatairatana	5	1												
19	Mr. Alvin	Gee	5													
20	Dr. Vites	Techangam	5													
21	Mr. Anawash	Suwanarit	5	1												

Remarks: 1. Definitions: 1 = Director; 2 = Chairman of the Board of Directors; 3 = Vice Chairman of the Board of Directors;
4 = Executive Director; 5 = Executive

2. The Company

- | | |
|--|---|
| 1 = Bangkok Metro Networks Limited | 2 = Northern Bangkok Expressway Company Limited |
| 3 = CH. Karnchang Public Company Limited | 4 = Mahasiri Siam Co., Ltd. |
| 5 = CK Power Public Company Limited | 6 = CH. Karnchang Holding Co., Ltd. |
| 7 = CH. Karnchang-Tokyu Construction Company Limited | 8 = CK. Office Tower Co., Ltd. |
| 9 = TTW Public Company Limited | 10 = SouthEast Asia Energy Limited |
| 11 = Xayaburi Power Company Limited | 12 = Nam Ngum 2 Power Company Limited |
| 13 = CH. Karnchang Real Estate Co., Ltd. | |

Information of Directors in the Subsidiaries

Names of Directors			Northern Bangkok Expressway Company Limited	Bangkok Metro Networks Limited
1.	Mr. Plew	Trivisvavet	Chairman of the Board of Directors and Executive Director	-
2.	Mr. Supong	Chayutsahakij	Director and Executive Director	-
3.	Mr. Phongsarit	Tantisuvanitchkul	Director and Executive Director	Chairman of the Board of Directors
4.	EXAT's representative ⁽¹⁾		Director	
5.	Mrs. Payao	Marittanaporn	Director and Executive Director	-
6.	Dr. Sombat	Kitjalaksana	Director and Executive Director	Director
7.	Mr. Witoon	Hatairatana	-	Director
8.	Mrs. Thipsuda	Yimwilai	-	Director
9.	Mr. Anawash	Suwanarit	-	Director
10.	Miss Panan	Tosuwanthaworn	-	Director
11.	Mr. Nattavut	Trivisvavet	-	Director

- Remarks:
1. Subsidiaries refer to material subsidiaries whose revenues exceed 10 percent of total revenues as per the consolidated statement of income of the latest accounting year.
 2. ⁽¹⁾ EXAT's representative is in the process of being nominated as director to replace Khun Tasanuch Thammachot who resigned from her position on January 10, 2020.

Information of Head of the Internal Audit Unit and Head of the Compliance Unit

1. Head of the Internal Audit Unit

Name-Surname	Miss Vasana Wattananukulchai
Position	General Manager Internal Audit Office
Education	<ul style="list-style-type: none"> - M.B.A., National Institute of Development Administration - Bachelor of Accountancy Bangkok University
Work Experience	<p>2015 - Present - General Manager of Internal Audit Office Bangkok Expressway and Metro Public Company Limited</p> <p>2008 - Dec 2015 - General Manager of Internal Audit Office Bangkok Expressway Public Company Limited</p> <p>2006 - 2007 - General Manager of Toll Revenue Division Bangkok Expressway Public Company Limited</p>
Related Training	<ul style="list-style-type: none"> - Internal Auditing - Integrated Management ISO 9001, ISO 14001 and ISO 27001 - Risk Management ISO 31000 - Compliance Audit - Internal Control for Financial Reporting: Business Value-Added Strategy - Going from Good to Great in IT Governance and Outsourcing - In-depth Modern Risk Management Techniques - Anti-Corruption The Practical Guide (ACPG 15) Thai Institute of Directors Association (IOD) - Using Technology as an Efficient and Effective Auditing Tool - Employee Fraud Management Detection & Prevention Workshop
Duties and Responsibilities	<ol style="list-style-type: none"> 1. Internal audit work <ol style="list-style-type: none"> 1.1 Preparing the annual internal audit plan; 1.2 Supervising the review of performance, adequacy, and appropriateness of the internal control system of the Company's work systems to ensure compliance with the plan; 1.3 Concluding the results of the review, together with observations and suggestions for improvement for the audited works, as well as following up the suggested improvement; 1.4 Reporting on the audit results to the management and the Audit Committee. 2. Works in support of the Audit Committee <ol style="list-style-type: none"> 2.1 Reviewing the annual and quarterly financial statements; 2.2 Preparing information in support of the selection and nomination of the Company's auditor on a yearly basis; 2.3 Reviewing the disclosure of information to ensure compliance with the rules and regulations and the good corporate governance principles; 2.4 Assessing the adequacy of the Company's annual internal control system; 2.5 Coordinating and organizing the Audit Committee's meetings. 3. Works in support of corporate risk management <ol style="list-style-type: none"> 3.1 Coordinating all internal work units to prepare and review the annual emergency and risk management plans as well as compiling the summary results thereof as the overall emergency and risk management plans; 3.2 Following up and concluding the results of risk management from all relevant work units on a quarterly basis for presentation of the same to the management and the Corporate Governance and Risk Management Committee once a quarter; 3.3 Coordinating and organizing the Corporate Governance and Risk Management Committee's meetings. 4. Work in respect of quality, environmental and information security management system activity <ol style="list-style-type: none"> 4.1 Following up the results of system audit conducted by the monitoring subcommittee and external certification agencies. 5. Other works as assigned by the Audit Committee.

Remark: Any appointment, removal, and transfer of Head of the Internal Audit Unit shall be subject to the power of the Audit Committee.

2. Head of the Compliance Unit

Name-Surname	Mr. Phakpoom Thaweewittayarut
Position	- Deputy Managing Director, Administration - Company Secretary
Education	- M.B.A., Thammasat University - Bachelor of Laws, Chulalongkorn University - Bachelor of Accountancy, Chulalongkorn University
Work Experience	2015 - Present - Deputy Managing Director, Administration Bangkok Expressway and Metro Public Company Limited Oct 2014 - Dec 2015 - Deputy Managing Director, Administration Bangkok Expressway Public Company Limited 2012 - Sep 2014 - Assistant Managing Director, Administration Bangkok Expressway Public Company Limited
Related Training	- Certified Public Accountant (CPA) - Certified Internal Auditor (CIA) - Director Certification Program (DCP 102/2008), Thai Institute of Directors Association - Company Secretary Program (CSP 9/2005), Thai Institute of Directors Association - Advances for Corporate Secretaries Program Thai Listed Companies Association
Duties and Responsibilities	1. Determining the scope of the good corporate governance in line with the Company's structure in comparison with international practices or principles; 2. Reviewing the appropriateness and adequacy of the Company's good corporate governance policy and code of ethics, as well as their revisions to meet the international practices for good corporate governance; 3. Reviewing with the management as to compliance with the good corporate governance principles as specified by the Company for disclosure in the Annual Report; 4. Conducting the procedures for evaluation of the performance of the Board of Directors, the Managing Directors, as well as concluding the results for presentation to the Board of Directors; 5. Providing suggestions for the preparation of the Company's corporate governance development plan in compliance with the specified good corporate governance principles; 6. Providing advice and suggestions on the good corporate governance practices to the Board of Directors; 7. Performing any other functions as assigned by the Managing Directors.

Independent Auditor's Report

To the Shareholders of Bangkok Expressway and Metro Public Company Limited

Opinion

I have audited the accompanying consolidated financial statements of Bangkok Expressway and Metro Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2020, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of Bangkok Expressway and Metro Public Company Limited for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Bangkok Expressway and Metro Public Company Limited and its subsidiaries and of Bangkok Expressway and Metro Public Company Limited as at 31 December 2020, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of matter

I draw attention to the following matters.

- a) As described in Note 46 to the financial statements, on 18 February 2020 the Cabinet passed a resolution to amend the concession agreements in order to settle all disputes between the Group and Expressway Authority of Thailand (EXAT). The Group and EXAT have agreed to settle all disputes and to cancel enforcement in accordance with the judgment of the Supreme Administrative Court described in Note 46.1.11 to the financial statements. On 20 February 2020, the Group and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment). In the first quarter of current year, the Group and EXAT reached a settlement of all disputes and filed a petition to cancel enforcement in accordance with the judgment of the Supreme Administrative Court.
- b) As described in Note 1.2 to the financial statements, the Coronavirus disease 2019 pandemic has resulted in an economic slowdown and is adversely impacting various businesses and industries. This situation significantly affects the Group's business activities in terms of commuter numbers on both the expressway and metro systems and this significantly impacts the Group's revenue while opening hours are reduced and organisations are supporting work from home policies. The Group's management has continuously monitored ongoing developments and assessed the financial impact as the situation has changed.

My opinion is not modified in respect of this matters.

Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

I have fulfilled the responsibilities described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.

Key audit matters and how audit procedures respond to each matter are described below.

Recognition of toll revenue, toll revenue sharing and fare box revenue

The Group recognises toll revenue, toll revenue sharing and fare box revenue in accordance with the accounting policy disclosed in Note 5.1 to the financial statements. The revenue accounts are the most significant amounts in the statement of income. In addition, the Group's service income is derived from numerous transactions and varies in terms of the toll and fare box rates. I have therefore paid attention to the audit of the measurement of the related transactions recorded by the Group.

I have examined the revenue recognition of the Group by assessing and testing the internal controls relevant to the revenue cycle of the Group, including the related information technology systems, by making inquiry of responsible executives, gaining an understanding of the controls and selecting representative samples to test the operation of the designed controls. In addition, I have examined the measurement and completeness of the revenue information that the Group used for accounting purposes by performing live audit testing and traffic volume observation. On a sampling basis, I examined documents supporting actual revenue transactions occurring during the year. I also performed analytical procedures on disaggregated data to detect possible irregularities in sales transactions throughout the period, particularly for accounting entries made through journal vouchers.

Capitalisation of project costs under construction

As described in Note 1.1 B.1 to the financial statements, as a result of the concession agreement made with the Mass Rapid Transit Authority of Thailand on 31 March 2017, the Company has a project which is operating under a concession agreement. On 30 March 2020, the project was completed and operation of the Through Operation systems of the MRT Blue Line project commenced. For the year ended 31 December 2020, the Company recorded costs of projects under construction amounting to Baht 1,683 million as "intangible assets under concession agreement of the MRT Blue Line Project", as disclosed in Note 22 to the financial statements. I considered the capitalisation of project costs to assets to be a significant transaction. In addition, management needed to exercise substantial judgment in determining whether the costs were direct costs and could be recognised as costs of acquiring intangible assets, and in deciding to cease capitalisation of borrowing costs when they did not meet the conditions stipulated under financial reporting standards.

I assessed the method used for recognition of project costs under construction during the year by inquiring with management to gain an understanding of the basis applied and judgement exercised by management in capitalising expenses as project costs under construction, including the capitalisation of borrowing costs, and disclosures in the notes to the financial statements. I reviewed the minutes of meetings, contracts and documents related to the project costs under construction. I also selected and checked representative samples of supporting documents for expenses recognised as project costs under construction incurred during the year to determine whether the recognition met the criteria under financial reporting standards. In addition, I tested the calculation and the recording of the borrowing costs capitalised as project costs under construction and reviewed the disclosures in the notes to the financial statements.

Recording and presentation of transactions related to the signing of the Expressway concession agreement (Amendment)

As described in Notes 1.1 A.1 and A.3 to the financial statements, on 20 February 2020 the Group and Expressway Authority of Thailand (EXAT) signed the Second Stage Expressway agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project agreement (Amendment), whereby the Group was granted extensions of the terms of the existing agreements to 31 October 2035. Therefore, I have focused on the recording and presentation of the accounting entries related to the signing of the amendments to the concession agreements, and the disclosures made in the notes to financial statements.

I have examined and assessed the recording and the presentation of accounting transactions related to the Second Stage Expressway agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project agreement (Amendment), including the disclosures made in the notes to the financial statements, by reading and gaining an understanding of the substance of the transactions, and the conditions and undertakings per the agreements made with the EXAT. I also inquired with the management regarding the basis and judgement management used in recording and presenting these transactions. In addition, I reviewed the disclosures in the notes to financial statements.

Other Information

Management is responsible for the other information. The other information comprise the information included in annual report of the Group, but does not include the financial statements and my auditor's report thereon. The annual report of the Group is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the annual report of the Group, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance for correction of the misstatement.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



Isaraporn Wisutthiy

Certified Public Accountant (Thailand) No. 7480

EY Office Limited

Bangkok: 24 February 2021

Statement of Financial Position

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position

As at 31 December 2020

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Assets					
Current assets					
Cash and cash equivalents	8	1,613,584,108	703,750,307	1,214,091,489	608,705,825
Current investments	4, 9	-	1,157,746,702	-	1,136,558,315
Bank deposit for unearned fare box revenue	10	224,486,696	205,697,086	224,486,696	205,697,086
Trade and other receivables	11	548,903,316	481,786,671	512,750,654	474,295,921
Current portion of long-term loans to related party	7	-	-	-	18,000,000
Current portion of receivable under the concession agreement	12	1,649,683,274	1,649,683,274	1,649,683,274	1,649,683,274
Current tax assets		125,377,096	128,148,743	125,377,096	128,148,743
Other current financial assets	13	761,275,133	-	761,275,133	-
Other current assets					
Prepaid expenses		90,825,229	83,599,640	85,521,468	78,383,203
Advance payment for service contracts		17,783,816	24,639,141	17,783,816	24,639,141
Others		11,835,188	12,526,757	6,176,149	10,349,792
Total current assets		5,043,753,856	4,447,578,321	4,597,145,775	4,334,461,300
Non-current assets					
Long-term loans to related party, net of current portion	7	-	-	-	19,000,000
Receivable under the concession agreement, net of current portion	12	7,561,048,340	9,210,731,614	7,561,048,340	9,210,731,614
Other non-current financial assets	14	15,840,737,472	-	15,840,737,472	-
Investments in subsidiaries	15	-	-	644,580,180	633,109,867
Other long-term investments	4, 17	-	17,096,827,328	-	17,096,827,328
Investment properties	18	120,357,493	120,357,493	120,357,493	120,357,493
Building and equipment	19	379,278,437	311,376,837	346,698,738	269,338,043
Right-of-use assets	30	86,514,411	-	58,433,907	-
Rights to operate expressway sectors	20	31,701,521,503	32,253,366,737	26,965,266,678	27,248,648,130
Rights to use sites for expressway construction	21	-	61,467,080	-	61,467,080
Intangible asset under concession agreement of the MRT Blue Line Project	22	44,683,719,344	42,338,899,443	44,376,999,264	41,998,706,257
Project cost of the MRT Chalong Ratchadham Line	23	660,436,487	644,950,810	660,436,487	644,950,810
Prepaid project remuneration	7	7,307,904,942	5,086,367,785	7,307,904,942	5,086,367,785
Other intangible assets	24	63,165,051	74,027,004	58,266,063	69,273,014
Deferred tax assets	39	13,651,112	6,951,994	-	-
Other non-current assets		153,669,851	43,867,537	137,144,714	12,629,280
Total non-current assets		108,572,004,443	107,249,191,662	104,077,874,278	102,471,406,701
Total assets		113,615,758,299	111,696,769,983	108,675,020,053	106,805,868,001

The accompanying notes are an integral part of the financial statements.

Statement of Financial Position (Continued)

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2020

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2020	2019	2020	2019
Liabilities and shareholders' equity					
Current liabilities					
Short-term loans from financial institutions	25	3,000,000,000	3,250,000,000	3,000,000,000	3,250,000,000
Trade and other payables	26	1,744,651,781	1,938,481,838	1,749,756,519	1,906,801,351
Current portion of long-term loans from financial institutions	27	3,745,161,069	3,166,120,069	3,091,761,069	2,541,760,069
Current portion of lease liabilities	30	45,512,736	-	25,670,777	-
Current portion of debentures	28	4,615,000,000	2,500,000,000	4,615,000,000	2,500,000,000
Unearned fare box revenue	10	228,290,262	212,234,424	228,290,262	212,234,424
Deposits on stored value ticket		87,727,497	79,946,797	87,727,497	79,946,797
Income tax payable		41,623,582	25,467,515	-	-
Current portion of derivative financial liabilities		11,860,783	-	11,860,783	-
Other current financial liabilities		64,602,760	56,227,880	59,707,336	51,920,211
Other current liabilities					
Value added tax payable		64,913,271	61,238,396	49,916,533	50,202,207
Withholding tax deducted at source payable		59,123,553	99,118,066	56,273,728	95,264,199
Others		25,094,642	40,071,839	23,346,096	36,162,694
Total current liabilities		13,733,561,936	11,428,906,824	12,999,310,600	10,724,291,952
Non-current liabilities					
Long-term loans from financial institutions, net of current portion	27	23,670,054,666	21,745,560,898	21,002,958,324	18,739,920,898
Lease liabilities, net of current portion	30	40,912,590	-	32,841,181	-
Debentures, net of current portion	28	34,057,924,287	35,670,826,818	34,057,924,287	35,670,826,818
Derivative financial liabilities, net of current portion		173,936,021	112,685,174	173,936,021	112,685,174
Unearned revenue from advertising management rights	29	-	-	9,368,683	10,617,042
Provision for long-term employee benefits	31	932,330,697	886,390,430	904,695,538	862,915,385
Deferred tax liabilities	39	2,959,530,701	3,025,459,610	2,959,530,701	3,026,721,050
Other non-current liabilities		13,782,769	3,758,883	10,966,408	247,708
Total non-current liabilities		61,848,471,731	61,444,681,813	59,152,221,143	58,423,934,075
Total liabilities		75,582,033,667	72,873,588,637	72,151,531,743	69,148,226,027

The accompanying notes are an integral part of the financial statements.

Statement of Financial Position (Continued)

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2020

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Shareholders' equity					
Share capital					
Registered					
15,285,000,000 ordinary shares of Baht 1 each		15,285,000,000	15,285,000,000	15,285,000,000	15,285,000,000
Issued and paid-up					
15,285,000,000 ordinary shares of Baht 1 each		15,285,000,000	15,285,000,000	15,285,000,000	15,285,000,000
Premium on ordinary shares		5,816,938,084	5,816,938,084	5,816,938,084	5,816,938,084
Capital deficit from change in shareholding in subsidiaries		(264,641,165)	(256,942,521)	-	-
Retained earnings					
Appropriated - statutory reserve	32	1,464,000,000	1,379,090,000	1,464,000,000	1,379,090,000
Unappropriated		15,572,592,087	15,052,068,973	7,651,651,354	7,501,046,895
Other components of shareholders' equity		117,510,065	1,504,565,153	6,305,898,872	7,675,566,995
Equity attributable to shareholders of the Company		37,991,399,071	38,780,719,689	36,523,488,310	37,657,641,974
Non-controlling interests of the subsidiaries		42,325,561	42,461,657	-	-
Total shareholders' equity		38,033,724,632	38,823,181,346	36,523,488,310	37,657,641,974
Total liabilities and shareholders' equity		113,615,758,299	111,696,769,983	108,675,020,053	106,805,868,001

The accompanying notes are an integral part of the financial statements.

Income Statement

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Income statement

For the year ended 31 December 2020

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2020	2019	2020	2019
Revenues					
Revenue from expressway business		8,144,975,668	10,302,412,750	6,942,076,712	8,852,072,694
Revenue from rail business		4,519,840,374	5,022,100,349	4,519,840,374	5,022,100,349
Revenue from commercial development business	34	824,644,414	782,564,040	723,606,929	719,567,838
Other income					
Gains on sale of investments	13, 14, 16	3,530,367	181,078,813	3,364,485	269,243,228
Gain on reclassification of investment	16	-	3,408,628,533	-	-
Interest income		296,044,829	392,633,384	295,071,557	438,519,210
Dividend income	7, 16	482,715,660	257,868,552	482,715,660	488,801,682
Others		50,809,869	56,312,532	237,817,480	238,547,217
Total revenues		14,322,561,181	20,403,598,953	13,204,493,197	16,028,852,218
Expenses					
Cost of expressway business		1,738,365,018	1,991,458,088	1,524,115,580	1,756,712,478
Cost of rail business		4,713,365,429	3,796,981,929	4,713,365,429	3,796,981,929
Cost of commercial development business		226,069,501	210,292,457	339,672,153	445,115,520
Amortisation on rights to operate completed expressway sectors and compensation for site acquisition cost	20, 21	1,389,661,862	4,048,131,964	1,119,832,239	3,444,574,582
Amortisation on intangible asset under concession agreement of the MRT Blue Line Project	22	359,429,944	263,394,239	311,417,441	219,560,536
Selling expenses		169,847,473	139,622,388	95,023,623	87,025,129
Administrative expenses		1,176,670,273	1,196,759,191	1,094,579,751	1,113,362,485
Total expenses		9,773,409,500	11,646,640,256	9,198,006,216	10,863,332,659
Profit from operating activities		4,549,151,681	8,756,958,697	4,006,486,981	5,165,519,559
Share of profit from investments in an associate	16	-	172,910,981	-	-
Finance cost	37	(2,112,506,968)	(1,723,062,346)	(2,013,756,901)	(1,643,442,393)
Profit before income tax expenses		2,436,644,713	7,206,807,332	1,992,730,080	3,522,077,166
Income tax expenses	39	(381,919,095)	(1,754,942,103)	(294,796,464)	(598,451,284)
Profit for the year		2,054,725,618	5,451,865,229	1,697,933,616	2,923,625,882
Profit attributable to:					
Equity holders of the Company		2,051,090,045	5,434,819,325	1,697,933,616	2,923,625,882
Non-controlling interests of the subsidiaries		3,635,573	17,045,904	-	-
		2,054,725,618	5,451,865,229		
Basic earnings per share					
Profit attributable to equity holders of the Company	40	0.13	0.36	0.11	0.19

The accompanying notes are an integral part of the financial statements.

Statement of Comprehensive Income

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of comprehensive income

For the year ended 31 December 2020

(Unit: Baht)

Note	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Profit for the year	2,054,725,618	5,451,865,229	1,697,933,616	2,923,625,882
Other comprehensive income				
Other comprehensive income to be reclassified to profit or loss in subsequent periods:				
Losses from cash flow hedges, net of income tax	(58,489,304)	(72,701,199)	(58,489,304)	(72,701,199)
Gains on valuation of available-for-sale securities, net of income tax	-	482,287,536	-	4,784,328,294
Share of other comprehensive income of associate recognised due to reclassification of investment	-	(9,019,502)	-	-
Share of other comprehensive income from an associate	16	(1,929,640)	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax	(58,489,304)	398,637,195	(58,489,304)	4,711,627,095
Other comprehensive income not to be reclassified to profit or loss in subsequent periods:				
Losses on investments in equity designated at fair value through other comprehensive income, net of income tax	(1,359,788,928)	-	(1,359,788,928)	-
Actuarial gain (loss), net of income tax	31	(77,357,601)	26,618,808	(79,521,070)
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax	(1,333,170,120)	(77,357,601)	(1,333,170,120)	(79,521,070)
Other comprehensive income for the year	(1,391,659,424)	321,279,594	(1,391,659,424)	4,632,106,025
Total comprehensive income for the year	663,066,194	5,773,144,823	306,274,192	7,555,731,907
Total comprehensive income attributable to:				
Equity holders of the Company	659,430,621	5,755,875,433	306,274,192	7,555,731,907
Non-controlling interests of the subsidiaries	3,635,573	17,269,390	-	-
	663,066,194	5,773,144,823	-	-

The accompanying notes are an integral part of the financial statements.

Statement of Changes in Shareholder's Equity

Bangkok Expressway and Metro Public Company Limited and Its subsidiaries

Statement of changes in shareholders' equity

For the year ended 31 December 2020

	Consolidated financial statements											(Unit: Baht)
	Equity attributable to the shareholders of the Company											
	Other components of shareholders' equity											
	Other comprehensive income											
	Issued and paid-up share capital	Premium on ordinary shares	Capital deficit from change in shareholding in subsidiaries	Retained earnings		Loss from cash flow hedges	Surplus (deficit) on changes in valuation of financial assets	Share of other comprehensive income from an associate	Total other components of shareholders' equity	Total equity attributable to shareholders of the Company	Equity attributable to non-controlling interests of the subsidiaries	Total shareholders' equity
	15,285,000,000	5,816,938,084	(75,770,451)	1,232,890,000	12,133,780,735	(17,445,940)	1,112,425,756	10,949,142	1,105,927,958	35,498,766,326	113,260,197	35,612,026,523
Profit for the year	-	-	-	-	5,434,819,325	-	-	-	-	5,434,819,325	17,045,904	5,451,865,229
Other comprehensive income for the year	-	-	-	-	(77,581,087)	(72,701,199)	482,287,536	(10,949,142)	398,637,195	321,056,108	223,486	321,279,594
Total comprehensive income for the year	-	-	-	-	5,357,238,238	(72,701,199)	482,287,536	(10,949,142)	398,637,195	5,755,875,433	17,269,390	5,773,144,823
Investment in subsidiary (Note 15)	-	-	(181,172,070)	-	-	-	-	-	-	(181,172,070)	(88,067,930)	(269,240,000)
Transferred to statutory reserve (Note 32)	-	-	-	146,200,000	(146,200,000)	-	-	-	-	-	-	-
Dividend paid (Note 41)	-	-	-	-	(2,292,750,000)	-	-	-	-	(2,292,750,000)	-	(2,292,750,000)
Balance as at 31 December 2019	15,285,000,000	5,816,938,084	(256,942,521)	1,379,090,000	15,052,068,973	(90,148,139)	1,594,713,292	-	1,504,565,153	38,780,719,689	42,461,657	38,823,181,346
Balance as at 1 January 2020 - before restated	15,285,000,000	5,816,938,084	(256,942,521)	1,379,090,000	15,052,068,973	(90,148,139)	1,594,713,292	-	1,504,565,153	38,780,719,689	42,461,657	38,823,181,346
Cumulative effect of change in accounting policy (Note 4)	-	-	-	-	(96,625,739)	-	31,223,144	-	31,223,144	(65,402,595)	-	(65,402,595)
Balance as at 1 January 2020 - as restated	15,285,000,000	5,816,938,084	(256,942,521)	1,379,090,000	14,955,443,234	(90,148,139)	1,625,936,436	-	1,535,788,297	38,715,317,094	42,461,657	38,757,778,751
Profit for the year	-	-	-	-	2,051,090,045	-	-	-	-	2,051,090,045	3,635,573	2,054,725,618
Other comprehensive income for the year	-	-	-	-	26,618,808	(58,489,304)	(1,359,788,928)	-	(1,418,278,232)	(1,391,659,424)	-	(1,391,659,424)
Total comprehensive income for the year	-	-	-	-	2,077,708,853	(58,489,304)	(1,359,788,928)	-	(1,418,278,232)	659,430,621	3,635,573	663,066,194
Investment in subsidiary (Note 15)	-	-	(7,698,644)	-	-	-	-	-	-	(7,698,644)	(3,771,669)	(11,470,313)
Transferred to statutory reserve (Note 32)	-	-	-	84,910,000	(84,910,000)	-	-	-	-	-	-	-
Dividend paid (Note 41)	-	-	-	-	(1,375,650,000)	-	-	-	-	(1,375,650,000)	-	(1,375,650,000)
Balance as at 31 December 2020	15,285,000,000	5,816,938,084	(264,641,165)	1,464,000,000	15,572,592,087	(148,637,443)	266,147,508	-	117,510,065	37,991,399,071	42,325,561	38,033,724,632

The accompanying notes are an integral part of the financial statements.

Statement of Changes in Shareholder's Equity

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of changes in shareholders' equity

For the year ended 31 December 2020

	Separate financial statements								(Unit: Baht)
	Other components of shareholders' equity								
	Retained earnings				Other comprehensive income				
	Issued and paid-up share capital	Premium on ordinary shares	Appropriated - statutory reserve	Unappropriated	Loss from cash flow hedges	Surplus (deficit) on changes in valuation of financial assets	Total other components of shareholders' equity	Total	
Balance as at 1 January 2019	15,285,000,000	5,816,938,084	1,232,890,000	7,095,892,083	(17,446,940)	2,981,386,840	2,963,939,900	32,394,660,067	
Profit for the year	-	-	-	2,923,625,882	-	-	-	2,923,625,882	
Other comprehensive income for the year	-	-	-	(79,521,070)	(72,701,199)	4,784,328,294	4,711,627,095	4,632,106,025	
Total comprehensive income for the year	-	-	-	2,844,104,812	(72,701,199)	4,784,328,294	4,711,627,095	7,555,731,907	
Transferred to statutory reserve (Note 32)	-	-	146,200,000	(146,200,000)	-	-	-	-	
Dividend paid (Note 41)	-	-	-	(2,292,750,000)	-	-	-	(2,292,750,000)	
Balance as at 31 December 2019	15,285,000,000	5,816,938,084	1,379,090,000	7,501,046,895	(90,148,139)	7,765,715,134	7,675,566,995	37,657,641,974	
Balance as at 1 January 2020 - before restated	15,285,000,000	5,816,938,084	1,379,090,000	7,501,046,895	(90,148,139)	7,765,715,134	7,675,566,995	37,657,641,974	
Cumulative effect of change in accounting policy (Note 4)	-	-	-	(113,387,965)	-	48,610,109	48,610,109	(64,777,856)	
Balance as at 1 January 2020 - as restated	15,285,000,000	5,816,938,084	1,379,090,000	7,387,658,930	(90,148,139)	7,814,325,243	7,724,177,104	37,592,864,118	
Profit for the year	-	-	-	1,697,933,616	-	-	-	1,697,933,616	
Other comprehensive income for the year	-	-	-	26,618,808	(58,489,304)	(1,359,788,928)	(1,418,278,232)	(1,391,659,424)	
Total comprehensive income for the year	-	-	-	1,724,552,424	(58,489,304)	(1,359,788,928)	(1,418,278,232)	306,274,192	
Transferred to statutory reserve (Note 32)	-	-	84,910,000	(84,910,000)	-	-	-	-	
Dividend paid (Note 41)	-	-	-	(1,375,650,000)	-	-	-	(1,375,650,000)	
Balance as at 31 December 2020	15,285,000,000	5,816,938,084	1,464,000,000	7,651,651,354	(148,637,443)	6,454,536,315	6,305,898,872	36,523,488,310	

The accompanying notes are an integral part of the financial statements.

Cash Flow Statement

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Cash flow statement

For the year ended 31 December 2020

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cash flows from operating activities				
Profit before tax	2,436,644,713	7,206,807,332	1,992,730,080	3,522,077,166
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Amortisation and depreciation	1,857,979,562	4,026,462,692	1,504,206,025	3,362,011,432
Reversal of allowance for doubtful debt	-	(3,971,546)	-	-
Allowance for expected credit losses (reversal)	(548,274)	-	389,846	-
Revenue recognition of unearned revenue from advertising management rights	-	-	(1,248,360)	(1,248,360)
Withholding tax deducted at source written off	605,265	-	-	-
Gain on sale of investments in financial assets	(3,530,367)	(181,078,813)	(3,364,485)	(269,243,228)
Gain on fair value adjustments of financial instruments	(14,508,454)	(24,997,738)	(14,395,453)	(24,962,055)
Gain on reclassification of investment	-	(3,408,628,533)	-	-
Gain on disposals/write-off of equipment, right-of-use assets and intangible asset under concession agreement of the MRT Blue Line Project	(2,876,113)	(1,331,425)	(2,875,367)	(1,328,045)
Project remuneration expense	350,690,055	393,651,735	350,690,055	393,651,735
Compensation for site acquisition cost	61,467,080	397,839,441	61,467,080	397,839,441
Provision for long-term employee benefits	109,639,862	102,201,396	105,479,749	98,366,202
Share of profit from investments in an associate	-	(172,910,981)	-	-
Unrealised loss on exchange rate	22,541	276	22,541	276
Effect of reduction in rental expenses	(19,715)	-	(23,705)	-
Interest income	(296,044,829)	(392,633,384)	(295,071,557)	(438,519,210)
Dividend income	(482,715,660)	(257,868,552)	(482,715,660)	(488,801,682)
Interest expenses	2,080,911,700	1,670,220,735	1,982,968,396	1,593,730,537
Profit from operating activities before changes in operating assets and liabilities	6,097,717,366	9,353,762,635	5,198,259,185	8,143,574,209
Operating assets (increase) decrease				
Bank deposit for unearned fare box revenue	(18,789,610)	(55,680,976)	(18,789,610)	(55,680,976)
Trade and other receivables	(55,567,070)	(7,760,875)	(27,843,277)	7,054,111
Receivable under the concession agreement	1,649,683,274	1,649,683,274	1,649,683,274	1,649,683,274
Other current assets	12,089,492	(11,393,416)	15,659,000	(15,295,741)
Other non-current assets	11,443,912	(3,048,985)	4,267,146	5,392,640
Cash paid for project remuneration	(2,559,221,912)	(1,894,886,245)	(2,559,221,912)	(1,894,886,245)
Operating liabilities increase (decrease)				
Trade payables and other payables	157,100,847	181,841,193	192,259,854	176,731,078
Unearned fare box revenue	16,055,838	49,117,295	16,055,838	49,117,295
Deposits on stored value ticket	7,780,700	14,681,511	7,780,700	14,681,511
Other current liabilities	(41,394,911)	34,359,081	(43,248,315)	30,706,865
Other non-current liabilities	11,563,379	(2,134,042)	10,966,408	(752,001)
Cash paid for long-term employee benefits	(36,876,553)	(11,000,415)	(36,876,553)	(11,000,415)
Cash paid for compensation for site acquisition cost	-	(1,616,000,000)	-	(1,616,000,000)
Net cash flows from operating activities	5,251,584,752	7,681,540,035	4,408,951,738	6,483,325,605
Cash received from interest income	296,045,709	392,634,064	294,675,868	391,818,742
Cash paid for income tax	(196,270,863)	(332,798,583)	(125,377,096)	(259,889,590)
Net cash flows from operating activities	5,351,359,598	7,741,375,516	4,578,250,510	6,615,254,757

The accompanying notes are an integral part of the financial statements.

Cash Flow Statement (Continued)

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Cash flow statement (continued)

For the year ended 31 December 2020

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cash flows from investing activities				
Cash received from sales of financial assets designated at FVTPL	3,904,702,827	-	3,554,887,078	-
Cash paid for purchase of financial assets designated at FVTPL	(3,492,504,112)	-	(3,164,155,634)	-
Cash received from sale of financial assets designated at FVOCI	2,310,374	-	2,310,374	-
Cash paid for purchase of financial assets designated at FVOCI	(526,342,927)	-	(526,342,927)	-
Cash received from sales of current investments	-	17,447,889,696	-	15,920,389,696
Cash paid for purchase of current investments	-	(17,290,610,050)	-	(15,756,208,983)
Cash paid for purchase of investments in subsidiary	(11,470,313)	(269,240,000)	(11,470,313)	(269,240,000)
Cash received from sales of investments in an associate	-	398,386,200	-	398,386,200
Cash received from sales of other long-term investments	-	78,219,853	-	78,219,853
Increase in other long-term investment	-	(400,000,000)	-	(400,000,000)
Cash received from long-term loans to related parties	-	-	37,000,000	2,474,692,518
Cash received from sales of equipment, right-of-use assets and intangible asset under concession agreement of the MRT Blue Line Project	5,355,862	1,695,689	5,355,115	1,692,278
Purchase of equipment	(127,506,633)	(46,552,497)	(118,223,608)	(31,665,004)
Cash received from interest income	-	-	396,459	539,004,884
Cash received from dividend income	482,715,660	488,801,682	482,715,660	488,801,682
Cash paid for project cost of the MRT Chalong Ratchadham Line	(39,120,693)	(29,307,405)	(39,120,693)	(29,307,405)
Cash paid for intangible asset under concession agreement of the MRT Blue Line Project	(2,987,424,067)	(6,840,809,764)	(2,972,884,669)	(6,793,327,698)
Cash paid for expressway construction	(827,337,637)	(706,974,948)	(824,517,416)	(704,364,628)
Interest expenses capitalised as cost of projects	(90,275,175)	(378,623,301)	(90,275,175)	(378,623,301)
Increase in other intangible assets	(17,419,060)	(15,722,417)	(15,440,960)	(14,134,917)
Net cash flows used in investing activities	(3,724,315,894)	(7,562,847,262)	(3,679,766,709)	(4,475,684,825)
Cash flows from financing activities				
Cash received from short-term loan from financial institution	9,300,000,000	4,882,000,000	9,300,000,000	4,882,000,000
Repayment of short-term loans from financial institution	(9,550,000,000)	(4,448,000,000)	(9,550,000,000)	(4,448,000,000)
Cash received from long-term loans from financial institutions	5,299,998,000	6,530,000,000	5,299,998,000	4,500,000,000
Repayment of long-term loans from financial institutions	(2,853,940,069)	(3,041,760,069)	(2,541,760,069)	(3,041,760,069)
Cash payment for lease liabilities	(44,427,542)	-	(26,254,320)	-
Cash received from debentures	3,000,000,000	5,000,000,000	3,000,000,000	5,000,000,000
Cash paid for redemption of debentures	(2,500,000,000)	(5,000,000,000)	(2,500,000,000)	(5,000,000,000)
Cash paid for financial fees	(8,815,078)	(11,516,532)	(8,815,078)	(11,516,532)
Interest paid	(1,984,375,214)	(1,618,951,836)	(1,890,616,670)	(1,542,524,603)
Dividend paid	(1,375,650,000)	(2,292,750,000)	(1,375,650,000)	(2,292,750,000)
Net cash flows used in financing activities	(717,209,903)	(978,437)	(293,098,137)	(1,954,551,204)
Net increase in cash and cash equivalents	909,833,801	177,549,817	605,385,664	185,018,728
Cash and cash equivalents at beginning of year	703,750,307	526,200,490	608,705,825	423,687,097
Cash and cash equivalents at end of year	1,613,584,108	703,750,307	1,214,091,489	608,705,825

Supplemental cash flows information

Non-cash items consist of:

Increase in accounts payable from equipment	20,126,650	-	20,126,650	-
Increase in payable from expressway construction	-	50,664,315	-	48,829,935
Increase in accrued interest expenses capitalised as cost of projects	-	17,749,896	-	17,749,896
Increase in right-of-use assets from lease liabilities	38,106,955	-	35,658,330	-

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Notes to consolidated financial statements

For the year ended 31 December 2020

1. General information

1.1 Corporate information

Bangkok Expressway and Metro Public Company Limited (“the Company”) is a public company incorporated from an amalgamation on 30 December 2015 and domiciled in Thailand. The Company’s major shareholder is the CH. Karnchang Public Company Limited, which is a public company incorporated in Thailand. The registered office of the Company is at 587 Sutthisarn Road, Ratchacaphisek Subdistrict, Dindaeng District, Bangkok. The Company has four branches.

The Company is principally engaged in the construction and management of expressways, the operation of metro services and commercial development. Details are as follows:

A. Construction and management of expressways

The Group has been granted concessions by the Expressway Authority of Thailand (“EXAT”) for the construction and management of expressways, as follows:

A.1 The Si Rat Expressway under the Second Stage Expressway agreement (Sector A, Sector B and Sector C) and the Extension of the Second Stage Expressway agreement (Sector D).

The Company, as a concessionaire, invested in the design, construction and management of expressways. These consists of 4 sectors: Sector A (Rama IX-Ratchadapisek), Sector B (Phayathai-Bangkhlo), Sector C (Ratchadapisek-Chaeng Watthana) and Sector D (Rama IX-Srinagarindra). The concession periods are 30 years commencing on 1 March 1990 for Sector A, Sector B and Sector C, and on 17 April 1997 for Sector D. The EXAT has the rights to collect all toll revenues and is to compensate the Company in the form of toll revenue sharing at the rates specified in the concession agreement, throughout the concession period. The Company has the rights to extend the concession for two further periods of 10 years each, depending upon terms and conditions that are to be agreed between the parties.

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all of the disputes described in Note 46 to the financial statements. On 20 February 2020, the Company and EXAT signed the Second Stage Expressway Agreement (Amendment). The Company was granted extensions to 31 October 2035 of the terms of the existing agreements for both the Second Stage Expressway agreement (Sector A, Sector B and Sector C), which was to end on 29 February 2020, and the Extension of the Second Stage Expressway agreement (Sector D), which was to end on 21 April 2027.

In addition, the Company retains all rights to extend the concessions specified in the existing agreements. The remaining periods of the existing agreements are 4 years and 4 months for the Second Stage Expressway agreement and 11 years and 6 months for the Extension of the Second Stage Expressway agreement (Sector D), commencing from the end of the amended agreements. The toll rates are to be increased every 10 years by fixed amounts specified in the agreements, commencing from 1 September 2018.

- A.2 The Si Rat - Outer Ring Road Expressway Project, under a concession agreement in respect of the investment, design, construction, management, operation and maintenance.

The Company, as concessionaire, invested in the design, construction, management, operation and maintenance of the Si Rat - Outer Ring Road Expressway Project, and is also responsible for expressway operation expenses throughout the concession period, which is for 30 years commencing on 15 December 2012. The Company has the rights to collect all toll revenue and all other related income, and is to compensate the EXAT in the form of toll revenue sharing at the rates specified in the concession agreement, throughout the concession period.

The Si Rat - Outer Ring Road Expressway started operation on 22 August 2016.

- A.3 The Udon Rattaya Expressway Project under the Bang Pa-In - Pak Kret Expressway Agreement in respect of the construction and management of the expressway project of a subsidiary.

The Subsidiary, as concessionaire, invested in the design, construction and management of the expressway, together with related business under a 30-year concession commencing on 27 September 1996. The EXAT has the rights to collect all toll revenue and is to compensate the Subsidiary in the form of revenue sharing at the rates specified in the concession agreement, throughout the concession period. The Subsidiary has the rights to extend the concession for two further periods of 10 years each, depending upon terms and conditions that are to be agreed between the parties.

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all the disputes described in Note 46 to the financial statements. On 20 February 2020, the subsidiary and EXAT signed the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment). The Subsidiary received an extension of the term of the existing agreement, which was to end on 26 September 2026, to 31 October 2035. The Subsidiary retains all rights to extend the concession specified in the existing agreement, of which the remaining period is 10 years and 11 months commencing from the end of the amended agreements. The toll rates are to be increased every 10 years by fixed amounts specified in the agreements, commencing from 1 November 2018.

B. Operation of metro services

The Company received concessions from the Mass Rapid Transit Authority of Thailand (“MRTA”) to operate metro services, as follows:

B.1 The MRT Blue Line Project.

The Company, as concessionaire of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (The MRT Blue Line: Hua Lamphong Station - Bang Sue Station) under the MRTA Initial System Project - Chaloem Ratchamongkhon Line, invested in M&E Equipment and is to operate and maintain the MRTA Initial System for a concession period of 25 years, commencing on 2 July 2004.

On 28 March 2017, the Company was selected as concessionaire of the MRT Blue Line Concession Agreement, in accordance with a cabinet resolution. On 31 March 2017, the Company signed the MRT Blue Line Concession Agreement for a concession period of approximately 33 years under the Build, Transfer and Operate basis, with the MRTA. The MRT Blue Line Project consists of the MRTA Initial System Project - Chaloem Ratchamongkhon Line: Hua Lamphong Station-Bang Sue Station and the MRT Blue Line Extension: Hua Lamphong Station-Lak Song Station and Bang Sue Station-Tha Phra Station.

Under the MRT Blue Line Concession Agreement, a concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line is deemed to be part of the MRT Blue Line Concession Agreement, and only the clauses relating the rights, duties and provisions with respect to fares, fare rates and payment of remuneration to the MRTA will remain in effect until the end of the concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line.

The Company, as concessionaire of the MRT Blue Line Concession Agreement is responsible for the supply, installation and testing of the M&E Systems of the MRT Blue Line Extension Project (Phase 1 of the concession, which has a terms of 36 months from the commencement date of work by the MRTA) and operation of the Through Operation systems of the MRT Blue Line Project (Phase 2 of the concession, which has a term of 30 years from the commencement date of the revenue-generating service on all sectors). The Company has rights, duties and obligations to claim, collect, and retain all fares, and to generate revenue from commercial development, and is responsible for all investment, payment of operating costs, and payment of remuneration to the MRTA in accordance with the Concession.

The Company is required to gradually commence operation of the MRT Blue Line Extension Project in 3 sectors.

Sector 1: Bang Sue Station-Tao Poon Station within 15 August 2017.

Sector 2: Hua Lamphong Station-Lak Song Station within 30 months.

Sector 3: Tao Poon Station-Tha Phra Station within 36 months.

On 11 August 2017, the Company officially commenced operation of the MRT Blue Line Extension Project: Bang Sue Station-Tao Poon Station.

On 29 September 2019, the Company officially commenced operation of the MRT Blue Line Extension Project: Hua Lamphong Station-Lak Song Station.

On 30 March 2020, the Company officially commenced commercial operation of the MRT Blue Line Project: Tao Poon Station-Tha Phra Station. As a result, the Company commenced operation and revenue-generating service of the Through Operation systems of the MRT Blue Line Project in accordance with the MRT Blue Line Concession Agreement. The MRT Blue Line Concession Agreement has a term of 30 years from the commencement date of the revenue-generating service on all sectors (30 March 2020).

B.2 The MRT Chalong Ratchadham Line Project (Bang Yai-Rat Burana, Bang Yai-Bang Sue Section (Klong Bang Phai Station-Tao Poon Station)) (the "MRT Purple Line Project") Contract 4: Concession for Supply of M&E Systems and O&M Services.

The Company, as concessionaire, invested in the M&E Systems and rolling stock. In addition, the Company provides operation and maintenance services. The MRTA has the rights to collect fare box revenues and commercial revenues from the use of all civil infrastructure and the M&E Systems, and is to compensate the Company in the form of M&E Systems equipment costs (Phase I) and operation and maintenance service fees (Phase II). Details are as below:

Phase I: Design and Build

The Company is to design, supply, install and test the M&E Systems within 1,200 days after the agreement date (4 September 2013). In return the Company is to receive remuneration and interest totaling Baht 20,011 million from the MRTA in the form of monthly payments over a period of 10 years, beginning from the date of the Commissioning Certificate.

On 6 August 2016, the Company delivered the M&E Systems and Rolling Stocks under Phase 1 of the concession agreement to the MRTA. The Company has recorded amounts receivable from the MRTA under the account of receivable under the concession agreement, as described in Note 12 to the financial statements.

Phase II: O&M services

The Company is responsible for the operation of metro services, including repair, maintenance and improvement of all equipment and materials related to the civil infrastructure works and M&E Systems from the date specified in the Commissioning Certificate until the end of the concession period. In addition, the Company shall transfer rights of civil infrastructure and M&E Systems to the MRTA when the concession agreement ends. The compensation for Phase II under the agreement, amounting to approximately Baht 57,208 million (excluding escalations for inflation and adjustments to reflect electricity prices), will be paid to the Company on a monthly basis until the expiration of the concession agreement (3 September 2043).

On 6 August 2016, the Company is delivered the operating civil infrastructure and M&E Systems equipment of the MRT Chalong Ratchadham Line from the MRTA. On that day, the operation of the MRT Chalong Ratchadham Line Project officially started.

- C. Commercial development business, which consists of commercial developments related to the expressways and the operation of metro services.

On 1 October 2018, the Company and Bangkok Metro Network Limited (a subsidiary company) agreed to terminate and replace the amendment to the commercial development rights agreement dated 11 March 2015, and terminate the contract granting commercial development rights to manage advertising services through the Passenger Information Display System (PIDs) dated 1 January 2010. Under the agreements, the Company transferred the commercial development rights to provide services relating to the MRTA Initial System Project - Chaloem Ratchamongkhon Line and to manage advertising services through PIDs in the MRTA Initial System Project - Chaloem Ratchamongkhon Line to the subsidiary. It also had the rights to receive commercial development revenue and share the revenue with the Company at the rates specified in

the agreement. On the same day, the Company and the subsidiary entered into a management agreement for commercial development of the MRT Blue Line Project (the MRTA Initial System Project - Chaloem Ratchamongkhon Line and the MRT Blue Line Extension Project). Under this agreement, the Company authorised the subsidiary to act on its behalf in managing commercial development and advertising services through the Passenger Information Display System (PIDs) for the MRT Blue Line Project. The contract will expire in July 2029, and the Company is to pay a management fee to the subsidiary based on the specified rate. Therefore, for the period from 1 October 2018, the Company has recorded revenue and expenses relating to commercial development of the MRT Blue Line Project in profit or loss of the Company.

1.2 Coronavirus disease 2019 Pandemic

The Coronavirus disease 2019 pandemic is adversely impacting various businesses and industries. This situation significantly affects the Group's business activities in terms of commuter numbers on both the expressway and metro systems and this significantly impacts the Group's revenue while opening hours are reduced and organisations are supporting work from home policies. The Group's management has continuously monitored ongoing developments and assessed the financial impact as the situation has changed.

2. Basis of preparation

- 2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Profession Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

2.2 Basis of consolidation

- a) The consolidated financial statements include the financial statements of Bangkok Expressway and Metro Public Company Limited (“the Company”) and its subsidiaries (“the subsidiaries”). Details are as follows:

Company's name	Nature of business	Country of incorporation	Proportion of Shareholding	
			2020 (Percent)	2019 (Percent)
Northern Bangkok Expressway Company Limited	Operation and management of Bang Pa-In - Pak Kret Expressway project	Thailand	99.99	99.99
Bangkok Metro Networks Limited	Management on commercial development of the MRT project	Thailand	90.52	89.67

As described in Note 15 to the financial statements, the Company made an additional investment in 0.85 percent of the issued and fully paid up share capital of Bangkok Metro Network Limited in July 2020.

- b) The Company is deemed to have control over an investee or subsidiaries if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- c) Subsidiaries are fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.
- d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.
- e) Material balances and transactions between the Group have been eliminated from the consolidated financial statements.
- f) Non-controlling interests represent the portion of profit or loss and net assets of the subsidiaries that are not held by the Company and are presented separately in the consolidated profit or loss and within equity in the consolidated statement of financial position.

- 2.3 The separate financial statements, which present investment in subsidiaries and an associate presented under the cost method.

3 New financial reporting standards

a) Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised (revised 2019) and new financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2020. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards. The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements. However, the new standard involves changes to key principles, which are summarised below:

Financial reporting standards related to financial instruments

The set of TFRSs related to financial instruments consists of five accounting standards and interpretations, as follows:

Financial reporting standards:

TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments

Accounting standard:

TAS 32	Financial Instruments: Presentation
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Financial Reporting Standard Interpretations:

TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortised cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. They also include stipulations regarding the presentation and disclosure of financial instruments.

The adoption of these standards has the impact on the Group's financial statements to result in the following adjustments.

- Classification and measurement of investments in available-for-sale equity securities
 - The Group has elected to irrevocably classify these investments as financial assets at fair value through other comprehensive income.

- Classification and measurement of non-listed equity investments - The Group has decided to measure these investments at fair value and classify them as financial assets at fair value through other comprehensive income.
- Recognition of expected credit losses - The Group recognises an allowance for expected credit losses on its financial assets, and it is no longer necessary for a credit-impaired to have occurred.

The Group recognised the cumulative effect of the adoption of these financial reporting standards as an adjustment to retained earnings and other components of shareholders' equity as at 1 January 2020, and the comparative information was not restated.

The cumulative effect of the change is described in Note 4 to the financial statements.

TFRS 16 Leases

TFRS 16 supersedes TAS 17, Leases, together with related Interpretations. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases, and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is low value.

Accounting by lessors under TFRS 16 is substantially unchanged from TAS 17. Lessors will continue to classify leases as either operating or finance leases.

The Group recognised the cumulative effect of the adoption of this financial reporting standard as an adjustment to retained earnings as at 1 January 2020, and the comparative information was not restated.

The cumulative effect of the change is described in Note 4 to the financial statements.

Accounting Guidance on Temporary Relief Measures for Accounting Alternatives in Response to the Impact of the COVID-19 Pandemic

The Federation of Accounting Professions announced Accounting Guidance on Temporary Relief Measures for Accounting Alternatives in Response to the Impact of the COVID-19 Pandemic. Its objectives are to alleviate some of the impacts of applying certain financial reporting standards, and to provide clarification about accounting treatments during the period of uncertainty relating to this situation.

On 22 April 2020, the Accounting Treatment Guidance was announced in the Royal Gazette and it is effective for the financial statements prepared for reporting periods ending between 1 January 2020 and 31 December 2020.

The Group has elected to apply the following temporary relief measures on accounting alternatives:

- Not to take into account forward-looking information when determining expected credit losses, in cases where the Group uses a simplified approach to determine expected credit losses.
- To measure the fair value of unquoted equity investments using the fair value as at 1 January 2020.
- Not to consider the COVID-19 situation as an indication that an asset may be impaired in accordance with TAS 36, Impairment of Assets.

The Group is evaluating the impact on the financial statements and will consider recording the impact after the relief measures expire.

b) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2021

The Federation of Accounting Professions issued a number of revised financial reporting standards and interpretations, which are effective for fiscal years beginning on or after 1 January 2021. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The management of the Group is currently evaluating the impact of these standards on the financial statements in the year when they are adopted.

4. Cumulative effects of changes in accounting policies due to the adoption of new financial reporting standards

As described in Note 3 to the financial statements, during the current year, the Group has adopted the set of financial reporting standards related to financial instruments and TFRS 16. The cumulative effect of initially applying these standards was recognised as an adjustment to retained earnings and other components of shareholders' equity as at 1 January 2020 and the comparative information was not restated.

The impacts of changes in accounting policies on the statements of financial position at the beginning of 2020 due to the adoption of these standards are presented as follows:

(Unit: Thousand Baht)

	Consolidated financial statements			
		The impacts of		
		Financial reporting		
		standards related		
	31 December	to financial		1 January
	2019	instruments	TFRS 16	2020
Statement of financial position				
Assets				
Current assets				
Current investments	1,157,746	(1,157,746)	-	-
Other current financial assets	-	1,157,746	-	1,157,746
Non-current assets				
Other non-current financial assets	-	17,014,130	-	17,014,130
Other long-term investments	17,096,827	(17,096,827)	-	-
Building and equipment (Note 19)	311,377	-	(4,568)	306,809
Right-of-use assets (Note 30)	-	-	98,439	98,439
Liabilities and shareholders' equity				
Current liabilities				
Current portion of lease liabilities	-	-	44,870	44,870
Other current liabilities	40,072	-	(1,222)	38,850
Non-current liabilities				
Long-term loans from financial institutions, net of current portion	21,745,561	(2,893)	-	21,742,668
Lease liabilities, net of current portion	-	-	51,762	51,762
Debentures, net of current portion	35,670,827	(1,116)	-	35,669,711
Deferred tax liabilities	3,025,460	(13,285)	-	3,012,175
Other non-current liabilities	3,759	-	(1,539)	2,220
Shareholders' equity				
Retained earnings - unappropriated	15,052,069	(96,626)	-	14,955,443
Other components of shareholders' equity	1,504,565	31,223	-	1,535,788

(Unit: Thousand Baht)

	Separate financial statements			
		The impacts of		
		Financial reporting standards related		
	31 December	to financial		1 January
	2019	instruments	TFRS 16	2020
Statement of financial position				
Assets				
Current assets				
Current investments	1,136,558	(1,136,558)	-	-
Other current financial assets	-	1,136,558	-	1,136,558
Non-current assets				
Other non-current financial assets	-	17,014,130	-	17,014,130
Other long-term investments	17,096,827	(17,096,827)	-	-
Building and equipment (Note 19)	269,338	-	(2,255)	267,083
Right-of-use assets (Note 30)	-	-	53,313	53,313
Liabilities and shareholders' equity				
Current liabilities				
Current portion of lease liabilities	-	-	26,309	26,309
Other current liabilities	36,164	-	(752)	35,412
Non-current liabilities				
Long-term loans from financial institutions, net of current portion	18,739,921	(2,097)	-	18,737,824
Lease liabilities, net of current portion	-	-	25,749	25,749
Debentures, net of current portion	35,670,827	(1,116)	-	35,669,711
Deferred tax liabilities	3,026,721	(14,706)	-	3,012,015
Other non-current liabilities	248	-	(248)	-
Shareholders' equity				
Retained earnings - unappropriated	7,501,047	(113,388)	-	7,387,659
Other components of shareholders' equity	7,675,567	48,610	-	7,724,177

4.1 Financial instruments

- a) The Company recognised the classification of derivatives at fair value through profit or loss, which impact on retained earnings as at 1 January 2020 due to the adoption of financial reporting standards related to financial instruments in the consolidated financial statements amounted to Baht 99 million (the separate financial statements: Baht 115 million).

b) As at 1 January 2020, classification and measurement of financial assets required by TFRS 9, in comparison with classification and the former carrying amount, are as follows:

Consolidated financial statements					(Unit: Thousand Baht)
The former carrying amount	Classification and measurement in accordance with TFRS 9				
	Fair value through other comprehensive income			Total	
	Fair value through profit or loss				
Financial assets as at 1 January 2020					
Cash and cash equivalents	-	-	703,750	703,750	
Bank deposit for unearned fare box revenue	-	-	205,697	205,697	
Trade and other receivables	-	-	481,787	481,787	
Other current financial assets	1,157,746	-	-	1,157,746	
Receivable under the concession agreement	-	-	10,860,415	10,860,415	
Other non-current financial assets	-	17,014,130	-	17,014,130	
Total financial assets	1,157,746	17,014,130	12,251,649	30,423,525	

Separate financial statements						(Unit: Thousand Baht)
	The former carrying amount	Classification and measurement in accordance with TFRS 9				
		Fair value through profit or loss	Fair value through other comprehensive income		Amortised cost	Total
Financial assets as at 1 January 2020						
Cash and cash equivalents	608,706	-	-	608,706		608,706
Bank deposit for unearned fare box revenue	205,697	-	-	205,697		205,697
Trade and other receivables	474,296	-	-	474,296		474,296
Long-term loans to related party	37,000	-	-	37,000		37,000
Other current financial assets	1,136,558	1,136,558	-	-		1,136,558
Receivable under the concession agreement	10,860,415	-	-	10,860,415		10,860,415
Other non-current financial assets	17,014,130	-	17,014,130	-		17,014,130
Total financial assets	30,336,802	1,136,558	17,014,130	12,186,114		30,336,802

As at 1 January 2020, the Group has not designated any financial liabilities at fair value through profit or loss. However, the Group has derivative liabilities used in hedge accounting with fair value totaling Baht 113 million.

4.2 Lease

On adoption of TFRS 16, the Group recognised lease liabilities in relation to leases that previously classified as operating leases measured at the present value of the remaining lease payments, discounted using the Group's incremental borrowing rates as of 1 January 2020, of 1 percent to 6 percent per annum. For leases that previously classified as finance leases, the Group recognised the carrying amount of the lease assets and lease liabilities before transition as right-of-use assets and lease liabilities, respectively at the date of initial application.

	(Unit: Thousand Baht)	
	Consolidated	Separate
	financial statements	financial statements
Operating lease commitments as at 31 December 2019	64,150	44,704
Less: Short-term leases and leases of low-value assets	(17,982)	(17,862)
Add: Others	51,124	26,329
Less: Deferred interest expenses	(3,421)	(2,113)
Increase in lease liabilities due to initial TFRS 16 adoption	93,871	51,058
Liabilities under finance lease agreements as at 31 December 2019	2,761	1,000
Lease liabilities as at 1 January 2020	96,632	52,058
Comprise of:		
Current lease liabilities	44,870	26,309
Non-current lease liabilities	51,762	25,749
	96,632	52,058

5. Significant accounting policies

5.1 Revenue and expense recognition

a) Toll revenue recognition

Toll revenue represent the invoiced value, excluding value added tax, at a point in time upon completion of the service.

b) Toll revenue sharing recognition

Toll revenue sharing represent the invoiced value, excluding value added tax, on accrual basis.

c) Fare box revenue recognition

Smart card and smart token sales are recognised as revenue at a point in time upon completion of the service. Prepaid value in stored value smart cards is recorded as unearned fare box revenue in current liabilities in the statement of financial position.

d) Revenue recognition from provision of operating services

Revenue from provision of operating services is recognised over time when services have been rendered, excluding value added tax. Service rate charged is in accordance with rates stipulated in the agreement.

e) Revenue recognition from commercial development revenue

Commercial development revenue is recognised over time when services have been rendered.

f) Other revenues and expenses recognition

Interest income

Interest income is calculated using the effective interest method and recognised on an accrual basis. The effective interest rate is applied to the gross carrying amount of a financial asset, unless the financial assets subsequently become credit-impaired when it is applied to the net carrying amount of the financial asset (net of the expected credit loss allowance).

Interest income from receivable under the concession agreement is realised over the installment period using the effective interest rate method. Interest income is recognised when installments come due, regardless of whether collection is made, and is presented under interest income in profit and loss.

Finance cost

Interest expense from financial liabilities at amortised cost is calculated using the effective interest method and recognised on an accrual basis.

Dividends

Dividends are recognised when the rights to receive the dividends is established.

Other expenses

Expenses are recognised on accrual basis.

5.2 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and cash at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

5.3 Investments in subsidiaries

Investments in subsidiaries are accounted for in the separate financial statements using the cost method.

5.4 Investment properties

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and allowance for loss on impairment (if any).

No depreciation has been provided for land awaiting sales.

On disposal of investment properties, the difference between the net disposal proceeds and the carrying amount of the asset is recognised in profit or loss in the period when the asset is derecognised.

5.5 Building and equipment and depreciation

Building and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of building and equipment is calculated by reference to their costs on the straight-line basis over the following estimated useful lives:

Building and construction improvement	5 years, 20 years
Furniture, fixture and equipment	3 - 5 years
Vehicles	5 - 16 years

Depreciation is included in determining income. No depreciation has been provided for assets under installations.

An item of building and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

5.6 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

5.7 Amortisation of rights to operate expressway sectors and amortisation

Rights to operate expressway sectors represent the cost of construction of the Second Stage Expressway System, the Si Rat - Outer Ring Road Expressway and the Bang Pa-In - Pak Kret Expressway. It is stated at cost less accumulated amortisation and allowance for loss on impairment (if any).

The rights to operate completed expressway sectors are amortised as expenses in income statements with the unit of throughput method over the concession period. The amortisation of rights to operate expressway sectors is charged to profit or loss and calculated as follows:

Amortisation for the year = Net rights to operate expressway sectors x Percentage of the number of vehicle volume for the year

Percentage of the number of vehicles volume for the year =
$$\frac{\text{Current year's number of actual vehicle volume}}{(\text{Current year's number of actual vehicle volume} + \text{Projected vehicle volume after current year to the remaining years of the agreement})}$$

No amortisation is provided for project costs under construction.

5.8 Rights to use sites for expressway and amortisation

The Company initially recorded the rights to use sites for expressway at cost, equal to the present value of future compensation for site acquisition cost to be paid to the EXAT under the Second Stage Expressway System agreement. Following initial recognition, the rights are carried at cost less accumulated amortisation and allowance for loss on impairment (if any).

The Company amortises the rights to use sites for expressway as an expense in the income statement in proportion to the number of actual vehicle volume. The Company reviews for impairment of the asset whenever there are indications of impairment and reviews the amortisation method at least once per year.

5.9 Intangible assets under concession agreement of the MRT Blue Line Project and amortisation

Intangible assets under concession agreement of the MRT Blue Line Project are stated at cost less accumulated amortisation and allowance for loss on impairment (if any).

The Group capitalised as assets all expenditures related to the MRT Blue Line Project, which including management and consultant fees, design costs, electrical and mechanical works and rolling stock purchased during the concession period, interest and other financing expenses. These will be amortised to expenses over the concession period after the commencement of operations.

Equipment - Metro system

The Company has been adopting the unit of throughput method to amortise such intangible assets, which related to equipment of metro system, over concession period of the MRT Blue Line Project and based on the following methodology:

$$\text{Amortisation for the year} = \text{Net intangible assets under concession agreement of the MRT Blue Line Project} \\ \times \text{Percentage of passengers for the year}$$

$$\text{Percentage of Passengers for the year} = \frac{\text{Current year's actual passengers}}{(\text{Actual passengers for the current year} + \text{Projected passengers during the remaining concession year})}$$

Equipment - Other system

Amortisation of intangible assets under the concession agreement of the MRT Blue Line Project such as rental area improvement, telecommunication equipment at station, advertising equipment etc. is calculated by reference to its cost on the straight-line basis over the following estimated useful lives:

Equipment and rental area at station improvement	5 years and concession period
Telecommunication equipment	5 years and concession period
Advertising equipment	5 - 7 years

Amortisation of intangible assets under concession agreement of the MRT Blue Line Project is included in profit or loss.

No amortisation is provided on assets under installations.

5.10 Project cost of the MRT Chalong Ratchadham Line

Project cost of the MRT Chalong Ratchadham Line is stated at cost less accumulated amortisation and allowance for loss on impairment (if any). The amortisation is calculated on the straight-line basis over the concession period.

The amortisation is included in profit or loss.

5.11 Prepaid project remuneration

The Company records remuneration expense of the MRT Blue Line Project in profit or loss for each year based on the proportion of projected remuneration to projected revenue under the concession agreement over the concession period. Differences between the remuneration that the Company pays to the MRTA and the recognised remuneration expenses are recorded under “prepaid project remuneration” in the statement of financial position.

The proportion of projected remuneration to projected revenue under the concession agreement of the MRT Blue Line Project is reviewed at least once a year.

5.12 Other intangible assets and amortisation

The Group is initially recognised intangible assets at cost. Following the initial recognition, the intangible assets are carried at cost less any accumulated amortisation and allowance for loss on impairment (if any).

Intangible assets with finite useful lives are amortised on a systematic basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation is include in profit or loss.

The intangible assets with finite useful lives is computer software with 3 years, 5 years and 10 years useful lives.

5.13 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Accounting policies adopted since 1 January 2020

The Group as a lessee applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. At the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group recognises right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.

Right-of-use assets

Right-of-use assets are measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognised, initial direct costs incurred, and lease payments made at or before the commencement date of the lease less any lease incentives received.

Depreciation of right-of-use assets are calculated by reference to their costs, on the straight-line basis over the shorter of their estimated useful lives and the lease term.

Building and construction improvement	3 - 5 years
Vehicles	5 years

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Lease liabilities

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising an option to terminate.

The Group discounted the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term.

Accounting policies adopted before 1 January 2020

Leases of equipment which transfer substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lower of the fair value of the leased assets or the present value of the minimum lease payments. The outstanding rental obligations, net of finance charges, are included in long-term payables, while the interest element is charged to profit or loss over the lease period. The assets acquired under finance leases is depreciated over the lease period.

Leases of equipment which do not transfer substantially all the risks and rewards of ownership are classified as operating leases. Operating lease payments are recognised as an expense in profit or loss on a straight-line basis over the lease term.

5.14 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, the Group, whether directly or indirectly, or which are under common control with the Group.

They also include associated companies, and individuals or enterprises which directly or indirectly own a voting interest in the Company that gives them significant influence over the Group, key management personnel, directors and officers with authority in the planning and direction of the Group's operations.

5.15 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also the Company's functional currency.

Transactions in foreign currencies are translated into Baht at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in determining income.

5.16 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the building and equipment, right-of-use asset, investment properties and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. The Group also carries out annual impairment reviews in respect of goodwill. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount.

An impairment loss is recognised in profit or loss.

5.17 Employee benefits

Short-term employee benefits

The Group will recognise salaries, wages, bonuses and contributions to the social security fund as expenses when incurred.

Post-employment benefits

Defined contribution plans

The Group and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Group. The fund's assets are held in a separate trust fund and the contributions of the Group is recognised as expenses when incurred.

Defined benefit plans

The Group has obligations in respect of the severance payments they must make to employees upon retirement under labor law. The Group treats these severance payment obligations as a defined benefit plan.

The obligation under the defined benefit plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from post-employment benefits are recognised immediately in other comprehensive income.

5.18 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

5.19 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

Current tax

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

Deferred tax

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Group recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Group records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

5.20 Financial instruments

Accounting policies adopted since 1 January 2020

The Group initially measures financial assets at its fair value plus, in the case of financial assets that are not measured at fair value through profit or loss, transaction costs. However, trade receivables, that do not contain a significant financing component, are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortised cost, fair value through other comprehensive income ("FVOCI"), or fair value through profit or loss ("FVTPL"). The classification of financial assets at initial recognition is driven by the Group's business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

Financial assets at amortised cost

The Group measures financial assets at amortised cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate (“EIR”) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to irrevocably classify its equity investments which are not held for trading as equity instruments designated at FVOCI. The classification is determined on an instrument-by-instrument basis.

Gains and losses recognised in other comprehensive income on these financial assets are never recycled to profit or loss.

Dividends are recognised as other income in profit or loss, except when the dividends clearly represent a recovery of part of the cost of the financial asset, in which case, the gains are recognised in other comprehensive income.

Equity instruments designated at FVOCI are not subject to impairment assessment.

Financial assets designated at FVTPL

Financial assets measured at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognised in profit or loss.

Classification and measurement of financial liabilities

Except for derivative liabilities, at initial recognition the Group’s financial liabilities are recognised at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the EIR amortisation process. In determining amortised cost, the Group takes into account any fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in profit or loss.

Derecognition of financial instruments

A financial asset is primarily derecognised when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has neither transferred nor retained substantially all the risks and rewards of the asset but has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in profit or loss.

Impairment of financial assets

The Group recognises an allowance for expected credit losses (“ECLs”) for all debt instruments not held at FVTPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).

The Group considers a significant increase in credit risk to have occurred when contractual payments are more than 30 days past due and considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to have a significant increase in credit risk and to be in default using other internal or external information, such as credit rating of issuers.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. It is based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

Accounting policies adopted before 1 January 2020**Trade accounts receivable**

Trade accounts receivable are stated at the net realisable value. Allowance for doubtful accounts is provided for the estimated losses that may be incurred in collection of receivables. The allowance is generally based on collection experience and analysis of debt aging.

Receivable under the concession agreement

Receivable under the concession agreement is stated at the contract value net of unrealised financial revenue.

Investments

- a) Investments in securities held for trading are stated at fair value. Changes in the fair value of these securities are recorded in profit or loss.
- b) Investments in available-for-sale securities are stated at fair value. Changes in the fair value of these securities are recorded in other comprehensive income and will be recorded in profit or loss when the securities are sold.
- c) Investments in debt securities, both due within one year and expected to be held to maturity, are recorded at amortised cost. The premium/discount on debt securities is amortised/accreted by the effective interest rate method with the amortised/accreted amount presented as an adjustment to the interest income.
- d) Investments in non-marketable equity securities, which the Group classifies as other investments, are stated at cost net of allowance for impairment loss (if any).

The fair value of marketable securities is based on the latest bid price of the last working day of the year. The fair value of debt instruments is determined based on yield rates quoted by the Thai Bond Market Association. The fair value of unit trusts is determined from their net asset value.

The weighted average method is used for computation of the cost of investments.

In the event the Group reclassifies investments from one type to another, such investments will be readjusted to their fair value as at the reclassification date. The difference between the carrying amount of the investments and the fair value on the date of reclassification are recorded in profit or loss or recorded as other components of shareholders' equity, depending on the type of investment that is reclassified.

On disposal of an investment, the difference between net disposal proceeds and the carrying amount of the investment is recognised in profit or loss.

5.21 Derivatives and hedge accounting

The Group uses derivative which is an interest rate swaps to hedge its interest rate risks.

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The subsequent changes are recognised in profit or loss unless the derivative is designated and effective as a hedging instrument under cash flow hedge. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Derivatives are presented as non-current assets or non-current liabilities if the remaining maturity of the instrument is more than 12 months and it is not due to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

Hedge accounting - Cash flow hedges

At the inception of a hedging relationship, the Group formally designates and documents the hedging relationship to which it wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

The documentation, at the inception of the hedge and on an ongoing basis, includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements, including analysis of the sources of hedge ineffectiveness and how the hedge ratio is determined.

A hedging relationship qualifies for hedge accounting if it meets all of the following hedge effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk is not the dominant factor in the value changes that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

Hedges that meet all of the qualifying criteria for hedge accounting are accounted for cash flow hedges. The effective portion of the gain or loss on the hedging instrument is recognised in other comprehensive income in the cash flow hedge reserve, while any ineffective portion is recognised immediately in profit or loss. The cash flow hedge reserve is adjusted to the lower (in absolute amounts) of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The way cash flow hedge reserve accumulated in other comprehensive income are subsequently accounted for, depends on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the reserve accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and is not recognised in other comprehensive income for the period. For any other cash flow hedges, the reserve accumulated in other comprehensive income is subsequently reclassified to profit or loss as a reclassification adjustment in the same period which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the cash flow hedge reserve accumulated in other comprehensive income must remain in equity if the hedged future cash flows are still expected to occur. Otherwise, the reserve will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, the way the reserve remaining in equity is accounted for depends on the nature of the underlying transaction as described above.

5.22 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

6. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

Leases

Determining the lease term with extension and termination options - The Group as a lessee

In determining the lease term, the management is required to exercise judgement in assessing whether the Group is reasonably certain to exercise the option to extend or terminate the lease considering all relevant facts and circumstances that create an economic incentive for the Group to exercise either the extension or termination option.

Estimating the incremental borrowing rate - The Group as a lessee

The Group cannot readily determine the interest rate implicit in the lease, therefore, the management is required to exercise judgement in estimating its incremental borrowing rate to discount lease liabilities. The incremental borrowing rate is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

Fair value of financial instruments

In determining the fair value of financial instruments that are not actively traded and for which quoted market prices are not readily available, the management exercise judgement, using a variety of valuation techniques and models. The input to these models is taken from observable markets, and includes credit risks for both bank and counter parties consideration of liquidity, correlation and longer-term volatility of financial instruments. Change in assumption which is related to calculating input, could affect fair value in financial statement and the disclosure of fair value hierarchy.

Impairment of investment in subsidiaries

The Company reviews impairment of investment in subsidiaries, which requires management to prepare projection of the cash flow expected to be generated by the investment in the future, and to choose a suitable discount rate in order to calculate the present value of those cash flows.

Building improvement and equipment/Depreciation

In determining depreciation of building improvement and equipment, the management is required to make estimates of the useful lives and residual values of the Company's building improvement and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review building improvement and equipment for impairment on a periodical basis and record impairment losses in the period when it is determined that their recoverable amount is lower than the carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

Amortisation of rights to operate completed expressway sectors and rights to use sites for expressway construction

In determining amortisation of rights to operate completed expressway sectors and rights to use sites for expressway construction, the management has to project vehicle volume after current year for the remaining years of the agreement. Vehicle volume is projected based on the number of vehicles as assessed by an independent appraiser, and adjusted by comparison to actual vehicle volume. However, the actual vehicle volume in the future could differ from the estimate depending upon changes in external factors that may affect toll rates and vehicle volume.

Amortisation of intangible asset under concession agreement of the MRT Blue Line Project

In determining amortisation of intangible asset under the concession agreement of the MRT Blue Line Project, the management has to project the number of passengers after current year for the remaining years of the agreement. Various assumptions needed to project by an accredited independent valuer, such as traffic model, network rail, average cost of fuel, and fare structure.

Deferred tax assets

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

Post-employment benefits under defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

7. Related party transactions

During the year, the Group had significant business transactions with related parties. Such transactions arose in the ordinary course of business and were concluded on commercial terms and bases agreed upon between the Group and those related parties.

The relationship between the Company and the related parties which have transactions with during the year summarised below.

Name of related parties	Relationship with the Company
CH. Karnchang Public Company Limited	Major shareholders
Mass Rapid Transit Authority of Thailand	Shareholders
Northern Bangkok Expressway Company Limited	Subsidiary company
Bangkok Metro Networks Limited	Subsidiary company
TTW Public Company Limited	Related company through common directors of the Company
CK Power Public Company Limited	Related company through common directors of the Company
Bangpa-in Land Development Company Limited	Related company through common directors of the Company

Such significant transactions for the year ended 31 December 2020 and 2019 are summarised below.

(Unit: Million Baht)

	Consolidated		Separate		Pricing policy
	financial statements		financial statements		
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>	
<u>Transactions with major shareholder</u>					
Cost of rail projects	1,991	5,565	1,991	5,565	Based on contracts
Cost of expressway construction	814	743	814	743	Based on contracts
Expressway and civil works maintenance expenses	585	595	585	595	Based on contracts
Office rental and service expenses	9	8	-	-	Based on contracts
<u>Transactions with subsidiary companies</u>					
(eliminated from the consolidated financial statements)					
Commercial development revenue	-	-	3	2	Based on contracts
Interest income from long-term loans	-	-	-	47	Based on contracts
Project management income	-	-	209	186	Based on contract
Commercial development management fee	-	-	276	360	Based on contract
<u>Transactions with associated company</u>					
Dividend income	-	-	-	231	As declared
<u>Transactions with related companies</u>					
Interest income from M&E Systems	277	380	277	380	FDR plus stipulated margin per annum
Dividend income	483	258	483	258	As declared
Cost of commercial development	10	9	-	-	Based on contract
Remuneration from fare box (Inclusive of VAT)	332	376	332	376	Concession agreement
Remuneration from commercial development	19	18	19	18	Concession agreement
Property tax	3	12	2	11	At the rates charged by Bangkok Metropolitan Administration
Utility expenses	2	2	2	2	Based on contract

As at 31 December 2020 and 2019, the balances of the accounts between the Group and related parties are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
<u>Trade and other receivables (Note 11)</u>				
<u>Trade receivables</u>				
Bangkok Metro Networks Limited	-	-	1,271	4,226
Mass Rapid Transit Authority of Thailand	349,988	337,040	349,988	337,040
Total	349,988	337,040	351,259	341,266
<u>Other receivables</u>				
Northern Bangkok Expressway Company Limited	-	-	19,795	16,585
Bangkok Metro Networks Limited	-	-	11	-
CH. Karnchang Public Company Limited	-	111	-	111
Total	-	111	19,806	16,696
<u>Guarantees for rental</u>				
CH. Karnchang Public Company Limited	1,914	1,914	-	-
<u>Advance payment under service contract</u>				
CH. Karnchang Public Company Limited	10,829	12,224	10,829	12,224
<u>Long-term loans to related party</u>				
Bangkok Metro Networks Limited	-	-	-	37,000
Less: current portion	-	-	-	(18,000)
Long-term loans to related party, net of current portion	-	-	-	19,000
<u>Receivable under the concession agreement (Note 12)</u>				
Mass Rapid Transit Authority of Thailand	9,210,732	10,860,415	9,210,732	10,860,415
<u>Prepaid project remuneration</u>				
Mass Rapid Transit Authority of Thailand	7,307,905	5,086,368	7,307,905	5,086,368
<u>Trade and other payables (Note 26)</u>				
Bangkok Metro Networks Limited	-	-	123,240	32,603
CH. Karnchang Public Company Limited	401,750	753,448	401,645	753,347
Mass Rapid Transit Authority of Thailand	224,992	213,221	224,992	213,210
Others	320	339	320	320
Total	627,062	967,008	750,197	999,480

(Unit: Thousand Baht)

	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
<u>Retention guarantees</u>				
CH. Karnchang Public Company Limited	50,783	44,252	50,783	44,252
<u>Guarantees for rental</u>				
Bangkok Metro Networks Limited	-	-	903	800
<u>Unearned revenue from advertising management rights (Note 29)</u>				
Bangkok Metro Networks Limited	-	-	10,618	11,866

Long-term loans to related party

The balance of long-term loans to and interest receivables between the Company and its subsidiary as at 31 December 2020 and 2019 and the movement in the separate financial statement were as follows:

	(Unit: Thousand Baht)			
	Balance as at 31 December 2019	Increase during the year	Decrease during the year	Balance as at 31 December 2020
Bangkok Metro Networks Limited				
Long-term loan	37,000	-	(37,000)	-
Interest receivable	-	396	(396)	-
Total	37,000	396	(37,396)	-

Directors and management's remuneration

During the year ended 31 December 2020 and 2019, the Group had employee benefit expenses payable to their directors and management as below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Short-term employee benefits	157,588	176,380	137,212	158,271
Post-employment benefits	9,694	9,344	8,556	8,225
Total	167,282	185,724	145,768	166,496

8. Cash and cash equivalents

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Cash	46,566	46,526	43,083	43,609
Bank deposits	1,567,018	657,224	1,171,008	565,097
Total	<u>1,613,584</u>	<u>703,750</u>	<u>1,214,091</u>	<u>608,706</u>

The Company has pledged the bank accounts used to deposit moneys received for work on the MRT Chalong Ratchadham Line Project (Note 12) and transferred rights to debit or withdraw from the deposit accounts used to make payment of loans and related financial fees to a group of lenders to secure the Company's loan, as described in Note 27 to the financial statements.

As at 31 December 2020, the balance of the pledged bank account amounted to Baht 1,028 (2019: Baht 1,026).

9. Current investments

(Unit: Thousand Baht)

	2019	
	Consolidated financial statements	Separate financial statements
Investments in trading securities		
Unit trusts	1,087,425	1,066,248
Add: Unrealised gain on changes in value of investments	70,321	70,310
Unit trusts - Fair value	<u>1,157,746</u>	<u>1,136,558</u>
Total current investments	<u>1,157,746</u>	<u>1,136,558</u>

10. Bank deposit for unearned fare box revenue

This bank account is a reserve account set aside in compliance with the Notification of the Bank of Thailand applicable to electronic card businesses. These funds cannot be used for any purpose other than making payment for fare box revenue.

11. Trade and other receivables

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
<u>Trade receivables</u>				
Trade receivables				
- Related parties (Note 7)	349,988	337,040	351,259	341,266
- Unrelated parties	165,407	137,513	134,225	109,798
Less: Allowance for expected credit losses				
(2019: Allowance for doubtful debts)	(390)	(938)	(390)	-
Total trade receivables - net	<u>515,005</u>	<u>473,615</u>	<u>485,094</u>	<u>451,064</u>
<u>Other receivables</u>				
Other receivables				
- Related parties (Note 7)	-	111	19,795	16,696
- Unrelated parties	29,098	3,308	3,690	2,616
Accrued income				
- Related parties (Note 7)	-	-	11	-
- Unrelated parties	4,800	4,753	4,161	3,920
Total other receivables	<u>33,898</u>	<u>8,172</u>	<u>27,657</u>	<u>23,232</u>
Trade and other receivables - net	<u>548,903</u>	<u>481,787</u>	<u>512,751</u>	<u>474,296</u>

Most of the trade receivables of the Group was within their credit terms or past due up to 3 months. As at 31 December 2020, the outstanding balances of trade receivables in the consolidated financial statements that are one year past due amounted to approximately Baht 0.3 million (2019: Baht 2 million) (Separate financial statements: Nil).

Set out below is the movement in the allowance for expected credit losses of trade and other receivables.

	(Unit: Thousand Baht)	
	Consolidated	Separate
	<u>financial statements</u>	<u>financial statements</u>
As at 1 January 2020	938	-
Provision for expected credit losses	390	390
Amount written off	(938)	-
As at 31 December 2020	<u>390</u>	<u>390</u>

12. Receivable under the concession agreement

	(Unit: Thousand Baht) Consolidated and Separate financial statements
Net book value as at 1 January 2020	10,860,415
Collection	(1,649,683)
Net book value as at 31 December 2020	9,210,732
Current	1,649,683
Non-current	7,561,049
Total receivable under the concession agreement	9,210,732

Receivable under the concession agreement is a receivable for M&E Systems (Inclusive of VAT) of Phase 1 of the MRT Chalong Ratchadham Line Project as described in Note 1.1 B.2 to the financial statements. The MRTA will pay the remuneration and interest in the form of monthly installments until 2026. The Company transferred rights to receive cash from receivable under the concession agreement to the group of lenders, in settlement of long-term loans from financial institutions, as described in Notes 27.2 and 27.3 to the financial statements.

Amounts receivable under the concession agreement that are due in over 5 years amount to approximately Baht 962 million and carry interest rate of FDR plus stipulated margin.

Interest income for M&E Systems for the year end 31 December 2020 amounted to Baht 277 million (2019: Baht 380 million).

13. Other current financial assets

Other current financial assets are the investment in trading securities designated at FVTPL.

14. Other non-current financial assets

	(Unit: Thousand Baht) 2020 Consolidated and Separate financial statements
<u>Equity instruments designated at FVOCI</u>	
Equity instruments of listed companies	
- CK Power Public Company Limited	6,376,867
- TTW Public Company Limited	9,063,870
Equity instruments of non-listed company	
- Eastern High-Speed Rail Linking Three Airports Co., Ltd	400,000
Total other non-current financial assets	15,840,737

Equity instruments designated at FVOCI include listed and non-listed equity investments which the Group considers these investments to be strategic in nature.

15. Investments in subsidiaries

Details of investments in subsidiaries as presented in separate financial statements are as follows:

(Unit: Million Baht)

Company's name	Registered capital		Paid-up capital		Proportion of investment		Cost	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
					(percent)			
Northern Bangkok Expressway Company Limited	6,000	6,000	5,250	5,250	99.99	99.99	2,604	2,604
Bangkok Metro Networks Limited	254	254	254	254	90.52	89.67	507	495
Total cost							3,111	3,099
Allowance for impairment							(2,466)	(2,466)
Net book value							645	633

In March 2019, the Company purchased 5 million ordinary shares of Bangkok Metro Networks Limited ("BMN") (equal to 20 percent of its issued and paid-up share capital) from its existing shareholders, for a total of Baht 269 million. As a result of this transaction, its shareholding changed from 69.67 percent to 89.67 percent.

In July 2020, the Company purchased 0.2 million ordinary shares (equal to 0.85 percent of its issued and paid-up share capital) from its existing shareholders, for a total of Baht 11 million. As a result of this transaction, its shareholding changed from 89.67 percent to 90.52 percent.

The purchase transaction of investment in the subsidiary was detailed below.

(Unit: Thousand Baht)

	Consolidated financial statements	
	<u>2020</u>	<u>2019</u>
Purchase price of investment in subsidiary	11,471	269,240
Less: Non-controlling interests of subsidiary adjusted	(3,772)	(88,068)
Capital deficit from change in shareholding interest in subsidiary	7,699	181,172

16. Investments in associate

During the year 2019, the Company sold 33 million ordinary shares of TTW Public Company Limited (“TTW”) amounting to Baht 399 million, and recorded gains on sale of investment in this associated company of Baht 122 million and Baht 217 million in profit or loss in the consolidated and separate financial statements, respectively. As a result, its equity interest of TTW decreased to 18.47 percent.

On 29 May 2019, a meeting of the Company’s Board of Directors passed a resolution to approve the change in the purpose of investing in TTW shares and passed a resolution to approve the reclassification of the investment in TTW from investment in associated company to investment in available-for-sale securities, which was consistent with the approval of the change in the purpose of investing in TTW shares from holding for long-term investment in order to receive returns in the form of interest and dividends to holding to convert to cash when the business opportunity and timing are appropriate.

Subsequently, the Company reclassified the investment in TTW from investment in associated company to investment in available-for-sale securities, which is consistent with the reduction of its interest in that company’s equity and the purpose of holding the investment. The Company recorded a gain of Baht 3,409 million as a result of the reclassification of the investment in profit or loss in the consolidated financial statements for the year ended 31 December 2019.

Share of comprehensive income and dividend received

During the year ended 31 December 2019, the Company has recognised its share of profit/loss from investments in associate in the consolidated financial statements and dividend income in the separate financial statements as follows:

Company's name	(Unit: Million Baht)	
	Consolidated financial statements	Separate financial statements
	Share of other comprehensive	
	Share of profit from investments in an associate	income from investments in an associate Dividend received
TTW Public Company Limited	173	(2) 231

17. Other long-term investments

(Unit: Thousand Baht)		
2019		
	Consolidated	Separate
	financial statements	financial statements
Investment in available-for-sale securities		
CK Power Public Company Limited		
- Ordinary shares	5,178,082	2,813,840
- Warrants	93,033	114,767
TTW Public Company Limited		
- Ordinary shares	9,432,320	4,061,076
Add: Unrealised gain on changes in value of investments	1,993,392	9,707,144
Investment in available-for-sale securities - Net	16,696,827	16,696,827
Long-term investment		
Eastern High-Speed Rail Linking		
Three Airports Co., Ltd	400,000	400,000
Total other long-term investments - Net	17,096,827	17,096,827

18. Investment properties

As at 31 December 2020, the Company has investment properties, consisting of land, which is presented in the consolidated and separate financial statements at its fair value of Baht 321 million (2019: Baht 321 million).

The fair value of above investment properties has been determined based on the valuation performance by an accredited independent valuer, using market approach.

19. Building and equipment

(Unit: Thousand Baht)

	Consolidated financial statements				
	Building and construction improvement	Furniture, fixture and office equipment	Vehicles	Asset during installation	Total
Cost:					
1 January 2019	75,779	211,935	460,252	593	748,559
Additions	11,622	13,244	7,887	13,798	46,551
Disposals/Write off	-	(9,688)	(12,147)	-	(21,835)
Reclassification/ Transfer in (out)	2,130	(32)	-	(593)	1,505
31 December 2019	89,531	215,459	455,992	13,798	774,780
Transfers to right-of-use assets					
(Note 4)	-	-	(8,865)	-	(8,865)
Additions	3,274	31,229	44,668	67,396	146,567
Disposals/Write off	-	(3,168)	(24,291)	-	(27,459)
Reclassification/ Transfer in (out)	193	15,116	-	(12,730)	2,579
31 December 2020	92,998	258,636	467,504	68,464	887,602
Accumulated depreciation:					
1 January 2019	45,246	157,904	221,472	-	424,622
Depreciation for the year	9,824	21,848	28,579	-	60,251
Accumulated depreciation on					
disposals/write off	-	(9,638)	(11,832)	-	(21,470)
31 December 2019	55,070	170,114	238,219	-	463,403
Transfers to right-of-use assets					
(Note 4)	-	-	(4,297)	-	(4,297)
Depreciation for the year	10,694	27,910	36,440	-	75,044
Accumulated depreciation on					
disposals/write off	-	(3,137)	(22,689)	-	(25,826)
31 December 2020	65,764	194,887	247,673	-	508,324
Net book value:					
31 December 2019	34,461	45,345	217,773	13,798	311,377
31 December 2020	27,234	63,749	219,831	68,464	379,278
Depreciation for the year					
2019 (Baht 29 million included in cost of services and the balance in selling and administrative expense)					60,251
2020 (Baht 37 million included in cost of services and the balance in selling and administrative expense)					75,044

(Unit: Thousand Baht)

	Separate financial statements				
	Building and construction improvement	Furniture, fixture and office equipment	Vehicles	Asset during installation	Total
Cost:					
1 January 2019	61,336	155,884	448,893	-	666,113
Additions	-	10,253	7,887	13,525	31,665
Disposals/Write off	-	(9,238)	(12,147)	-	(21,385)
31 December 2019	61,336	156,899	444,633	13,525	676,393
Transfers to right-of-use assets					
(Note 4)	-	-	(5,775)	-	(5,775)
Additions	1,100	30,380	43,122	62,681	137,283
Disposals/Write off	-	(3,151)	(24,291)	-	(27,442)
Reclassification/ Transfer in (out)	-	15,036	-	(12,457)	2,579
31 December 2020	62,436	199,164	457,689	63,749	783,038
Accumulated depreciation:					
1 January 2019	38,990	127,085	217,497	-	383,572
Depreciation for the year	6,061	11,479	26,963	-	44,503
Accumulated depreciation on disposals/write off	-	(9,188)	(11,832)	-	(21,020)
31 December 2019	45,051	129,376	232,628	-	407,055
Transfers to right-of-use assets					
(Note 4)	-	-	(3,520)	-	(3,520)
Depreciation for the year	5,854	17,379	35,380	-	58,613
Accumulated depreciation on disposals/write off	-	(3,120)	(22,689)	-	(25,809)
31 December 2020	50,905	143,635	241,799	-	436,339
Net book value:					
31 December 2019	16,285	27,523	212,005	13,525	269,338
31 December 2020	11,531	55,529	215,890	63,749	346,699
Depreciation for the year					
2019 (Baht 20 million included in cost of services and the balance in selling and administrative expense)					44,503
2020 (Baht 26 million included in cost of services and the balance in selling and administrative expense)					58,613

As at 31 December 2020, the Group have certain items of building improvement and equipment which were fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 278 million (2019: Baht 265 million) (The Company only: Baht 266 million, 2019: Baht 255 million).

20. Rights to operate expressway sectors

(Unit: Thousand Baht)

	Consolidated financial statements		
	Rights to operate completed expressway sector	Project costs under construction	Total
Cost:			
1 January 2019	86,121,683	5,608	86,127,291
Additions	320,200	437,439	757,639
Transfer in (out)	5,608	(5,608)	-
31 December 2019	86,447,491	437,439	86,884,930
Additions	86,184	691,283	777,467
Write off	-	(50)	(50)
Reclassification/ Transfer in (out)	436,321	(437,389)	(1,068)
31 December 2020	86,969,996	691,283	87,661,279
Accumulated amortisation:			
1 January 2019	50,981,271	-	50,981,271
Amortisation for the year	3,650,292	-	3,650,292
31 December 2019	54,631,563	-	54,631,563
Amortisation for the year	1,328,195	-	1,328,195
31 December 2020	55,959,758	-	55,959,758
Net book value:			
31 December 2019	31,815,928	437,439	32,253,367
31 December 2020	31,010,238	691,283	31,701,521
Amortisation for the year			
2019			3,650,292
2020			1,328,195

(Unit: Thousand Baht)

	Separate financial statements		
	Rights to operate completed expressway sector	Project costs under construction	Total
Cost:			
1 January 2019	73,277,393	5,608	73,283,001
Additions	320,200	432,994	753,194
Transfer in (out)	5,608	(5,608)	-
31 December 2019	73,603,201	432,994	74,036,195
Additions	85,199	690,903	776,102
Write off	-	(50)	(50)
Reclassification/ Transfer in (out)	431,876	(432,944)	(1,068)
31 December 2020	74,120,276	690,903	74,811,179
Accumulated amortisation:			
1 January 2019	43,740,812	-	43,740,812
Amortisation for the year	3,046,735	-	3,046,735
31 December 2019	46,787,547	-	46,787,547
Amortisation for the year	1,058,365	-	1,058,365
31 December 2020	47,845,912	-	47,845,912
Net book value:			
31 December 2019	26,815,654	432,994	27,248,648
31 December 2020	26,274,364	690,903	26,965,267
Amortisation for the year			
2019			3,046,735
2020			1,058,365

21. Rights to use sites for expressway construction

The net book value of rights to use sites for expressway construction as at 31 December 2020 and 2019 are presented below.

	(Unit: Thousand Baht)	
	Consolidated and Separate	
	financial statements	
	<u>2020</u>	<u>2019</u>
Cost	6,644,790	6,644,790
Less: Accumulated amortisation	(6,644,790)	(6,583,323)
Net book value	-	61,467

A reconciliation of the net book value of the rights to use sites for expressway construction for the years 2020 and 2019 are summarised below.

	(Unit: Thousand Baht)	
	Consolidated and Separate	
	financial statements	
	<u>2020</u>	<u>2019</u>
Net book value at the beginning of the year	61,467	390,198
Amortisation for the year	(61,467)	(328,731)
Net book value at the end of the year	-	61,467

The rights to use sites for expressway construction is a part of rights to operate expressway sectors.

22. Intangible asset under concession agreement of the MRT Blue Line Project

(Unit: Thousand Baht)

	Consolidated financial statements		
	Intangible asset under concession agreement of the MRT Blue Line Project	Project costs under construction	Total
Cost:			
1 January 2019	22,015,349	17,578,869	39,594,218
Additions	752,415	6,062,954	6,815,369
Reclassification	(1,505)	-	(1,505)
Interest cost	28,649	332,224	360,873
Transfer in (out)	11,226,336	(11,226,336)	-
31 December 2019	34,021,244	12,747,711	46,768,955
Additions	2,259,577	385,214	2,644,791
Interest cost	59,569	-	59,569
Write off	-	(110)	(110)
Transfer in (out)	11,620,270	(11,620,270)	-
31 December 2020	47,960,660	1,512,545	49,473,205
Accumulated amortisation:			
1 January 2019	4,166,662	-	4,166,662
Amortisation for the year	263,394	-	263,394
31 December 2019	4,430,056	-	4,430,056
Amortisation for the year	359,430	-	359,430
31 December 2020	4,789,486	-	4,789,486
Net book value:			
31 December 2019	29,591,188	12,747,711	42,338,899
31 December 2020	43,171,174	1,512,545	44,683,719
Amortisation for the year			
2019			263,394
2020			359,430

(Unit: Thousand Baht)

Separate financial statements			
	Intangible asset under concession agreement of the MRT Blue Line Project	Project costs under construction	Total
Cost:			
1 January 2019	21,419,563	17,562,246	38,981,809
Additions	706,726	6,061,162	6,767,888
Interest cost	28,649	332,224	360,873
Transfer in (out)	11,209,713	(11,209,713)	-
31 December 2019	33,364,651	12,745,919	46,110,570
Additions	2,244,984	385,157	2,630,141
Interest cost	59,569	-	59,569
Transfer in (out)	11,619,615	(11,619,615)	-
31 December 2020	47,288,819	1,511,461	48,800,280
Accumulated amortisation:			
1 January 2019	3,892,303	-	3,892,303
Amortisation for the year	219,561	-	219,561
31 December 2019	4,111,864	-	4,111,864
Amortisation for the year	311,417	-	311,417
31 December 2020	4,423,281	-	4,423,281
Net book value:			
31 December 2019	29,252,787	12,745,919	41,998,706
31 December 2020	42,865,538	1,511,461	44,376,999
Amortisation for the year			
2019			219,561
2020			311,417

During the year, the Company has capitalised the borrowing cost as part of intangible asset under concession agreement of the MRT Blue Line Project. The weighted average rate used to determine the amount of borrowing cost eligible from capitalisation was 2.55 percent (2019: 3.17 percent).

23. Project cost of the MRT Chalong Ratchadham Line

The net book value of project cost of the MRT Chalong Ratchadham Line as at 31 December 2020 and 2019 is presented below.

	(Unit: Thousand Baht)	
	Consolidated and Separate financial statements	
	<u>2020</u>	<u>2019</u>
Cost	773,360	731,769
Less: Accumulated amortisation	(112,924)	(86,818)
Net book value	<u>660,436</u>	<u>644,951</u>

A reconciliation of the net book value of project cost of the MRT Chalong Ratchadham Line for the years 2020 and 2019 are summarised below.

	(Unit: Thousand Baht)	
	Consolidated and Separate financial statements	
	<u>2020</u>	<u>2019</u>
Net book value at the beginning of the year	644,951	654,691
Additions	41,591	16,309
Amortisation for the year	(26,106)	(26,049)
Net book value at the end of the year	<u>660,436</u>	<u>644,951</u>

24. Other intangible assets

The net book value of other intangible assets which are computer software as at 31 December 2020 and 2019 is presented below.

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Cost	227,563	211,655	213,362	199,432
Less: Accumulated amortisation	(164,398)	(137,628)	(155,096)	(130,159)
Net book value	<u>63,165</u>	<u>74,027</u>	<u>58,266</u>	<u>69,273</u>

A reconciliation of the net book value of other intangible assets for the years 2020 and 2019 is presented below.

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Net book value at the beginning of the year	74,027	84,778	69,273	80,301
Acquisition	17,419	15,722	15,441	14,135
Reclassification	(1,511)	-	(1,511)	-
Amortisation for the year	(26,770)	(26,473)	(24,937)	(25,163)
Net book value at the end of the year	<u>63,165</u>	<u>74,027</u>	<u>58,266</u>	<u>69,273</u>

25. Short-term loans from financial institutions

	Interest rate (Percent per annum)	(Unit: Thousand Baht)	
		Consolidated and Separate	
		financial statements	
		<u>2020</u>	<u>2019</u>
Promissory notes	At the fixed rate	1,500,000	3,250,000
Short-term loan	1M BIBOR plus stipulated margin	1,500,000	-
Total		<u>3,000,000</u>	<u>3,250,000</u>

26. Trade and other payables

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Trade payables - related parties (Note 7)	518,530	882,909	641,665	915,381
Trade payables - unrelated parties	600,037	432,705	523,602	394,213
Accrued interest - unrelated parties	201,838	205,868	201,386	205,244
Accrued expense - related parties (Note 7)	108,532	84,099	108,532	84,099
Accrued expense - unrelated parties	252,159	304,224	212,307	281,327
Other payables	63,556	28,677	62,265	26,537
Total trade and other payables	<u>1,744,652</u>	<u>1,938,482</u>	<u>1,749,757</u>	<u>1,906,801</u>

27. Long-term loans from financial institutions

Loans	Credit facility (Million Baht)	Objective	Interest rate (percent)	Period of repayment	(Unit: Thousand Baht)			
					Consolidated financial statements		Separate financial statements	
					2020	2019	2020	2019
27.1 Long-term loan (Fully drew down)	8,000	Working capital	At the fixed rate	Repayment installments in every six month commencing May 2017 to May 2021	1,500,000	2,500,000	1,500,000	2,500,000
27.2 Tranche A (Fully drew down)	13,557	To invest in the MRT Chalong Ratchadham Line Project	Interest rate of FDR plus stipulated margins	Repayment in monthly installments commencing October 2017 to July 2026	8,569,024	10,103,776	8,569,024	10,103,776
27.3 Tranche B (Fully drew down)	62	To invest in the MRT Chalong Ratchadham Line Project	Interest rate of FDR plus stipulated margins	Repayment in monthly installments commencing October 2017 to July 2026	39,136	46,144	39,136	46,144
27.4 Long-term loan (Fully drew down)	14,000	To invest in the MRT Blue Line Extension Project	Interest rate of 6M THBFX plus stipulated margins	Repayment in quarterly installments commencing December 2021 to December 2035	13,999,998	8,700,000	13,999,998	8,700,000
27.5 Long-term loan (Fully drew down)	3,630	Repayment for loan obtained from the Company	Interest rate of 6M FDR plus stipulated margins	Repayment in quarterly installments within September 2024	3,317,820	3,630,000	-	-
Total	39,249				27,425,978	24,979,920	24,108,158	21,349,920
Less: Current portion of long-term loans					(3,745,161)	(3,166,120)	(3,091,761)	(2,541,760)
Less: Deferred financial fees					(10,762)	(68,239)	(13,439)	(68,239)
Long-term loans - net of current portion					23,670,055	21,745,561	21,002,958	18,739,921

Movements in the long-term loans account for the year ended 31 December 2020 and 2019 are as follows:

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Balance at the beginning of the year	24,979,920	21,491,680	21,349,920	19,891,680
Add: Drawdown during the year	5,299,998	6,530,000	5,299,998	4,500,000
Less: Repayment during the year	(2,853,940)	(3,041,760)	(2,541,760)	(3,041,760)
Balance at the end of the year	27,425,978	24,979,920	24,108,158	21,349,920

(Unit: Thousand Baht)

For the long-term loan number 27.1

The Company entered into an interest rate swap contract to change the interest rate from a floating rate of 6M THBFIX plus stipulated margins to a fixed rate.

Under the loan agreements, the Company must comply with normal financial covenants relating to various matters, such as the maintenance of debt service coverage ratio and debt to equity ratio.

For the long-term loans number 27.2 to 27.3

The Company pledged bank accounts used to deposit moneys received for work on the M&E system of Phase 1 of the MRT Chalong Ratchadham Line (Note 8) and transferred rights to receive payments for such work to the group of lenders (Note 12) as collateral to secure these loans. The Company had interest expenses amounting to Baht 277 million on such loans for the year ended 31 December 2020 (2019: Baht 380 million).

Under the Credit Facility Agreements, the Company must comply with normal financial covenants relating to various matters, such as maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

For Long-term loan number 27.4

The Company entered into interest rate swap agreements for parts of these loans to change the interest rate from a floating rate of 6M THBFIX plus a stipulated margins to a fixed rate.

Under the Credit Facility Agreements, the Company must comply with normal financial covenants relating to various matters, such as maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

For Long-term loan number 27.5

This is a loan of a subsidiary company. Under the loan agreement, the subsidiary must comply with normal financial covenants relating to various matters, such as maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

28. Debentures

Debentures as at 31 December 2020 and 2019 have the following details:

					(Unit: Thousand Baht)	
					Consolidated and Separate	
					financial statements	
Type of debenture	Term	Issuance date	Maturity date	Interest rate	2020	2019
					(% per annum)	
1. No. 1/2016						
- Tranche 2	5 years	24 June 2016	24 June 2021	2.52	1,615,000	1,615,000
- Tranche 3	7 years	24 June 2016	24 June 2023	3.00	2,000,000	2,000,000
- Tranche 4	10 years	24 June 2016	24 June 2026	3.30	3,335,000	3,335,000
- Tranche 5	12 years	24 June 2016	24 June 2028	3.61	2,750,000	2,750,000
2. No. 2/2016	12 years	11 August 2016	24 June 2028	3.61	500,000	500,000
3. No. 3/2016						
- Tranche 1	4 years	21 October 2016	21 October 2020	2.62	-	2,500,000
- Tranche 2	9 years	21 October 2016	21 October 2025	3.78	2,500,000	2,500,000
- Tranche 3	11 years	21 October 2016	21 October 2027	3.95	3,000,000	3,000,000
4. No. 1/2017						
- Tranche 1	5 years	7 September 2017	7 September 2022	2.65	2,000,000	2,000,000
- Tranche 2	7 years	7 September 2017	7 September 2024	3.10	3,000,000	3,000,000
5. No. 1/2018						
- Tranche 1	3 years	5 April 2018	5 April 2021	2.05	3,000,000	3,000,000
- Tranche 2	5 years	5 April 2018	5 April 2023	2.46	3,500,000	3,500,000
- Tranche 3	7 years	5 April 2018	5 April 2025	3.01	3,500,000	3,500,000
6. No. 1/2019						
- Tranche 1	3 years	9 May 2019	9 May 2022	2.65	1,000,000	1,000,000
- Tranche 2	5 years	9 May 2019	9 May 2024	3.18	2,000,000	2,000,000
- Tranche 3	7 years	9 May 2019	9 May 2026	3.59	1,000,000	1,000,000
- Tranche 4	10 years	9 May 2019	9 May 2029	3.84	1,000,000	1,000,000
7. No. 1/2020						
- Tranche 1	4 years	10 June 2020	10 June 2024	2.88	1,000,000	-
- Tranche 2	10 years	10 June 2020	10 June 2030	3.50	1,300,000	-
- Tranche 3	12 years	10 June 2020	10 June 2032	3.78	700,000	-
Total					38,700,000	38,200,000
Less: Current portion of debenture					(4,615,000)	(2,500,000)
Less: Deferred debenture issuing cost					(27,076)	(29,173)
Debentures - net of current portion					34,057,924	35,670,827

Movements in the debentures account for the year ended 31 December 2020 and 2019 are summarised below.

	(Unit: Thousand Baht)	
	Consolidated and Separate financial statements	
	<u>2020</u>	<u>2019</u>
Balance at the beginning of the year	38,200,000	38,200,000
Add: Issuance of debentures during the year	3,000,000	5,000,000
Less: Redemption of debentures during the year	(2,500,000)	(5,000,000)
Balance at the end of the year	<u>38,700,000</u>	<u>38,200,000</u>

All of the Company's debentures are registered debentures, unsubordinated, and unsecured, without a debenture holders' representative, except for the debenture number 6 and 7 which have a holders' representative, that pay interest semi-annually. The debentures contain covenants relating to maintenance of interest bearing debt to equity ratio.

29. Unearned revenue from advertising management rights

The Company received remuneration of Baht 35 million from the subsidiary for granting the rights to manage advertising services through the Passenger Information Display System (PIDs), as described in Note 1.1 C. to the financial statements, on the execution date of the agreement (1 January 2010) and this rights will expire in July 2029. The amount is presented under the caption of "Unearned revenue from advertising management rights" and is being amortised to revenue throughout the contract period.

Movements in unearned revenue from advertising management rights account in the separate financial statements are summarised below.

	(Unit: Thousand Baht)
Balance as at 1 January 2019	13,114
Less: Recognise to revenue during the year	<u>(1,248)</u>
Balance as at 31 December 2019	11,866
Less: Recognise to revenue during the year	<u>(1,248)</u>
Balance as at 31 December 2020	10,618
Less: Current portion	<u>(1,249)</u>
Unearned revenue from advertising management rights - net of current portion	<u>9,369</u>

30. Leases

The Group, as a lessee, has lease contracts for various items of equipment used in its operations. Leases generally have lease terms between 3 - 5 years.

a) Right-of-use assets

Movements of right-of-use assets for the year ended 31 December 2020 are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements		
	Buildings and Construction improvement	Vehicles	Total
1 January 2020 (Note 4)	54,805	43,634	98,439
Additions	7,889	30,217	38,106
Decrease	-	(847)	(847)
Depreciation for the year	(29,884)	(19,300)	(49,184)
31 December 2020	32,810	53,704	86,514

(Unit: Thousand Baht)

	Separate financial statements		
	Buildings and Construction improvement	Vehicles	Total
1 January 2020 (Note 4)	11,992	41,321	53,313
Additions	7,889	27,769	35,658
Decrease	-	(847)	(847)
Depreciation for the year	(11,586)	(18,104)	(29,690)
31 December 2020	8,295	50,139	58,434

b) Lease liabilities

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Lease payments	90,358	-	61,569	-
Less: Deferred interest expenses	(3,933)	-	(3,057)	-
Total	86,425	-	58,512	-
Less: Portion due within one year	(45,513)	-	(25,671)	-
Lease liabilities - net of current portion	40,912	-	32,841	-

A maturity analysis of lease payments is disclosed in Note 48 to the financial statements under the liquidity risk.

c) Expenses relating to leases that are recognised in profit or loss

	(Unit: Thousand Baht)	
	For the year ended 31 December 2020	
	Consolidated	Separate
	financial statements	financial statements
Depreciation expense of right-of-use assets	49,184	29,690
Interest expense on lease liabilities	2,661	1,777
Expense relating to short-term leases and leases of low-value assets	22,883	22,109

d) Others

The Group had total cash outflows for leases for the year ended 31 December 2020 of Baht 62 million, including the cash outflow related to short-term lease and leases of low-value assets. Moreover, the Group had non-cash additions to right-of-use assets and lease liabilities of Baht 38 million (Separate financial statements: Baht 36 million).

31. Provision for long-term employee benefits

Provision for long-term employee benefits, which represents compensation payable to employees after they retire, are as follows:

	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Provision for long-term employee benefits				
at beginning of the year	886,390	686,898	862,915	664,554
Included in profit or loss:				
Current service cost	101,419	100,972	97,808	97,728
Interest cost	14,525	12,823	13,976	12,232
Losses on settlement	146	1,026	146	1,026
Included in other comprehensive income:				
Actuarial (gain) loss arising from				
- Demographic assumptions changes	11,592	617	11,592	600
- Financial assumptions changes	(34,677)	107,476	(34,677)	108,955
- Experience adjustments	(10,188)	(12,422)	(10,188)	(11,180)
Benefits paid during the year	(36,876)	(11,000)	(36,876)	(11,000)
Provision for long-term employee benefits				
at end of the year	<u>932,331</u>	<u>886,390</u>	<u>904,696</u>	<u>862,915</u>

The Group expects to pay Baht 19 million of long-term employee benefits during the next year (Separate financial statements: Baht 19 million) (2019: Baht 43 million, Separate financial statements: Baht 43 million).

As at 31 December 2020, the weighted average duration of the liabilities for long-term employee benefit is 12.49 - 17.55 years (Separate financial statements: 12.68 - 17.55 years) (2019: 12.43 - 17.78 years, Separate financial statements: 12.43 - 17.78 years).

Significant actuarial assumptions are summarised below.

	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Discount rate	1.5, 1.8, 2.3	1.6, 1.7, 2.3	1.5, 1.8	1.6, 1.7
Future salary increase rate	4.6, 5, 5.5	4.6, 5.5	5, 5.5	5.5
Staff turnover rate (depending on age)	1.0 - 7.0	1.0 - 8.0	1.0 - 6.0	1.0 - 8.0

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2020 and 2019 are summarised below.

(Unit: Million Baht)

	2020			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(90)	107	(87)	104
Future salary increase rate	103	(88)	99	(85)
Staff turnover rate	(94)	70	(91)	69

(Unit: Million Baht)

	2019			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(83)	99	(81)	96
Future salary increase rate	94	(81)	91	(79)
Staff turnover rate	(87)	64	(84)	63

32. Statutory reserve

Pursuant to Section 116 of the Public Company Limited Act B.E. 2535, the Company is required to set aside to a statutory reserve at least 5 percent of its net profit, after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of the registered capital. The statutory reserve is not available for dividend distribution.

33. Toll revenues

33.1 Under the Construction and Management Contract of the Si Rat Expressway Project (the Second Stage Expressway System) and the Bang Pa-In - Pak Kret Expressway Project and the Concession agreements (Amendment) that granted concession extensions, as described in Note 1.1 A. to the financial statements. The Group and the EXAT agreed to share toll revenues receive as follows:

	The Company	The EXAT
	(Percent)	(Percent)
Urban Network (FES and SES Sector A and Sector B)	40	60
Suburban Network (SES Sector C)	100	Nil
Suburban Network (SES Sector D)	100	Nil
Bang Pa-In - Pak Kret Expressway	100	Nil

- 33.2 Under a concession agreement of the Si Rat - Outer Ring Road Expressway Project, the Company and the EXAT agreed to share toll revenues receive as follows:

	The Company (Percent)	The EXAT (Percent)
<u>The Si Rat - Outer Ring Road Expressway</u>		
From the construction completion date of relevant Sections		
until end of contract period (14 December 2042)	100	Nil

34. Revenue from commercial development business

Revenue from commercial development business derived from various sources of income, as presented in the separate financial statements for the year ended 31 December 2020, consisted of revenue from expressway system amounting to Baht 17 million (2019: Baht 44 million) and revenue from rail system amounting to Baht 706 million (2019: Baht 675 million). This included revenue from advertising management rights amounting to Baht 1 million (2019: Baht 1 million) (Note 29).

35. Revenue from telecommunications network services and income from provision of space and facilities for the installation of telecommunications equipment

The Company's revenue from telecommunications network services and income from provision of space and facilities for the installation of telecommunications equipment for the year ended 31 December 2020 was as follows:

	(Unit: Thousand Baht)
Telecommunications Business License Type 2	238,108
with its own telecommunication network	
Income from provision of space and facilities for the	11,440
installation of telecommunications equipment	
	<u>249,548</u>

36. Remuneration from fare box revenue and commercial development revenue

36.1 The Concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line

The Company agrees to apportion revenues derived under the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement to the MRTA. These consist of remuneration from fares, remuneration from commercial development, apportionment of profit in excess of stipulated Return on Equity (ROE) and any benefit derived from the interest rate on a loan being lower the rate specified in the Concession Agreement.

As described in Note 1.1 B.1 to the financial statements, the Company signed the MRT Blue Line Project Concession Agreement on 31 March 2017. Under the MRT Blue Line Concession Agreement, the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement is deemed to be part of the MRT Blue Line Concession Agreement, and only the clauses relating the rights, duties and provisions with respect to fares, fare rates and payment of remuneration to the MRTA will remain in effect until the end of the concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line.

Remuneration paid to the MRTA under the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement is summarised in Part I of Note 36.2 to the financial statements.

36.2 The MRT Blue Line Concession agreement

Under the MRT Blue Line Project concession agreement dated 31 March 2017, the Company agrees to apportion revenue under the concession agreement to the MRTA, which can be divided into two parts, as follows:

Part I: Remuneration from fares and commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line earned under the related concession agreement until 1 July 2029, with detail as follow:

a) Remuneration from fare revenue

Annual remuneration

The Company has agreed to apportion fare revenue to the MRTA on an annual basis for the period from 2 July 2014 to 1 July 2029. The total amount payable is Baht 43,567 million (inclusive of VAT) divided into annual payments in amounts stipulated in the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement.

As at 31 December 2020, the Company recorded accumulated annual remuneration totaling Baht 9,158 million (2019: Baht 6,778 million).

Percentage remuneration

The Company has agreed to apportion to the MRTA 1 percent to 15 percent of the fare revenue of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (inclusive of VAT) from 2 July 2004 to 1 July 2029, in the form of monthly payments.

b) Remuneration from commercial development revenues

Annual remuneration

The Company has agreed to apportion commercial development revenues to the MRTA on an annual basis for the period from 2 July 2004 to 1 July 2029. The total amount payable is Baht 930 million (inclusive of VAT) divided into annual payments in amounts stipulated in the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement.

As at 31 December 2020, the Company recorded accumulated annual remuneration totaling Baht 505 million (2019: Baht 455 million).

Percentage remuneration

The Company has agreed to apportion to the MRTA 7 percent of commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (inclusive of VAT) from 2 July 2004 to 1 July 2029, in the form of monthly payments.

Part II: Remuneration from fares and commercial development revenues of the MRT Blue Line Extension Project from 31 March 2017 until end of the MRT Blue Line concession period and remuneration from fares and commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line from 2 July 2029 until end of the MRT Blue Line concession period.

The Company is to pay remuneration to MRTA when the Company earns a return on investment over the rate stipulated in the concession agreement, from its operation of the MRT Blue Line Extension Project, as from 31 March 2017, and from its operation of the MRTA Initial System Project - Chaloem Ratchamongkhon Line, as from 2 July 2029, until the end of the MRT Blue Line concession period. The compensation rates are as stipulated in the MRT Blue Line concession agreement

37. Finance cost

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Interest expense on financial liabilities	1,910,296	1,560,096	1,813,237	1,483,606
Interest expense on lease liabilities	2,661	246	1,777	138
Interest paid from interest rate swaps	175,715	109,987	175,715	109,987
Others financial cost	23,835	52,733	23,028	49,711
Total	<u>2,112,507</u>	<u>1,723,062</u>	<u>2,013,757</u>	<u>1,643,442</u>

38. Expenses by nature

Significant expenses classified by nature are as follows:

	Consolidated		(Unit: Thousand Baht)	
			Separate	
	financial statements		financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Amortisation and depreciation	1,857,980	4,026,463	1,504,205	3,362,011
Salaries, wages and other employee benefits				
for the Group's staff	2,462,306	2,365,977	2,339,201	2,261,593
Salary, wages and other benefits				
for the EXAT's employees	861,823	882,421	704,197	722,169
Repair and maintenance expenses	2,241,023	1,877,830	2,198,276	1,827,233
Compensation for site acquisition cost	61,467	397,839	61,467	397,839
Utilities expenses	793,068	645,492	772,423	624,983
Project remuneration expenses	350,690	393,652	350,690	393,652
Expenses with respect to facilitation and				
safety on expressway and stations	589,930	523,786	554,142	484,509
Insurance expenses	134,018	105,817	127,472	99,738

39. Income tax

Income tax expenses for the years ended 31 December 2020 and 2019 are made up as follows:

	Consolidated financial statements		(Unit: Thousand Baht)	
			Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Current income tax:				
Current income tax for the year	94,096	167,079	-	83,657
Adjustment in respect of current income tax				
of previous year	(750)	(58)	(635)	(58)
Deferred tax:				
Relating to origination and reversal of				
temporary differences	288,573	1,587,921	295,431	514,852
Income tax expense reported in				
 the income statement	<u>381,919</u>	<u>1,754,942</u>	<u>294,796</u>	<u>598,451</u>

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2020 and 2019 are as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Deferred tax related to				
- Unrealised loss from cash flow hedges	(14,622)	(18,175)	(14,622)	(18,175)
- Unrealised gain on valuation of available-for-sale securities	-	120,572	-	1,196,082
- Loss from the change in value of financial assets measured at FVOCI	(339,947)	-	(339,947)	-
- Actuarial gain (loss)	6,654	(19,340)	6,654	(19,880)
Total	<u>(347,915)</u>	<u>83,057</u>	<u>(347,915)</u>	<u>1,158,027</u>

The reconciliation between accounting profit and income tax expense is shown below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Accounting profit before tax	2,436,645	7,206,807	1,992,730	3,522,077
Applicable tax rate	20%	20%	20%	20%
Accounting profit before tax multiplied by applicable tax rate	487,329	1,441,361	398,546	704,415
Adjustment in respect of income tax of previous year	(750)	(58)	(635)	(58)
Effects of elimination entry on the consolidated financial statements	381	17,718	-	-
Effects of:				
Tax-exempt revenues	(96,543)	(49,601)	(96,543)	(95,788)
Share of profit from investment in an associate	-	(34,582)	-	-
Gain on reclassification of investment	-	392,523	-	-
Non-deductible expenses	2,860	806	2,860	806
Additional expense deductions allowed	(9,058)	(9,596)	(5,641)	(6,134)
Others	(2,300)	(3,629)	(3,791)	(4,790)
Total	<u>(105,041)</u>	<u>295,921</u>	<u>(103,115)</u>	<u>(105,906)</u>
Income tax expenses reported in the income statement	<u>381,919</u>	<u>1,754,942</u>	<u>294,796</u>	<u>598,451</u>

The components of deferred tax assets and deferred tax liabilities as at 31 December 2020 and 2019 are as follows:

	Consolidated		(Unit: Thousand Baht)	
	financial statements		Separate	
	2020	2019	2020	2019
Deferred tax assets (liabilities)				
Accrued bonus	37,451	10,923	30,378	9,283
Others accrued expense	3,515	2,503	3,040	2,074
Allowance for expected credit losses				
(2019: Allowance for doubtful accounts)	78	188	78	-
Provision for long-term employee benefits	186,466	177,278	180,939	172,583
Accumulated amortisation - Rights to operate				
expressway sectors	(514,522)	(443,190)	(514,522)	(443,190)
Rights to use sites for expressway construction	-	(12,293)	-	(12,293)
Prepaid project remuneration	(1,273,213)	(828,889)	(1,273,213)	(828,889)
Leases	165	-	124	-
Deferred financial fees	9,663	-	9,128	-
Unused tax loss	162,523	-	162,523	-
Unrealised gain from revaluation of trading				
securities	-	(14,062)	-	(14,062)
Unrealised gain from revaluation in				
available-for-sale securities	-	(398,678)	-	(1,941,429)
Gain from financial assets designated to FVTPL	(16,887)	-	(16,887)	-
Gain from financial assets designated to FVOCI	(1,578,278)	(1,534,825)	(1,578,278)	6,665
Derivative financial liabilities	37,159	22,537	37,159	22,537
Deferred tax assets (liabilities) - net	<u>(2,945,880)</u>	<u>(3,018,508)</u>	<u>(2,959,531)</u>	<u>(3,026,721)</u>
Presentation in the financial statements				
Deferred tax assets	13,651	6,952	-	-
Deferred tax liabilities	<u>(2,959,531)</u>	<u>(3,025,460)</u>	<u>(2,959,531)</u>	<u>(3,026,721)</u>
	<u>(2,945,880)</u>	<u>(3,018,508)</u>	<u>(2,959,531)</u>	<u>(3,026,721)</u>

40. Earnings per share

Basic earnings per share is calculated by dividing profit for the year attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the year.

41. Dividends

Dividends declared for the year ended 31 December 2020 and 2019 in the consolidated and separate financial statements consisted of the following:

Dividends	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)	Paid on
<u>For the year ended 31 December 2020</u>				
Dividend for the second half of the year 2019	Meeting of the Board of Directors on 9 April 2020	1,376	0.09	8 May 2020
<u>For the year ended 31 December 2019</u>				
Dividend for the second half of the year 2018	Annual General Meeting of the shareholders on 26 April 2019	1,376	0.09	22 May 2019
Dividend for the first half of the year 2019	Meeting of the Board of Directors on 9 August 2019	917	0.06	4 September 2019
Total dividend for the year ended 31 December 2019		2,293	0.15	

42. Promotional privileges

The Company has received promotional privileges from the Board of Investment for the investment of the MRT Blue Line Project, pursuant to the investment promotion certificate No. 60-1074-1-00-1-0 issued on 27 July 2017. Subject to certain imposed conditions, the privileges include an exemption from corporate income tax for a period of 8 years from the date the promoted operations begin generating revenues (11 August 2017).

The Company's operating revenues for the years ended 31 December 2020 and 2019, divided between promoted and non-promoted operations, are summarised below.

	Promoted operations		Non-promoted operations		Total	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Revenue from expressway business	-	-	6,942,077	8,852,073	6,942,077	8,852,073
Revenue from rail business	2,613,002	3,139,915	1,906,838	1,882,185	4,519,840	5,022,100
Revenue from commercial development business	-	-	723,607	719,568	723,607	719,568
Other income	408	2,205	1,018,561	1,432,906	1,018,969	1,435,111
Total revenues	<u>2,613,410</u>	<u>3,142,120</u>	<u>10,591,083</u>	<u>12,886,732</u>	<u>13,204,493</u>	<u>16,028,852</u>

(Unit: Thousand Baht)

43. Segment information

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

For management purposes, the Group is organised into business units based on its products and services and have four reportable segments as follows:

- 1) The expressway business segment includes the construction and operation of the expressway.
- 2) The rail business segment includes the operation of the rapid transit system.
- 3) The commercial development business segment includes the rental of retail space, and the provision of advertising media services and telecommunication services inside and outside underground train stations and on expressway.
- 4) Other segments are segments where the Company is employed to operate Udon Ratthaya Expressway project of the subsidiary.

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Segment performance is measured based on operating profit or loss and total assets and on a basis consistent with that used to measure operating profit or loss and total assets in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

The following tables present revenue and profit and total assets information regarding the Group's operating segments for the year ended 31 December 2020 and 2019.

	Expressway business segment		Rail business segment		Commercial development business segment		Other segments		Total segments		Elimination of inter-segment revenues		Consolidation	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Revenue from external customers	8,145	10,302	4,520	5,022	825	783	-	-	13,490	16,107	-	-	13,490	16,107
Inter-segment revenues	-	-	-	-	279	363	209	186	488	549	(488)	(549)	-	-
Total revenues	8,145	10,302	4,520	5,022	1,104	1,146	209	186	13,978	16,656	(488)	(549)	13,490	16,107
Segment profit (loss)	5,017	4,262	(489)	1,014	536	520	-	-	5,064	5,796	-	-	5,064	5,796
Unallocated income and expenses:														
Interest income													296	393
Gain on sale of investments													4	181
Gain on reclassification of investment													-	3,409
Other income													533	314
Share of profit from investments in an associate													-	173
Selling expenses													(170)	(139)
Administrative expenses													(1,177)	(1,197)
Finance cost													(2,113)	(1,723)
Income tax expenses													(382)	(1,755)
Non-controlling interests of the subsidiaries													(4)	(17)
Profit for the year	31,702	32,253	-	-	-	-	-	-	31,702	32,253	-	-	2,051	5,435
Rights to operate expressway sectors													31,702	32,253
Asset the under concession agreement														
- The MRT Blue Line Project	-	-	43,254	41,070	1,430	1,269	-	-	44,684	42,339	-	-	44,684	42,339
- The MRT Chalong Ratchaham Line	-	-	660	645	-	-	-	-	660	645	-	-	660	645
Receivable under the concession agreement	-	-	9,211	10,860	-	-	-	-	9,211	10,860	-	-	9,211	10,860
Prepaid project remuneration	-	-	7,058	4,904	250	182	-	-	7,308	5,086	-	-	7,308	5,086
Unallocated assets	-	-	-	-	-	-	20,848	21,244	20,848	21,244	(797)	(730)	20,051	20,514
Total assets													113,616	111,697

Transfer prices between business segments are as set out in Note 7 to the financial statements.

Geographic information

The Group operates in Thailand only. As a result, all the revenues and assets as reflected in these financial statements pertain exclusively to this geographical reportable segment.

Major customers

For the years 2020 and 2019, the Group has no major customer with revenue of 10 percent or more of an entity's revenues.

44. Provident fund

The Group and its employees have participated in TISCO Ruamtun 2 Registered Provident Fund as approved by Ministry of Finance in accordance with the Provident Fund Act B.E. 2530. Employees, the Group contributed to the fund monthly at the rates of 3 - 10 percent of basic salary. The fund, which is managed by TISCO Asset Management Company Limited, will be paid to employees upon termination in accordance with the fund rules. During the year 2020, the Group recognised the contribution of Baht 113 million in the consolidated financial statements (2019: Baht 95 million) as expenses and recognised the contribution of Baht 110 million in the separate financial statements (2019: Baht 92 million).

45. Commitments and contingent liabilities

45.1 Capital commitments

The Group has capital commitments as follows:

	As at 31 December	
	2020	2019
a) Performance improvement for farebox collection systems	Baht 15 million and USD 2 million	Baht 105 million and USD 2 million
b) Acquisition of equipment	Baht 44 million	Baht 23 million
c) Supply, installation and testing of the M&E Systems of the MRT Blue Line Project	Baht 852 million and EUR 3 million	Baht 2,483 million and EUR 4 million
d) Improvement for civil infrastructure of expressway	Baht 959 million	Baht 50 million
e) Improvement of computerised maintenance management system	-	Baht 3 million
f) Other capital commitments	Baht 4 million	Baht 6 million

45.2 Long-term service commitments

The Group has commitments in respect of the Procurement of M&E equipment contract, and the Maintenance of M&E equipment and trackwork and infrastructure and civil works contracts of the M&E Project. These contracts will expire between 2023 and 2029.

Future minimum service fees payable under these contracts, excluding escalation in accordance with the general consumer price index are as follows:

(Unit: Million)

	As at 31 December									
	2020					2019				
	<u>Baht</u>	<u>USD</u>	<u>EUR</u>	<u>SGD</u>	<u>YEN</u>	<u>Baht</u>	<u>USD</u>	<u>EUR</u>	<u>SGD</u>	<u>YEN</u>
Payable:										
In up to 1 year	1,565	-	5	-	380	1,712	-	5	-	379
In over 1 year and up to 5 years	5,176	2	17	1	1,518	5,559	2	18	1	1,518
In over 5 years	3,210	2	15	1	221	4,383	2	19	1	601

45.3 Commitments under various service agreements

The Group has commitments under various service agreements as follows:

(Unit: Million Baht)

	As at 31 December	
	2020	2019
Payable:		
In up 1 year	518	497
In over 1 year and up to 5 years	122	362

45.4 Guarantees

There were the following outstanding performance bonds and bank guarantees issued by banks on behalf of the Company.

(Unit: Million Baht)		
As at 31 December		
	2020	2019
a) Issued to the MRTA as guarantee for a bid for the operation of the MRT Orange Line Project - Bang Khun Non - Min Buri (Suwinthawong)	2,000	-
b) Issued to the MRTA in accordance with the operation of		
- The MRT Blue Line Concession agreement	210	210
- The MRT Chalong Ratchadham Project agreement	200	200
c) Issued to the Metropolitan Electricity Authority to guarantee electricity under rail projects	118	118
d) Other guarantees	11	14

45.5 Other commitments

(Unit: Million Baht)		
As at 31 December		
	2020	2019
a) Commitments in respect of the uncalled portion of investments		
Northern Bangkok Expressway Company Limited	750	750
b) Commitment in respect of Expressway inspection, replacement and improvement agreements (paid within one year)	128	27

46. The disputes with Expressway Authority of Thailand (EXAT)

On 21 September 2018, the Supreme Administrative Court ruled to affirm the Judgement of the Administrative Court regarding the dispute over a competing road with Udon Ratthaya Expressway (Note 46.1.11), which enforced the award made by an arbitral tribunal whereby EXAT was to compensate a subsidiary for deficits in revenue compared to projections under the Bang Pa-In - Pak Kret Expressway Agreement for the years 1999 and 2000, totaling Baht 1,790 million, together with interest from 22 March 2001 until payment is made in full. On 2 October 2018, the Council of Ministers' Meeting resolved that in order to alleviate the loss and damages which would occur to the Government and to protect the utmost benefits of the government sector in cases where a government agency has disputes under the Court of Arbitration or is sued in the Administrative Court in one or several cases related to the same or connected issues, the government agency may conduct a negotiation with its disputing party to alleviate the damage to the Government and to ensure justice to the people. As a result, the Group and EXAT entered into a process to negotiate the settlement of all disputes. On 6 January 2020, EXAT and the Group reached agreements to settle all disputes, subject to the approval of the Cabinet. The substance of the agreements was as follows:

- 1) EXAT and the Group agreed to settle all existing disputes and potential future disputes over the same issues in relation to the Concession Agreements, as described in Notes 46.1 to 46.3 to the financial statements.
- 2) The disputes were settled by extending the concessions without requiring investment in and improvement of the Second Stage Expressway, and construction of the Double Deck, with the terms of all three agreements extended until 31 October 2035, as described in Note 1.1 A. to the financial statements.
- 3) The Group retains all rights to extend the concessions specified in the existing agreements. The remaining periods of the existing agreements are 4 years and 4 months for the Second Stage Expressway agreement, 11 years and 6 months for the Extension of the Second Stage Expressway agreement (Sector D) and 10 years and 11 months for the Bang Pa-In - Pak Kret Expressway Project agreement, commencing from the end of the amended agreements.
- 4) The toll rates are to be increased every 10 years by fixed amounts as specified in the agreements.

Subsequently, on 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all disputes for both the Second Stage Expressway Project (The Si Rat Expressway including Sector D) and the Bang Pa-In - Pak Kret Expressway Project (the Udon Ratthaya Expressway). On 20 February 2020, the Group and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment), as described in Note 1.1 A. to the financial statements.

The Group and EXAT completed settlement of all disputes, as described in Notes 46.1 to 46.3 to the financial statements, and the subsidiary cancelled enforcement in accordance with the judgement of the Supreme Administrative Court (Note 46.1.11) in the first quarter of the current year. As a result of the above events, the Second Stage Expressway Agreement (Amendment) of the Company and EXAT and the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment) of a subsidiary and EXAT became effective.

A total of 19 disputes were referred to Panels and Arbitral Tribunals in accordance with the dispute settlement procedures under the relevant agreements and of the Administrative Court. The substance of each dispute was as follows:

46.1 11 disputes submitted by the Group claiming damages totaling approximately Baht 54,503.7 million as of the date of submission of the disputes

- 46.1.1 The Company submitted a statement of claim requiring EXAT to compensate for a deficit in revenue with interest in an amount of Baht 5,021.1 million, due to different opinions as to which date was the Priority Component Opening Date.
- 46.1.2 The Company submitted a statement of claim requiring EXAT to compensate for damages caused by EXAT's issuance of additional variation orders for certain construction work of the Si Rat Expressway in a total amount of Baht 382.5 million.
- 46.1.3 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 4,368 million caused by the revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for 2003, which was not in accordance with the agreement.
- 46.1.4 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 9,091.8 million caused by the revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2008, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.5 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 14,662.7 million caused by the revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2013, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.6 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 1,048.2 million caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2003, which was not in accordance with the agreement.

- 46.1.7 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 4,062.8 million caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2008, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.8 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 6,936.4 million caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2013, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.9 The subsidiary submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 908.7 million caused by the revision of toll rates of the Udon Ratthaya Expressway for the year 2003, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.10 The subsidiary submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 4,724.8 million caused by the revision of toll rates of the Udon Ratthaya Expressway for the years 2008 and 2013, which was not in accordance with the agreement, together with interest under the agreement.
- 46.1.11 The subsidiary submitted a statement of claim requiring EXAT to compensate for deficits in revenue of the years 1999 and 2000, on the grounds that the Government granted permission for construction of the Extension of the Don Muang Tollway Project, from the National Memorial to Rangsit Section, which constituted a competing road under the Agreement, and affected the financial position of the subsidiary, thereby rendering such damages. Up to the date of submission of the dispute (excluding interest) this amounted to Baht 1,790 million.

On 27 November 2008, the Arbitral Tribunal rendered its arbitral award on the dispute requiring EXAT to compensate for the deficient revenue with interest as required by the subsidiary.

On 3 May 2013, The Central Administrative Court issued a judgment to enforce compliance with the arbitral award.

On 21 September 2018, the Supreme Administrative Court ruled to affirm the Judgement of the Administrative Court to enforce the award of the arbitral tribunal to compensate the subsidiary for deficient revenue compared to projections under the Bang Pa-In - Pak Kret Expressway Agreement for the years 1999 and 2000, totaling Baht 1,790 million, which was composed of compensation for the year 1999 of Baht 730.8 million and compensation for the year 2000 of Baht 1,059.2 million, together with interest from 14 June 2000 and 22 March 2001, respectively, until the payment is made in full. EXAT was required to fully comply with the Judgement within 90 days from the date it was issued by the Supreme Administrative Court, which was on 20 December 2018.

46.2 3 disputes submitted by EXAT claiming damages totaling approximately Baht 1,589.2 million up to the date of submission of the disputes

- 46.2.1 EXAT submitted a statement of claim requiring the Company to be responsible for the cost of arrangements of the entrance - exit claimed by complainants, and the cost of free flow drains, in a total amount of Baht 0.4 million.
- 46.2.2 EXAT submitted a statement of claim requiring the subsidiary to construct the Udon Ratthaya Expressway, Phase 2, in accordance with the conditions of the Bang Pa-In - Pak Kret Expressway Agreement, and compensate an amount of Baht 1,587.7 million, together with interest under the Agreement.
- 46.2.3 EXAT submitted a statement of claim requiring the subsidiary to be responsible for costs of utilisation of the Control Center Building (Bang Phun) in an amount of Baht 1.1 million.

46.3 5 disputes submitted by the Group claiming damages under Panel proceedings, with the total amounts of approximately Baht 78,181.9 million up to the date of submission of the disputes

- 46.3.1 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 592.9 million caused by the revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2018, which was not in accordance with the agreement, together with interest under the agreement.
- 46.3.2 The Company submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 289.3 million caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2018, which was not in accordance with the agreement.
- 46.3.3 The subsidiary submitted a statement of claim requiring EXAT to compensate for damages totaling Baht 24.9 million caused by the revision of toll rates of the Udon Ratthaya Expressway for the year 2018, which was not in accordance with the agreement, together with interest under the agreement.
- 46.3.4 The subsidiary requested EXAT compensate for the deficits in revenue compared to projections under the Bang Pa-In - Pak Kret Expressway Agreement due to a competing road for the years 2001 - 2017, totaling Baht 46,300.2 million, together with accumulated interest calculated up to 30 April 2019 totaling Baht 25,925.3 million, and interest on principal totaling Baht 46,300.2 million calculated from 1 May 2019 until EXAT pays the principal together with the interest in the amount of Baht 72,225.5 million in full to the subsidiary.

46.3.5 The subsidiary requested EXAT compensate Baht 4,771 million for the deficit in revenue compared to projections due to the competing road for the year 2018, together with accumulated interest calculated until 29 October 2019 totaling Baht 278.3 million, and interest on the principal amount of Baht 4,771 million calculated from 30 October 2019 until EXAT pays the principal together with the interest in the amount of Baht 5,049.3 million in full to the subsidiary.

47. Fair value hierarchy

As at 31 December 2020 and 2019, the Group had the assets and liabilities that were measured or disclosed at fair value using different levels of inputs as follows:

(Unit: Million Baht)

	2020			
	Consolidated and Separate financial statements			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVTPL				
- Unit trusts	-	761	-	761
Financial assets measured at FVOCI				
- Listed equity	15,441	-	-	15,441
- Non-listed equity	-	-	400	400
Liabilities measured at fair value				
Derivative				
Interest rate swap contracts	-	186	-	186
Assets for which fair value are disclosed				
Investment properties	-	-	321	321
Liabilities for which fair value are disclosed				
Debentures	-	38,673	-	38,673

(Unit: Million Baht)

	2019							
	Consolidated financial statements				Separated financial statements			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Asset measured at fair value								
Current investment								
Unit trusts	-	1,158	-	1,158	-	1,137	-	1,137
Investment in available-for-sale securities	16,697	-	-	16,697	16,697	-	-	16,697
Liabilities measured at fair value								
Derivative								
Interest rate swap contracts	-	113	-	113	-	113	-	113
Asset for which fair value are disclosed								
Investment properties	-	-	321	321	-	-	321	321

48. Financial instruments

48.1 Derivatives and hedge accounting in cash flow hedges

The Company designated an interest rate swap contract as a hedging instrument used to hedge cash flows on a variable rate loan. This risk hedging is defined as an interest hedge.

There is an economic relationship between the hedged item and the hedging instrument as the terms of the interest rate swap match the terms of the variable rate loan (i.e., notional amount, maturity, payment and reset dates). The Group has established a hedge ratio of 1:1 as the underlying risk of the interest rate swap is identical to the hedged risk component. To test the hedge effectiveness, the Group uses the hypothetical derivative method and compares the changes in the fair value of the hedging instruments against the changes in fair value of the hedged items attributable to the hedged risks.

Hedge ineffectiveness can arise from:

- Differences in the interest rate curves applied to discount the hedged item and hedging instrument
- Differences in how the counterparties' credit risk impacts the fair value movements of the hedging instrument and hedged item

The ineffectiveness recognised in profit or loss was immaterial.

48.2 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, bank deposit for unearned fare box revenue, trade and other receivables, receivable under the concession agreement, short-term loans from financial institution, trade and other payable, lease liabilities, long-term loans from financial institution and debentures. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Group is exposed to credit risk primarily with respect to trade and other receivables, receivable under the concession agreement, deposits with banks and financial institutions and other financial instruments. The maximum exposure to credit risk is limited to the carrying amounts as stated in the statement of financial position. The Group's maximum exposure relating to derivatives is noted in the liquidity risk topic.

Trade receivables and receivable under the concession agreement

The Group manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. Outstanding trade receivables and receivable under the concession agreement are regularly monitored.

An impairment analysis is performed at each reporting date to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar credit risks. The Group classifies customer segments by customer type. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

Financial instruments and cash deposits

The Group manages the credit risk from balances with banks and financial institutions by making investments only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit may be updated throughout the year. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through a counterparty's potential failure to make payments.

The credit risk on debt instruments and derivatives is limited because the counterparties are banks with high credit-ratings assigned by international credit-rating agencies.

Market risk

There are two types of market risk comprising interest rate risk and currency risk.

Foreign currency risk

The Company has a significant foreign currency risk in respect of construction payable. As at 31 December 2020, the Company has outstanding financial liabilities denominated in foreign currency amounting to JPY 101 million, USD 0.1 million and SGD 0.1 million (2019: JPY 102 million, EUR 0.6 million, USD 0.3 million and SGD 0.1 million) which have not yet been hedged against foreign exchange risk (the majority of these liabilities are repayable within 1 year).

Interest rate risk

The Group's exposure to interest rate risk relates primarily to its short-term loans, long-term loans and debentures. Most of the Group's financial assets and liabilities bear floating interest rates or fixed interest rates which are close to the market rate.

The Group manages its interest rate risk by entering to interest rate swaps for some of long-term loans, in which it agrees to exchange, at specified intervals, between fixed and variable rate interest amounts calculated by reference to an agreed-upon notional principal amount.

As at 31 December 2020 and 2019, significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

(Unit: Million Baht)

	Consolidated financial statements						
	2020						
	Fixed interest rates			Floating	Non-interest		Effective
	Within 1 year	1 - 5 years	Over 5 years	interest rate	bearing	Total	interest rate
							(% p.a.)
Financial assets							
Cash and cash equivalents	-	-	-	1,536	78	1,614	0.25 - 1.30
Bank deposit for unearned fare box revenue	-	-	-	224	-	224	0.05 - 2.00
Trade and other receivables	-	-	-	-	549	549	-
Receivable under the concession agreement	-	-	-	9,211	-	9,211	Note 12
Other financial assets	-	-	-	-	16,602	16,602	-
	-	-	-	10,971	17,229	28,200	

(Unit: Million Baht)

Consolidated financial statements							
2020							
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate
	Within 1 year	1 - 5 years	Over 5 years				
Financial liabilities							
Short-term loans from financial institution	1,500	-	-	1,500	-	3,000	Note 25
Trade and other payables	-	-	-	-	1,745	1,745	-
Long-term loans from financial institution	1,499	-	-	25,916	-	27,415	Note 27
Lease liabilities	45	41	-	-	-	86	Note 30
Debentures	4,615	20,500	13,558	-	-	38,673	Note 28
Other financial liabilities	-	-	-	-	65	65	-
	<u>7,659</u>	<u>20,541</u>	<u>13,558</u>	<u>27,416</u>	<u>1,810</u>	<u>70,984</u>	

(Unit: Million Baht)

Consolidated financial statements							
2019							
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate
	Within 1 year	1 - 5 years	Over 5 years				
							(% p.a.)
Financial assets							
Cash and cash equivalents	-	-	-	520	184	704	0.35 - 1.50
Current investments	-	-	-	-	1,158	1,158	-
Bank deposit for unearned fare box revenue	-	-	-	206	-	206	1.50 - 2.00
Trade and other receivables	-	-	-	-	482	482	-
Receivable under the concession agreement	-	-	-	10,860	-	10,860	Note 12
Other long-term investments	-	-	-	-	17,097	17,097	-
	<u>-</u>	<u>-</u>	<u>-</u>	<u>11,586</u>	<u>18,921</u>	<u>30,507</u>	
Financial liabilities							
Short-term loans from financial institution	3,250	-	-	-	-	3,250	2.02 - 2.50
Trade and other payables	-	-	-	-	1,938	1,938	-
Long-term loans from financial institution	1,000	1,494	-	22,418	-	24,912	Note 27
Debentures	2,500	18,115	17,556	-	-	38,171	Note 28
	<u>6,750</u>	<u>19,609</u>	<u>17,556</u>	<u>22,418</u>	<u>1,938</u>	<u>68,271</u>	

(Unit: Million Baht)

	Separated financial statements						
	2020						
	Fixed interest rates			Floating	Non-interest	Total	Effective
	Within 1 year	1 - 5 years	Over 5 years	interest rate	bearing		interest rate
							(% p.a.)
Financial assets							
Cash and cash equivalents	-	-	-	1,143	71	1,214	0.25 - 1.30
Bank deposit for unearned fare box revenue	-	-	-	224	-	224	0.05 - 2.00
Trade and other receivables	-	-	-	-	513	513	-
Receivable under the concession agreement	-	-	-	9,211	-	9,211	Note 12
Other financial assets	-	-	-	-	16,602	16,602	-
	-	-	-	10,578	17,186	27,764	
Financial liabilities							
Short-term loans from financial institution	1,500	-	-	1,500	-	3,000	Note 25
Trade and other payables	-	-	-	-	1,750	1,750	-
Long-term loans from financial institution	1,499	-	-	22,596	-	24,095	Note 27
Lease liabilities	26	32	-	-	-	58	Note 30
Debentures	4,615	20,500	13,558	-	-	38,673	Note 28
Other financial liabilities	-	-	-	-	60	60	-
	7,640	20,532	13,558	24,096	1,810	67,636	

(Unit: Million Baht)

	Separated financial statements						
	2019						
	Fixed interest rates			Floating	Non-interest	Total	Effective
	Within 1 year	1 - 5 years	Over 5 years	interest rate	bearing		interest rate
							(% p.a.)
Financial assets							
Cash and cash equivalents	-	-	-	446	163	609	0.35 - 1.50
Current investments	-	-	-	-	1,137	1,137	-
Bank deposit for unearned fare box revenue	-	-	-	206	-	206	1.50 - 2.00
Trade and other receivables	-	-	-	-	474	474	-
Long-term loans to related party	-	-	-	37	-	37	Note 7
Receivable under the concession agreement	-	-	-	10,860	-	10,860	Note 12
Other long-term investments	-	-	-	-	17,097	17,097	-
	-	-	-	11,549	18,871	30,420	
Financial liabilities							
Short-term loans from financial institution	3,250	-	-	-	-	3,250	2.02 - 2.50
Trade and other payables	-	-	-	-	1,907	1,907	-
Long-term loans from financial institution	1,000	1,494	-	18,788	-	21,282	Note 27
Debentures	2,500	18,115	17,556	-	-	38,171	Note 28
	6,750	19,609	17,556	18,788	1,907	64,610	

Interest rate sensitivity

The following table demonstrates the sensitivity of the Group's profit before tax and equity to a reasonably possible change in interest rates on that portion of the floating rate loans affected as at 31 December 2020.

Currency	Increase/decrease	Effect on profit before tax	Effect on other components of shareholder's equity
	(%)	(Thousand Baht)	(Thousand Baht)
Baht	+ 0.25	57,600	35,757
	- 0.25	(57,643)	(35,757)

The above analysis has been prepared assuming that the amounts of the floating rate loans and all other variables remain constant over one year. Moreover, the floating legs of these loans are assumed to not yet have set interest rates. As a result, a change in interest rates affects interest payable for the full 12-month period of the sensitivity calculation.

Liquidity risk

As at 31 December 2020, approximately 16.4 percent of the Group's debt will mature in less than one year (2019: 13.4 percent) (the Company only: 16.3 percent, 2019: 13.2 percent) based on the carrying value of borrowings reflected in the financial statements. The Group has assessed the concentration of risk with respect to refinancing its debt and concluded it to be low. The Group has access to a sufficient variety of sources of funding.

The table below summarises the maturity profile of the Group's non-derivative financial liabilities and derivative financial instruments as at 31 December 2020 based on contractual undiscounted cash flows:

(Unit: Million Baht)

	Consolidated financial statements				
	On demand	Less than 1 year	1 to 5 years	Over 5 years	Total
Non-derivatives					
Short-term loans from financial institutions	-	3,000	-	-	3,000
Trade and other payables	-	1,745	-	-	1,745
Lease liabilities	-	46	44	-	90
Long-term loans from financial institutions	-	3,745	9,632	14,049	27,426
Debentures	-	4,615	20,500	13,585	38,700
Total non-derivatives	-	13,151	30,176	27,634	70,961
Derivatives					
Derivative liabilities: net settled	-	12	-	174	186
Total	-	12	-	174	186

(Unit: Million Baht)

	Separate financial statements				
	On demand	Less than 1 year	1 to 5 years	Over 5 years	Total
Non-derivatives					
Short-term loans from financial institutions	-	3,000	-	-	3,000
Trade and other payables	-	1,750	-	-	1,750
Lease liabilities	-	26	36	-	62
Long-term loans from financial institutions	-	3,092	6,967	14,049	24,108
Debentures	-	4,615	20,500	13,585	38,700
Total non-derivatives	-	12,483	27,503	27,634	67,620
Derivatives					
Derivative liabilities: net settled	-	12	-	174	186
Total	-	12	-	174	186

48.3 Fair values of financial instruments

Since the majority of the financial instruments of the Group are short-term in nature or carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statements of financial position. However, the Company has long-term liabilities in the form of debentures of which carrying value is different from the fair value. As at 31 December 2020, the book value of the Company's debentures was Baht 38,700 million, whereas the fair value was Baht 39,866 million (2019: book value of the Company's debentures was Baht 38,171 million, whereas the fair value was Baht 39,829 million).

The methods and assumptions used by the Group in estimating the fair value of financial instruments are as follows:

- a) For financial assets and liabilities which have short-term maturities, including cash and cash equivalents, bank deposit for unearned fare box revenue, trade and other receivables, receivable under the concession agreement, short-term loans from financial institutions and trade and other payables the carrying amounts in the statement of financial position approximate their fair value.
- b) The fair value of debt securities is generally derived from quoted market prices or by using the yield curve announced by the Thai Bond Market Association. The fair value of unit trusts is determined from their net asset value.
- c) The fair value of equity securities is generally derived from quoted market prices, or based on generally accepted pricing models when no market price is available.
- d) The fair value of fixed rate debentures and long-term loans is estimated by discounting expected future cash flow by the current market interest rate of loans with similar terms and conditions.
- e) The carrying amounts of long-term loans carrying interest at rates approximating the market rate, in the statement of financial position approximates their fair value.
- f) The fair value of derivatives has been determined using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as interest rate yield curves. The Group considers counterparty credit risk when determining the fair value of derivatives.

During the current year, there were no transfers within the fair value hierarchy.

48.4 Reconciliation of recurring fair value measurements of assets, categorised within Level 3 of the fair value hierarchy

There are no movements in the financial assets categorised within Level 3 of the fair value hierarchy during the year ended 31 December 2020.

49. Capital management

The primary objective of the Company's capital management is to ensure that it has an appropriate financial structure to preserve the ability to continue its business as a going concern and maximise shareholder value.

The Company manages its capital position with reference to its debt-to-equity ratio in order to comply with a condition in the long-term loan agreements, which requires the Company to maintain a debt-to-equity ratio of not more than 2.5:1

50. Events after the reporting period

On 24 February 2021, a meeting of the Board of Directors passed a resolution to propose a dividend payment for the year 2020 at a rate of Baht 0.10 per share to the Annual General Meeting of the shareholders for approval. This dividend payment is subject to the approval of the Annual General Meeting of the shareholders.

51. Approval of financial statements

These financial statements were authorised for issue by the Company's Board of Directors on 24 February 2021.



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