



HANA

Microelectronics Public Company Limited
บริษัท ฮานา ไมโครอิเล็กทรอนิกส์ จำกัด (มหาชน)

ANNUAL REPORT รายงานประจำปี 2563 2020





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The Group Financial Highlights

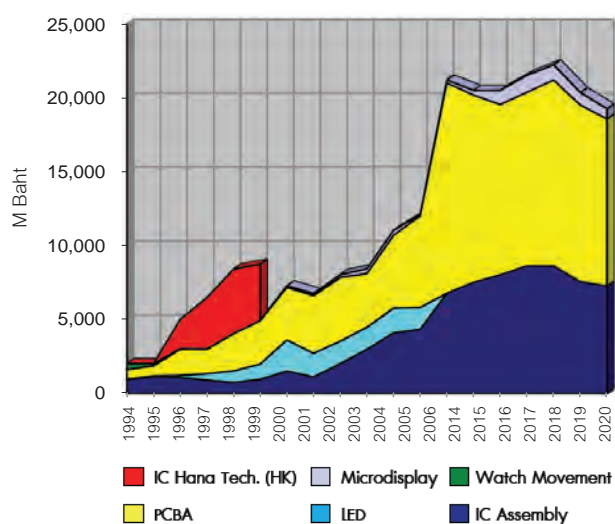
(Baht millions)

	2020	2019	2018	2020/2019 % change
Total Revenue	19,814	21,250	22,853	-7%
Sales Revenue	19,283	20,384	22,264	-5%
Gross Profit	2,548	2,191	3,203	16%
Earnings From Operations	1,725	1,408	2,309	23%
Net Profit before Non Recurring Items	1,798	1,470	2,360	22%
Net Profit (Loss) for the year	1,908	1,805	2,375	6%
Recurring EBITDA*	2,900	2,546	3,420	14%
Total Assets	25,180	24,426	25,368	3%
Total Liabilities	3,567	3,881	4,285	-8%
Shareholders Equity	21,614	20,546	21,083	5%
Net (Cash**) Debt / Equity	(0.12)	(0.23)	(0.18)	
Net Profit (after tax) % Sales	10%	9%	11%	11%
Recurring EBITDA Margin	15%	12%	15%	20%
Return on Equity	9%	9%	11%	0%
Dividend per share (from the profits of)	1.40	1.30	2.00	8%
Payout ratio	59%	58%	68%	2%
EPS before Non Recurring Items	2.23	1.83	2.93	22%
EPS after Non Recurring Items	2.37	2.24	2.95	6%
Book Value per share	26.85	25.53	26.19	5%
Net Number of shares outstanding (year end)	804.88	804.88	804.88	0%

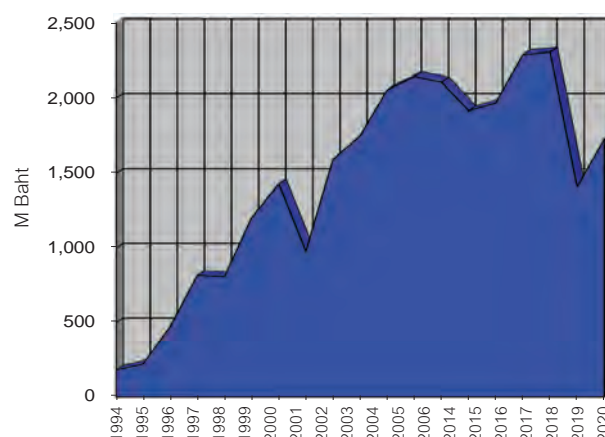
* Operating revenues before deducting of finance cost, income tax expenses, depreciation and amortization

** Cash: Cash and cash equivalents and short-term investments

Sales Revenue



Operating Profit



Chairman's Statement



Dear Shareholder,

The year 2020 will always been known as the year of Covid-19 and the devastation it wrought over the global economy. Our plant in China was the first to be hit as the country locked down during the Chinese New Year. We had to replace over 50% of our entire work force and lost nearly six weeks of activity. Fortunately, we escaped any human loss despite having staff trapped in the epicenter of Wuhan. I would like to thank our management team at Jiaxing for their tireless effort to keep everyone safe and ultimately come back so strongly after the lock down was lifted.

As we all know, the virus soon spread around the world causing a global lock down never seen before, negatively impacting most of our clients and interrupting parts of our supply chain as well. That said, the electronics industry in general has been able to “weather the storm” relatively well as the “work from home” increased demand for notebook computers, access security control, entertainment / toys and other electronic devices.

Apart from our Chinese operation, the worst hit was our Cambodian plant where regrettably we had to lay off 180 staff after our major customer effectively shut down for six months. With the USA being the biggest casualty of Covid-19, our Ohio operation also felt the impact. Fortunately, our major operations in Thailand escaped any major interruptions as the spread of the virus was effectively managed by the authorities.

Whilst we could not escape the Covid-19 impact, the overall drop in our revenues has been manageable due mostly to the sector diversity of the group. Additionally, your management's strong focus on cost control mitigated the drop in the top line and in the first half of the year the relative strength of the US\$ helped to support our margins and operating profits. Whilst we saw a return to economic normality by Q3 as the global lockdown was lifted, most of our customers remained cautious and fearful of a second Covid-19 wave and the impact of high unemployment levels in many countries across the globe.

Hana started to see a gathering pace of recovery in demand by the middle of Q4 especially from the mobile and automotive sectors, our two biggest exposures. However, the “risk off” outlook plus a Democratic election win had pushed the US dollar significantly weaker (vs. THB and CNY currencies) impacting our operating margins. With the Democrats now controlling both Congress and the White House for the first time since 2011, their plans for massive infrastructure spending look ever more likely and we believe this will stoke inflation concerns, as a result the green back may strengthen in 2021 as the markets will project USD rates to increase sooner than had been previously projected.

Chairman's Statement

Our key financial performances were as follows:

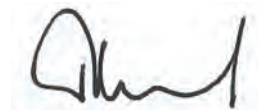
- Revenues down 5% from 20,384 million in 2019 to THB 19,282 million in 2020
- Operating income up 23% from THB 1,408 million to THB 1,725 million
- EBITDA income up 14% from THB 2,546 million to THB 2,900 million
- NPAT up 6% from THB 1,805 million to THB 1,908 million
- Cash and financial investments were up THB 1.2 billion from THB 8.5 billion at end 2019 to THB 9.7 billion at end 2020

Looking ahead, the practical challenges to roll out vaccine programs are now being realized and it is becoming clear that the economic impacts of Covid-19 will continue to place a drag on most western economies for at least the first quarter of 2021 as the second wave continues to hamper the recovery. We do however remain optimistic for the recovery to gather pace and see an increase in momentum in our order books especially on the semiconductor side. As a result, we plan to increase our capacity over the course of the first half of 2021 at a measured pace as we monitor the speed of the hoped for recovery. With open capacity at our microelectronics divisions, we remain well placed to grow when the opportunities arise.

We will also be watching closely how the US/China relationship evolves under US President Biden's government which could have further ramifications. Regardless, we believe Hana is well positioned with sites located in China and elsewhere to navigate the future.

Capital expenditure during the year was THB 1,055 million most of which was for maintenance and R&D in relation to our power management development which continues to progress well although somewhat delayed due to the pandemic. Our net available cash/financial investment grew YoY by THB 1.2 billion placing the group in a strong position for 2021.

Finally, I would like to thank my fellow board members and all the staff of the Hana Group for their hard work and effort in what has been an exceptionally challenging year.



John Thompson
Chairman of the Board of Directors



Operation Review

Hana Microelectronics Public Co., Ltd. (Lamphun)



2020 was a challenging year for Hana Lamphun. Whilst the effects of the Covid-19 pandemic were less severe on the electronics industry in general, we certainly did not escape the negative impact experiencing significant fluctuations in customer demand during the year.

Our Lamphun plants were mostly impacted in Q2 and Q3 with Q4 seeing a rebound in demand. Overall for the year our sales dropped by 5% due to the significant impact on the automotive, mobile phone and test & measurements segments. Nonetheless, with strong cost controls and favourable exchange rates (in the first half) our operations we were able to mitigate the overall weakness in our revenue for the year.

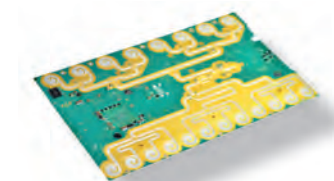
In response to the pandemic we implemented strict risk management and contingency plans in case of any outbreak. Employees were separated as much as possible with desk shields in the offices and table shields in the canteen. Staff working in the same department were relocated and plans were made and tested for staff to work from home. Compulsory temperature check procedures for all persons arriving at the factories, compulsory wearing of masks, regular comprehensive disinfecting using ULV foggers in non-production areas were enforced and we are pleased to report that those extensive actions paid off as we had no Covid-19 event at either of our plants and no stoppage of our production during 2020.

We successfully implemented the SAP S/4 HANA ERP system which commenced operations at the beginning of 2020. Whilst we are now going through the optimization period to make best use of the software we are already benefiting from the more timely and better quality of information from the system. This new ERP system together with our previous recent investments in Siemens Teamcenter PDM (Product Data Management and Valor MSS MES (Manufacturing Execution Software) provides us with “state of the art” comprehensive, integrated software to support the business operations to meet our customers current and future requirements.

In 2021, we see growing demand in the automotive and mobile phone segments, while the medical and industrial segments are expected to be stable. We plan to increase our technical capabilities, such as laser alignment, laser soldering and automatic RF testing to handle the new projects.

I would like to thank all our Hana LPN staff for their patience, dedication and hard work in 2020 especially due to the particular difficulties related to the Covid-19 outbreak and we look forward to 2021 with confidence and readiness to meet new challenges.

Mr. Wing Keung Chow
Vice President and General Manager

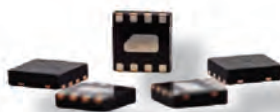


Operation Review

Hana Semiconductor (Ayutthaya) Co., Ltd.



The year 2020 was indeed a very unique and challenging year for all of us in view of the raging pandemic. In 2020, our product shipments were almost comparable to 2019 while our sales revenue was slightly lower for the year. The demand was lower in the first half of the year due to our customers concerns over the pandemic; however the second half of the year saw a recovery as demand for electronics increased due to customer inventory replenishment and work-from-home driven related demands.



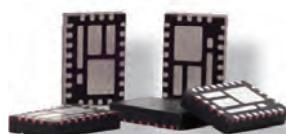
Whilst we all grappled with the uncertainties of the pandemic, we continued on our journey towards “Zero Defect” and also on operational excellence. Our focus on improvements in quality and productivity remained paramount to maintain our competitive edge. We continued to invest in automation to improve these two key fundamentals. All of these efforts and activities continued to delight our customers.

The inherent technical competency of our development and NPI team at Hana-AYT encouraged our customers to load record number of new package development activities in 2020. This bodes very well for the business outlook in 2021 and beyond since all of these development and NPI activities will translate into increased production over of the next 12-18 months. We also continued to file for intellectual property “IP” on some of our custom package developments. Our focus on IP will continue in 2021 and beyond to further differentiate Hana-AYT.



Another important pillar of the success of Hana-AYT is our human resources. We focused a lot of our efforts in identifying, training, developing the future leaders of Hana-AYT and this effort has been truly satisfying. We will continue this effort to ensure a solid foundation of human resources for the future.

A sincere “thank you” to our dedicated employees at Hana-AYT whose unflinching trust and loyalty enabled us to face the unprecedented challenges caused by the pandemic which still continues to impact us all. All levels of Hana-AYT staff pitched in to help each other to keep us safe and infection free during 2020. We will continue this enhanced vigilance during 2021 to keep our employees and their families safe.



Despite the many challenges during 2020, our strong teamwork and focus has seen us through - these core values remain our key strengths. Whilst we are not ‘out of the woods’ yet with respect to the pandemic, we believe the ‘beginning of the end’ is in sight and we look forward to 2021 with a sense of optimism that Hana-AYT will continue on our journey of growth again.

Mr. Sanjay Mitra
Vice President and General Manager

Operation Review

Hana Microelectronics (Jiaxing) Co., Ltd.



2020 was a challenging year for Hana Jiaxing. Due to the coronavirus epidemic, we had an extended CNY shutdown and our factory was approved by the local government to resume only on the 10th of February 2020.



Due to travel restrictions within China, we were able to run production at only 30% of our capacity for the first few weeks after reopening because of the lack of the operators. An enormous effort was made to recruit and train the lost 50% of our workforce to reach full capacity by the end of March. As a result, our sales dropped by 40% in Q1 to \$20.0M from \$33.3M in Q1/2019, with the demand for the rest of the 2020 remaining flat YoY.



Our microelectronics division was focused mainly on supporting our existing customers with particular emphasis on catching up on delivery schedules due to the many supply chain interruptions caused by the lock downs. Nonetheless we strived to continuously reduce the manufacturing cost through process automation and Value Analysis/Value Engineering “VA/VE” initiatives to enable both Hana Jiaxing and its customers to stay cost competitive in the market. We also implemented ‘virtual’ procedures to meet all New Product Introductions “NPI”s and production schedules for such new products without any customer onsite support.

One particular focus for the IC division in 2020 was to fulfill the growing demand from both the Taiwan IC design houses and the China local customers we had developed over the past three years. This is particularly important given the US/China trade issues.

Following our strategic business roadmap, in the second half of 2020 we invested \$12.5M in buying new equipment required for capacity expansion. Driven by our local customers, we completed more than 10 IT automation and Manufacturing Execution System “MES” projects in this year.



I would like to thank all our employees at Hana Jiaxing for their hard work and dedication in a very challenging year. We remained cheerful in extremely difficult circumstances and together achieved a strong recovery after a challenging start to the year.

2021 will continue to be tough but we strongly believe we can resume our growth as the global economy start to recover. As always, our focus on continuous improvement in providing our customers with world class manufacturing services will be the core to our success.

Mr. Steven Lee
General Manager

Operation Review

Hana Technologies, Inc.



The year of 2020 was challenging on many fronts for Hana Technologies “HTI”. The first impact of the pandemic was to cut off supply of materials and equipment coming from Asia. As that opened up, California and Europe shut down, further impacting our supply chain and the functionality of some customers.



With all 50 states in the US operating essentially independently, the team at HTI scrambled to keep the supply of raw materials flowing into the factory and respond to changing customers’ needs as their states (or countries) went in and out of lockdowns. Ohio finished the year 38th out of 50 US states on the Deaths per Capita list in the US for Covid-19. HTI had 2 cases of Covid-19 in 2020, one in July and one in October. The safety protocols HTI installed prevented the spread of the virus in both of these cases as no additional co-workers were affected.

Despite these challenges, HTI was able to remain profitable and retain all of its major customers. Sales dropped 18% compared to 2019. The majority of the reduction was in the first two quarters of the year in the Telecom and Consumer Electronics sectors. The overall Radio-Frequency Identification (RFID) sector actually grew 10% in 2020.



HTI continues to bring business opportunities to its sister companies. This activity grew by 8% from 2019 to 2020 despite the overall lower sales. Activity with Ayutthaya was flat year-on-year as the growth came in the Lamphun factory. Tire tag production in Lamphun was the down slightly, but Consumer Electronics assemblies increased significantly.

HTI joins the rest of world in hoping for a better 2021, but significant challenges remain as infections continue to increase in Q1/21, therefore the first half of 2021 will likely remain slow whilst hopefully the global pandemic fades, supply chains improve, and customers and markets gain more confidence which should be realized in the second half of the year.

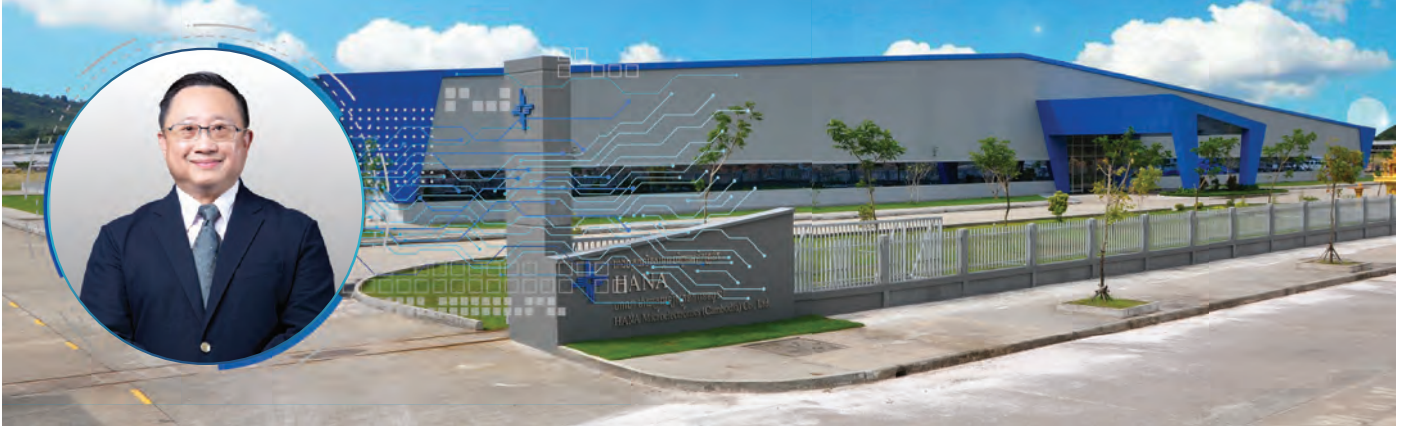


Renewed pushes for companies in the US to on-shore manufacturing is opening up opportunities for HTI in automotive and medical devices. HTI’s main focus in Telecom and RFID market sectors are also expected to grow, and we look forward to working closely with our customers and suppliers to recover and capitalize on new business opportunities in 2021.

Dr. John Erdmann
President and Chief Executive Officer

Operation Review

Hana Microelectronics (Cambodia) Co., Ltd.



In 2020, both the Covid-19 pandemic and the US/China trade war had a significant impact on our business. Whilst the US/China trade war was positive as Hana Cambodia can be offered as an alternative to China suppliers, the Covid-19 pandemic impacted the demand from our customers as their end markets were significantly affected. To minimize the impact, we reacted promptly to reduce overhead, increase employee capabilities, improve machine efficiency and the supply chain, which helped to reduce our costs.

Due to the Covid-19 pandemic, we transformed our support and services to respond to customer new product/requirement by using online video/teleconference communication, media/data transfer, virtual remote audit, workshops, training and assessment. We achieved virtual remote audit and successfully transferred several customer products from competitors in China and Mexico with good quality and delivery cycle time.

Looking ahead, we need to continue to develop talented individuals with special skills, as well as improve our cost and efficiency through process automation to enable us to take on more challenging product assemblies in the near future. We will continue to focus on the areas where we did not yet meet our targets to win more business from our customers.

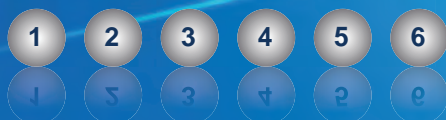
2021 will be a challenging year for our business due to the continuing uncertainty from the Covid-19 pandemic and US/China trade war. Nonetheless, we will continue to further enhance knowledge and skills of our employees while maintaining our quality standard to be more competitive and enable us to capture more business.

I would like to thank all of our Hana Cambodia employees for their dedication and hard work during a difficult 2020 and we will look forward to 2021 with confidence to meet new challenges and grow our business further.

Mr. Somchai Chanthachirathumrong
General Manager



Board of Directors



- | | |
|---|--|
| 1. Mr. Terrence Philip Weir
Executive Director | 4. Mr. Richard David Han
Executive Director |
| 2. Mr. Yingsak Jenratha
Independent Director | 5. Mr. Winson Moong Chu Hui
Executive Director |
| 3. Mrs. Salakchitt Preedaporn
Independent Director | 6. Mr. John Thompson
Chairman of the Board of Directors |

Executives



1. **Mr. Wing Keung Chow**
Vice President and General Manager
Hana-Lamphun Operation
2. **Mr. Richard David Han**
Executive Vice Chairman and
Chief Executive Officer
3. **Mr. Winson Moong Chu Hui**
President and Chief Operating Officer

4. **Ms. Achara Chaicharncheep**
Senior Manager of Finance and
Accounting
5. **Mr. Terrence Philip Weir**
Executive Vice President and
Chief Financial Officer

Management Team



Hana Microelectronics Public Co., Ltd. – Headquarter Management

1 2 3 4 5 6 7 8

1. **Mr. Ki Myung Yoon**
Director of Strategic Packages and Products Development
2. **Ms. Jirapa Kongmanee**
Senior Manager of Internal Audit
3. **Ms. Vitchuwan Pringpuangkeo**
Senior Manager of Corporate Training
4. **Ms. Achara Chaicharncheep**
Senior Manager of Finance and Accounting
5. **Mrs. Puntipa Tanthana**
Senior Director of Corporate Administration and Human Resources
6. **Mrs. Tappawong Na Tarlang**
Director of Corporate Human Resources, Business Partners, Training & Administration
7. **Mr. Peter Wuei Hwang**
Director of Business Development
8. **Mr. Insuk Kim**
Corporate Senior Vice President of International Manufacturing Operations



Hana Microelectronics Public Co., Ltd. – Lamphun Management

11 12 13 14 15 16 17 18 19
1 2 3 4 5 6 7 8 9 10

1. **Mrs. Napassanun Namwongsa**
Senior Manager of Integrated Management System
2. **Ms. Krongtong Wannawichit**
Senior Manager of Human Resources
3. **Mr. Sathit Umpai**
Director of Operations
4. **Mr. Wasan Suthum**
Director of Operations
5. **Mr. Wing Keung Chow**
Vice President and General Manager
6. **Mr. Wichai Sukprasertkul**
Vice President of Operations
7. **Mr. Kam Fu Yim**
Director of Quality Management (QM)
8. **Ms. Chonsita Kitirivorapot**
Senior Manager of Inventory Control
9. **Ms. Kittima Kongsing**
Senior Manager of Production & Material Control
10. **Ms. Tipawan Duangkaew**
Senior Manager of Customer Service
11. **Mr. Somjai Namwongsa**
Senior Manager of Human Resources Development
12. **Mr. Tosaporn Musikcharoen**
Senior Manager of Manufacturing Support
13. **Mr. Pattarapol Kantawang**
Senior Manager of Customer Service
14. **Mr. Stephen Boyd**
Senior Manager of Manufacturing
15. **Mr. Thawatchai Kumprasert**
Senior Manager of Management Information System (MIS)
16. **Mr. Seksit Mulachiwa**
Senior Manager of Procurement
17. **Mr. Nikorn Tolongtong**
Senior Manager of Customer Service
18. **Mr. Arkhom Kauekool**
Senior Manager of Industrial Engineer (IE)
19. **Mr. Chukiat Suksatian**
Senior Manager of Operation

Management Team



Hana Semiconductor (Ayutthaya) Co., Ltd. Management



1. **Mrs. Saowanee Rachatakarn**
Director of Finance
2. **Mrs. Rhodora F. Ceballo**
Senior Manager of Front of Line Process Engineer
3. **Ms. Praphaphun Naradilok**
Director of Human Resources and Training
4. **Ms. Sirirat Silapapipat**
Director of CSO Operations
5. **Ms. Areenee Kittisupornpong**
Director of Management Information System (MIS)
6. **Ms. Samantha Kulasinghe**
Senior Director of Manufacturing Support & Service Production Planning, Industrial Engineer
7. **Ms. Suparin Kengradomkij**
Senior Manager of Logistic & Traffic
8. **Mrs. Thawanvaree Pichitnorakarn**
Senior Manager of Purchasing
9. **Mr. Michaeljun C. Camba**
Senior Manager of Technology Development & Customer Service
10. **Mr. Pongsak Klongjai**
Senior Manager of Production
11. **Mr. Punsak Eammongkolchai**
Senior Director of Standard IC-Front of Line & End of Line Operations
12. **Mr. Anake Wannathong**
Senior Manager of CSO-Test Operation
13. **Mr. Paitoon Kungsaranuwat**
Director of TEST-IC Operation
14. **Mr. Sanjay Mitra**
Vice President and General Manager
15. **Mr. Pongsakorn Jangsatian**
Director of Quality & Reliability Assurance (QRA)
16. **Mr. Sithigorn Petchruk**
Senior Manager of Equipment Technical Support
17. **Mr. Seri Sukchean**
Senior Manager of Facility, Industrial Engineer, Environment & Safety
18. **Mr. Wanakorn Nonkhunthod**
Director of Supply Chain Management
19. **Mr. Swee Seng Lim**
Senior Manager of Quality Management



Hana Microelectronics (Jiaxing) Co., Ltd. Management



1. **Mr. Andy Shen**
Director of Operations
2. **Mr. Steven Lee**
Vice President & General Manager
3. **Mr. Felix Zheng**
Director of Operations
4. **Mr. Steven Quah**
Senior Manager of Quality & Reliability Assurance
5. **Ms. Lucy Guo**
Senior Manager of Human Resources
6. **Mr. KY Chew**
Director of Marketing & Account Management
7. **Mr. SC Ding**
Director of Production & Material Control
8. **Mr. Peter Xu**
Director of Manufacturing Support
9. **Ms. Jane Li**
Director of Finance & Logistics

Management Team



Hana Technology, Inc. Management



1. **Mr. Edward M. Stiles III**
Vice President of Quality and IT
2. **Mr. Michael R. Davis**
Financial Controller
3. **Dr. John H. Erdmann**
President and CEO
4. **Mr. Matthew Bucholtz**
Vice President of Operations
5. **Mr. Paul R. Brown, Jr.**
Vice President of Business Development
6. **Mr. D. Scott Worthington**
Vice President of Engineering



Hana Microelectronics, Inc. Management



1. **Mrs. Malee Lowchareonkul**
Senior Manager of Business Development and Customer Support
2. **Mr. Mike Gravelle**
Director of Business Development and Customer Support
3. **Mr. Sanjay Mitra**
President – HMI (USA)
4. **Mr. Mark Wadekamper**
Director of Business Development and Customer Support
5. **Mrs. LeAna Bui**
Account Manager
6. **Mr. Mike Griffin**
Director of Business Development and Customer Support
7. **Mr. Thang Bui**
Senior Director of Business Development and Customer Support
8. **Mr. Ralph Klouda**
Manager of Business Development and Customer Support

Management Team



Hana Microelectronics (Cambodia) Co., Ltd. Management



1. **Ms. Bun Sarourn**
Accountant
2. **Ms. Houern Monirath**
Human Resources Information System
3. **Mr. Somchai Chantrachirathumrong**
General Manager
4. **Ms. Kim Montha**
Senior Supervisor of Human Resources & Administration
5. **Ms. Roth Theany**
Supervisor of Training
6. **Mr. Hout Hoeut**
Senior Supervisor of Facility
7. **Mr. Warin Samarnso**
Senior Manager of Human Resources
8. **Mr. Narhit Muangnakin**
Senior Manager of Quality and Reliability Assurance (QRA)
9. **Mr. Keng Siyin**
Process Engineer
10. **Mr. Horn Borey**
Section Manager of Supply Chain
11. **Mr. Ren Maosheng**
Senior Manager of Operation
12. **Mr. Chheurn Raksmei**
Supervisor of Quality Assurance (QA)

Profiles of Directors & Executives

1. MR. JOHN THOMPSON

- **Independent Director**
- **Chairman of the Board of Directors**
- **Chairman of Audit Committee**



Age:	56 years old
Date of appointment:	1 January 2017
Number of years as the director:	4 years
Working Experiences:	<ul style="list-style-type: none"> • 2017 – present, Chairman of the Board of Directors, Independent Director and Chairman of Audit Committee, Hana Microelectronics Public Co., Ltd. • 2007 - present, Executive Director, NT Asset (Thailand) Co., Ltd. • 2005 - present, Independent Director and Audit Committee, Bangkok Post Public Co., Ltd.
Education Background:	<ul style="list-style-type: none"> • Bachelor (Honours), London University, United Kingdom • Associate Chartered Accountant (ACA), The Institute of Chartered Accountants in England & Wales (ICAEW), United Kingdom
IOD Training Courses:	<ul style="list-style-type: none"> • Directors Accreditation Program (DAP) 57/2006

Take the position as the director or management in other companies: Yes

Subsidiaries of Hana	Non-listed Company	Listed Company
None	Executive Director, NT Asset (Thailand) Co., Ltd.	Independent Director and Audit Committee, Bangkok Post Public Co., Ltd.

Shareholding of Mr. John Thompson				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Profiles of Directors & Executives

2. MR. RICHARD DAVID HAN



- **Executive Director**
- **Executive Vice Chairman and Chief Executive Officer**
- **Nomination Committee**

Age: 63 years old
 Date of appointment: 26 July 1993
 Number of years as the director: 27 years

Working Experiences:

- 2004 – present, Nomination Committee Hana Microelectronics Public Co., Ltd.
- 1993 – present, Executive Vice Chairman and Chief Executive Officer, Hana Microelectronics Public Co., Ltd.

Education background:

- B.A. Business Studies, Westminster, London, United Kingdom
- M.B.A. (Marketing) City University, London, United Kingdom

IOD Training Courses:

- Directors Accreditation Program (DAP) 57/2006
- Understanding the Fundamental of Financial Statements (UFS) 4/2006

Take the position as the director or management in other companies: Yes

Subsidiaries of Hana	Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd. 2. Hana Semiconductor (Ayutthaya) Co., Ltd. 3. Hana Technologies, Inc. 4. Hana Microelectronics, Inc. 5. Hana Microelectronics (Jiaxing) Co., Ltd. 6. Hana Microelectronics Investment Co., Ltd. 7. Hana Microelectronics International Co., Ltd. 8. Hana Microelectronics Enterprise Co., Ltd. 9. Hana Semiconductor International Ltd. 10. Hana Macao Commercial Offshore Ltd. 11. Omac Sales Ltd. 12. Hana Microelectronics (Cambodia) Co., Ltd. 13. Power Master Semiconductor Co., Ltd.	1. Omac (HK) Limited 2. Omac Limited 3. Rainbow Joy Limited	1. Thai British Security Printing Public Co., Ltd.
Position: Executive Director	Position: Executive Director	Position: Non-executive Director

Shareholding of Mr. Richard David Han				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
1,040,000 shares	-	-	1,040,000 shares (0.129%)	None	None

Profiles of Directors & Executives

3. MR. WINSON MOONG CHU HUI

- **Executive Director**
- **President and Chief Operating Officer**



Age:	74 years old
Date of appointment:	26 July 1993
Number of years as the director:	27 years
Working Experience:	1993 - present, Executive Director Hana Microelectronics Public Co., Ltd.
Educational Background:	Bachelor of Engineering, Cheng Kong University, Taiwan
IOD Training Background:	Director Accreditation Program (DAP) 117/2015

Take the position as the director or management in other companies: Yes

Subsidiaries of Hana	Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd. 2. Hana Semiconductor (Ayutthaya) Co., Ltd. 3. Hana Technologies, Inc. 4. Hana Microelectronics, Inc. 5. Hana Microelectronics (Jiaxing) Co., Ltd. 6. Hana Macau Commercial Offshore Ltd. 7. Hana Microelectronics (Cambodia) Co., Ltd.	None	None
Position: Executive Director		

Shareholding of Mr. Winsong Moong Chu Hui				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
6,280,000 shares	-	-	6,280,000 shares (0.780%)	None	None

Profiles of Directors & Executives

4. MR. TERRENCE PHILIP WEIR

- **Executive Director**
- **Vice President and Chief Financial Officer**
- **Chairman of Corporate Governance Committee**
- **Chairman of Risk Management Committee**



Age:	61 years old
Date of appointment:	26 July 1993
Number of years as the director:	27 years
Working Experience:	<ul style="list-style-type: none"> • 2013 – present, Chairman of Corporate Governance Committee Hana Microelectronics Public Co., Ltd. • 2008 – present, Chairman of Risk Management Committee Hana Microelectronics Public Co., Ltd. • 1993 – present, Executive Director Hana Microelectronics Public Co., Ltd.
Educational Background:	Bachelor of Economics, Macquarie University, CPA, Australia
IOD Training Background:	Director Certification Program (DCP) 6/2001, Diploma
Other Training:	<ul style="list-style-type: none"> • MSCI-SET Exclusive Sharing by the Stock Exchange of Thailand – November 2020 • Accounting for revenue from contracts with customers by CPA Australia Ltd. – December 2020 • Accounting for employee benefits by CPA Australia Ltd. – December 2020

Take the position as the director or management in other companies: Yes

Subsidiaries of Hana		Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd.		None	None
2. Hana Semiconductor (Ayutthaya) Co., Ltd.			
3. Hana Technologies, Inc.			
4. Hana Microelectronics, Inc.			
5. Hana Microelectronics (Jiaxing) Co., Ltd.			
6. Hana Microelectronics Investment Co., Ltd.			
7. Hana Microelectronics International Co., Ltd.			
8. Hana Microelectronics Enterprise Co., Ltd.			
9. Hana Semiconductor International Ltd.			
10. Hana Macao Commercial Offshore Ltd.			
11. Omac Sales Ltd.			
12. Hana Microelectronics (Cambodia) Co., Ltd.			
13. Power Master Semiconductor Co., Ltd.			
Position: Executive Director			

Shareholding of Mr. Terrence Philip Weir				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
575,000 shares	-	-	575,000 shares (0.071%)	None	None

Profiles of Directors & Executives

5. MRS. SALAKCHITT PREEDAPORN

- Independent Director
- Audit Committee
- Nomination Committee
- Corporate Governance Committee
- Risk Management Committee



Age:	59 years old
Date of appointment:	1 December 2013
Number of years as the director:	7 years
Working Experience:	<ul style="list-style-type: none"> • 2020 - present, Risk Management Committee Hana Microelectronic Public Co., Ltd. • 2013 - present, Independent Director Hana Microelectronic Public Co., Ltd. • 2009 - present, Financial and Accounting Consultant • 1992 - 2009, Accounting Manager S. Napa (Thailand) Co., Ltd. & Group Company
Educational Background:	Bachelor of Accounting, Thammasat University, Thailand
IOD Training Background:	<ul style="list-style-type: none"> • Risk Management for Committee Program (RMP) 2/2013 • Director Accreditation Program (DAP) 107/2014 • Director Certification Program (DCP) 205/2015 • Nomination Committee Best Practice Guideline (M-ND) 1/2017
Other Trainings:	<ul style="list-style-type: none"> • IAASB's work plan and value of the audit to the users of financial statements International Auditing and Assurance Standards Board (IAASB) by The Stock Exchange of Thailand and International Auditing and Assurance Standards Board (IAASB) – January 2020 • MSCI-SET Exclusive Sharing by The Stock Exchange of Thailand - November 2020

Take the position as the director or management in other companies:

Listed company: None

Non-listed company: None

Shareholding of Mrs. Salakchitt Preedaporn				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Profiles of Directors & Executives

6. MR. YINGSAK JENRATHA

- **Audit Committee**
- **Chairman of Nomination Committee**
- **Corporate Governance Committee**
- **Risk Management Committee**



Age:	73 years old
Date of appointment:	1 December 2013
Number of years as the director:	7 years
Working Experience:	<ul style="list-style-type: none"> • 2020 - present, Risk Management Committee Hana Microelectronic Public Co., Ltd. • 2013 - present, Independent Director Hana Microelectronics Public Co., Ltd. • 2010 - 2011, Management Advisor International Precision Product Co., Ltd. • 2008 - 2009, Vice President and General Manager Hana Microelectronics Co., Ltd. (Jiaxing), China
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Art in Political Sciences, Chaingmai University, Thailand • Mini MBA, Kasetsart University, Thailand • Operation Management Certificate from GIBA (Graduated Institute of Business Administration), Chulalongkorn University, Thailand
IOD Training Background:	<ul style="list-style-type: none"> • Anti-Corruption for Executive Program (ACEP) 9/2014 • Director Accreditation Program (DAP) 11/2014 • Role of the Nomination and Governance Committee (RNG) 8/2016
Other Trainings:	MSCI-SET Exclusive Sharing by The Stock Exchange of Thailand - November 2020
Take the position as the director or management in other companies:	Yes

Subsidiaries of Hana	Non-listed Company	Listed Company
None	None	Independent Director and Audit Committee, G J Steel Public Co., Ltd.

Shareholding of Mr. Yingsak Jenratha				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
60,000 shares	-	60,000 shares	0 share (0%)	None	None

Profiles of Directors & Executives

7. MR. WING KEUNG CHOW

- **Vice President and General Manager**
Hana-Lamphun



Age:	61 years old
Date of appointment:	1 January 2008
Working Experience:	<ul style="list-style-type: none"> • 2008 - present, Vice President and General Manager Hana Microelectronics Public Co., Ltd. • 2001 - 2007, Vice President Marketing & Customer Services Hana Microelectronics Public Co., Ltd.
Educational Background:	Master Degree of Management, SASIN, Chulalongkorn University, Thailand
IOD Training Background:	None
Take the position as the director or management in other companies:	
Listed company:	None
Non-listed company:	None

Shareholding of Mr. Wing Keung Chow				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
729,500 shares	253,000 shares	85,000 shares	561,500 shares (0.070%)	None	None

Profiles of Directors & Executives

8. MS. ACHARA CHAICHARNCHEEP

● Senior Financial and Accounting Manager



Age:	51 years old
Date of appointment:	14 October 2013
Working Experience:	1996 – present, Senior Accounting Manager Hana Microelectronics Public Co., Ltd. (Headquarter)
Educational Background:	Bachelor of Accounting, Kasetsart University, Thailand
IOD Training Background:	None
Other Training:	<ul style="list-style-type: none"> • TFRS 9 Financial Instruments (The principle for apply and an example for understanding) by Dharmniti Seminar and Training Co., Ltd. - November 2020 • Obstacles and practice of accounting records for recognition according to the accounting standards by Dharmniti Seminar and Training Co., Ltd. - November 2020

Take the position as the director or management in other companies:

Listed company:	None
Non-listed company:	None

Shareholding of Ms. Achara Chaicharncheep				Indirect Shareholding	
Number of shares as of 1 January 2020	Movement during the year		Number of shares as of 31 December 2020	Spouse	Minor Child
	Acquisition	Disposition			
30,000 shares	-	-	30,000 shares (0.004%)	None	None

Overview and Nature of Business

Hana Overview

Hana Group is one of South East Asia's leading independent "Electronics Manufacturing Service" (EMS) producers. The Company's headquarters is located in Bangkok and there are 6 manufacturing facilities, which are located in Lamphun and Ayutthaya provinces in Thailand, Jiaying in China, Ohio in USA and a new manufacturing facility in Koh Kong, Cambodia.

Hana Microelectronics Public Co., Ltd. is the parent company. Initially, the Company was established under the name of Hana Microelectronics Co., Ltd. on 28 February 1978 and then was registered to be a public company limited on 26 July 1993 and the name changed to Hana Microelectronics Public Company Limited.

Vision, Mission and Corporate Objectives

In 2020, the Board of Directors annually reviewed and approved the Company's vision, mission and corporate objectives or the long term goals as below.

Vision

To become the electronic manufacturing services' company of choice, by providing world class quality manufacturing through a diverse field or related disciplines.

Mission

To create long-term shareholder value in a manner which minimizes fluctuations in earnings; to develop and promote our employees' wellbeing; to create strong customer- satisfaction and to be a good corporate citizen maintaining high corporate, environmental and social practices for the benefit of all stakeholders.

Corporate objectives/Long term goals

1. Develop and foster our human resources base for continuous expansion and in order to meet the ever changing demands of the market and for their own personal career paths
2. Build strong and long relationships with our core customers to foster continuous growth
3. Understand our customers' demands and endeavor to meet them
4. Continuously diversify our customer base, geographic and industry exposure in order to cope with fluctuations in economic cycles
5. Create and grow shareholder value through the distribution of profits and increasing returns
6. Maintain integrity through business ethics in dealings with all stakeholders

Overview and Nature of Business

Major changes and development of the Company

Major changes and development of the Company and subsidiaries in the past 3 years are as follows.

- 2018**
- Hana Microelectronics Public Co., Ltd., Sahaphat Group Industrial Park branch expanded its second floor adding an additional 6,000 square meters of production space.
 - A subsidiary, Hana Microdisplay Technologies, Inc. changed its name to Hana Technologies, Inc. to better reflect its broader capabilities.

- 2019**
- Hana Technologies Group Limited, a subsidiary company, and Hana Technologies Investments Limited, a subsidiary company of Hana Technologies Group Limited, registered for dissolution of their business. There was no gain/loss on investments in these subsidiary companies.
 - Hana Semiconductor Holdings Limited, a subsidiary company of Hana Microelectronics International Company Limited, registered for dissolution of its business. There was no gain/loss on investments in this subsidiary company.
 - In June 2019, Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, additionally invested in 5,910,000 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 2.5 million or equivalent to Baht 76.86 million. In September 2019, it additionally invested in 5,922,600 ordinary shares, amounting to USD 2.5 million or equivalent to Baht 76.48 million. In December 2019, It additionally invested in 5,781,500 ordinary shares, amounting to USD 2.5 million or equivalent to Baht 75.39 million.

As at 31 December 2019, the overseas subsidiary company has invested in 24,158,257 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 10.49 million or equivalent to Baht 326.30 million, representing 100% of the issued and paid-up share capital of that company.

- 2020**
- In June 2020, Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, additionally invested in 14,526,840 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 6 million or equivalent to Baht 191.07 million. In October 2020, such overseas subsidiary company additionally invested in 6,783,900 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 3 million or equivalent to Baht 93.58 million.

As at 31 December 2020, the overseas subsidiary company has invested in 45,468,997 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 19.49 million or equivalent to Baht 610.95 million, representing 100% of the issued and paid-up share capital of that company.

Overview and Nature of Business

2020 Awards and Recognition



Hana was rated “Excellent” in Corporate Governance Rating (CGR) by the Thai Institute of Directors Association (IOD).

Hana received ASEAN Asset Class Publicly Listed Companies 2019 Award by earning more than 97.50 points. The ASEAN CG Scorecard reflected our enhancement on the corporate governance quality to the internationally-accepted standards.



Hana received the ESG 100 honor from the Thaipat Institute. Hana is ranked among the top 100 listed companies (as a universe of the 100 publicly listed companies), achieving an outstanding performance in terms of environmental, social, and governance (ESG).

Overview and Nature of Business



Hana has named in the list of sustainable stocks or the Thailand Sustainability Investment (THSI) list 2020, reflecting the greater emphasis on our commitment to sustainable business practices toward environmental, social, and governance (ESG).

Hana received the Sustainability Disclosure Acknowledgement Award for the year 2020 from Thaipat Institute. The award reflected that the Company has enhanced its disclosure of sustainability information covering economic, social and environmental implementation that benefits to the stakeholders and integrated SDGs into sustainability (target 12.6).

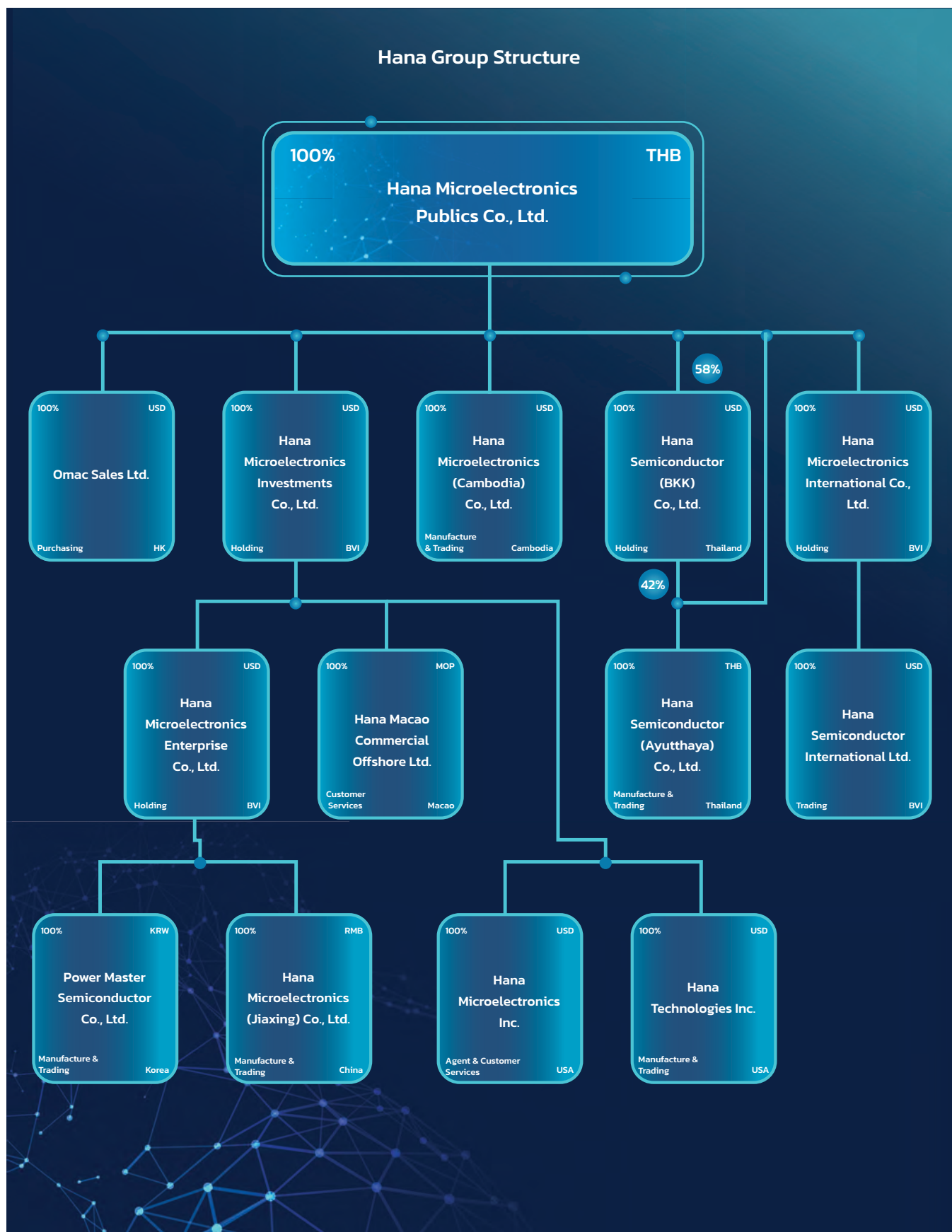


Hana received CSR-DIW Continuous Award for the year 2020, the Standard for Corporate Social Responsibility from the Department of Industrial Work (CSR-DIW). The award recognized the Company for its implementation under given CSR-DIW standards and sustainable development.

Hana was awarded as “A Factory Model of IoT Innovation” under the Innovation IoT Production System Prototype Development Project, honored by the Department of Industrial Works.



Overview and Nature of Business



Overview and Nature of Business

Business operating policy

Hana has the policy to diversify its business to multiple manufacturing locations strategically based in low-cost country wherever possible and setting up the necessary companies for customer service, purchasing center, trading and holding companies to serve the group requirement.

Manufacturing

Hana Microelectronics Public Co., Ltd.
Hana Semiconductor (Ayutthaya) Co., Ltd.
Hana Microelectronics (Jiaxing) Co., Ltd.
Hana Technologies, Inc.
Hana Microelectronics (Cambodia) Co., Ltd.
Power Master Semiconductor Co., Ltd.

Holding

Hana Semiconductor (BKK) Co., Ltd.
Hana Microelectronics International Ltd.
Hana Microelectronics Investment Ltd.
Hana Microelectronics Enterprises Co., Ltd.

Purchasing

Omac Sales Ltd.

Customer services

Hana Macao Commercial Offshore Ltd.

Trading

Hana Semiconductor International Ltd.

Agent and customer services

Hana Microelectronics, Inc.

Shareholding in subsidiaries which the Company holds shares of them directly and indirectly 10% up

Holding shares by the Company directly	Type of business	No. of shares/ Registered shares (Type of stock - Common stock)
Hana Semiconductor (BKK) Co., Ltd. 65/98 Soi Vibhavadi-Rangsit 64 Junction 2, Kwang Talad Bangkok, Khet Laksi, Bangkok 10210, Thailand	Holding	99,999,994/100,000,000 Baht
Omac Sales Ltd. Unit B1, 10/F, Block B, HK IND. Centre 489-491 Castle Peak Road, Lai Chi Kok, Kowloon, Hong Kong SAR, China	Purchasing of electronic components and equipment	99,999/100,000 HKD
Hana Microelectronics International Co., Ltd. Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG 1110, British Virgin Islands	Holding	2/2 USD
Hana Microelectronics Investment Co., Ltd. Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG 1110, British Virgin Islands	Holding	2/2 USD
Hana Semiconductor (Ayutthaya) Co., Ltd. 100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand	Manufacturing and trading of electronic components	69,999,993/120,000,000 Baht
Hana Microelectronics (Cambodia) Co., Ltd. Neang Kok Village, Pakkhleng Commune, Mondul Seyma District, Koh Kong Province Cambodia	Manufacturing and trading of electronic components	5,000,000/5,000,000 USD

Overview and Nature of Business

Holding shares by the Company's subsidiaries	Type of business	No. of shares/ Registered shares (Type of stock - Common stock)
Hana Semiconductor International Ltd. Rua De Pequim No. 126 EDF. Commercial I TAK C18 Macao	Trading of electronic components	1,851,283/10,000,000 USD Holding shares by Hana Microelectronics International Co., Ltd.
Hana Technologies, Inc. 2061 Case Parkway South, Unit # 6, Twinsburg, Cleveland, Ohio 44087, USA	Manufacturing and trading of electronic components	437,752/ 437,752 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
Hana Microelectronics, Inc. 3140 De La Cruz Blvd, #107, Santa Clara, CA 95054, USA	Agent and customer services	1,000/1,000 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
Hana Microelectronics Enterprise Co., Ltd. Vistra Corporate Services Center, Wickhams Cay II, Road Town, Tortola, British Virgin Islands	Holding	2/2 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
Hana Macao Commercial Offshore Ltd. Rua De Pequim No. 126 EDF. Commercial I TAK C18 Macao	Customer services	1/1 MOP (Macau Pataca) Holding shares by Hana Microelectronics Investment Co., Ltd.
Hana Microelectronics (Jiaxing) Co., Ltd. No#18, Hengnuo Road, Xingcheng Industrial Zone, Ziuzhou district, Jiaxing City, Zhejiang Province, 314000 P.R. China	Manufacturing and trading of electronic components	40,000,000/40,000,000 USD Holding shares by Hana Microelectronics Enterprise Co., Ltd.
Hana Semiconductor (Ayutthaya) Co., Ltd. 100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand	Manufacturing and trading of electronic components	50,000,001/120,000,000 Baht Holding shares by Hana Semiconductor (BKK) Co., Ltd.
Power Master Semiconductor Co., Ltd. 79-20, Gwahaksaneop 4-ro, Oksan-myeon Heungdeok-gu, Cheongju-si, Choongcheongbuk-do 28122, South Korea	Manufacturing and trading of electronic components	45,468,997/100,000,000 Won Holding shares by Hana Microelectronics Enterprise Co., Ltd.

Overview and Nature of Business

Nature of Business

Hana Group's business operations are primarily the assembly of components, sub-assemblies and small electronic finished products. The major product groups are printed circuit board assembly "PCBA", integrated circuit "IC" assembly and test and Microdisplay assembly with factories currently located in Thailand, China and USA providing a wide scope of assembly processes serving a diverse range of electronic industries which includes:-

Manufacturing Service	Location	Ultimate Holding
Lamphun plant 1: RF (Radio-Frequency Devices), Automotive Sensors, PCB Assembly including High Frequency Telecommunication Devices, Computer Components, Medical Devices Lamphun plant 2: Optical Mouse Sensors, Proximity Sensors, Computer Components, Tire Tag, Ink-jet Cartridge, Wafer Probe, RFID (Elatec)	Hana Microelectronics Public Co., Ltd., Lamphun plant 1 and 2, Thailand	100%
Integrated Circuit Assembly & Test, Optical Sensors and Modules, QFN, SOT, SIP, MEMS, LGA, Smart Card Module, Flipchip, OPTO, RF (Radio-Frequency Devices), Open Cavity QFN, Power QFN Cu Clip, Power Package Dual Cool, TO-247TE Dual Cool	Hana Semiconductor (Ayutthaya) Co., Ltd., Thailand	100%
Printed Circuit Board Assembly, Wireless Radio Frequency Product, Micro Coil Winding, Integrated Circuit Assembly & Test, LED	Hana Microelectronics (Jiaxing) Co., Ltd., P.R. China	100%
RFID (Radio Frequency Identification Devices), LCOS (Liquid Crystal on Silicon), MEMS, HTP (high-temperature polysilicon)	Hana Technologies, Inc., USA	100%
Remote Control, Security/Access Control Reader (Secure Reader Box Build, RFID (Radio-Frequency Devices) Reader, Smart Card Reader, USB Token Security, Cable Harness, Telecommunication Devices, Computer Components and Pre-Assembly: Semi-Electronic	Hana Microelectronics (Cambodia) Co., Ltd., Cambodia	100%

Overview and Nature of Business

Revenue structure by product group

(Unit: Million Baht)

Product	Company	% of share holding by the Company	2020		2019		2018	
			Revenue	%	Revenue	%	Revenue	%
IC ASSEMBLY	HS-AYT, HM-JX & PMS	100%	7,290	38	7,581	37	8,649	39
PCBA	HM-LPN, HM-JX & HMC	100%	11,306	59	11,965	59	12,575	56
MICRODISPLAY	HTI	100%	687	4	838	4	1,040	5
Total			19,283	100	20,384	100	22,264	100

Remark:

HS-AYT: Hana Semiconductor (Ayutthaya) Co., Ltd.

HM-JX: Hana Microelectronics (Jiaxing) Co., Ltd.

HMC: Hana Microelectronics (Cambodia) Co., Ltd.

HM-LPN: Hana Microelectronics Public Co., Ltd. (Lamphun)

HTI: Hana Technologies Inc.

PMS: Power Master Semiconductor Co., Ltd.

Hana Product Group

1. Printed Circuit Board Assembly (PCBA)

The broad definition of Printed Circuit Board Assembly is placing ICs and other electronics components on a printed circuit board using a procedure known as SMD (Surface Mount Device) technology. Our PCBA products are made in two of our manufacturing plants, Lamphun (Thailand) and in Jiaxing, China. The Company also provides manufacturing services for other products such as COB (Chip-on-Board) Assembly, Wireless Radio Frequency Product and other electronics device (Air Pressure and Temperature Control product, Fiber Optic Device, Wireless Sensor Product, Smart Card Product, Medical Device such as Hearing Aid and etc.). In our Cambodian plant, the Company assembles box build products and other labour intensive assemblies.

2. IC Assembly and Test

Hana provides IC assembly and test operations at our Ayutthaya plant in Thailand and Jiaxing, our plant in China. The Company offers a variety of IC assemblies and test services such as Standard IC products (QFN/DFN package, LGA, MSOP package, SC, SOT, and TSOT package, etc.), LEDs for Automotive Lighting, Optical Mouse, DC-DC Converter Assembly and Fiber Optic Assembly, etc.

3. Microdisplay

Hana Technology Inc. produces Liquid Crystal on Silicon "LCOS" devices which are be used for microdisplays and optical telecommunications components. The plant also produces RFID (Radio Frequency Identification - RFID) passive tags. The products are developed and initially manufactured by the plant in Twinsburg, Ohio, USA The manufacturing of these devices are also performed in both our Ayutthaya and Lamphun plants, where duplicate production lines have been established since 2004.

Product distribution and raw material

Hana manufactures all products according to the customers' specification and requirement and sells such products directly to our customers. The major raw materials come directly from suppliers and/or are consigned by our customers. The Company imports most of our major raw materials used in production either directly or through distributors. The Company does not purchase raw materials from any one supplier valued at more than 30 percent of the total purchase of raw materials. The Company orders materials in relation to our customers' orders using planning software systems to match the customer demand.

Overview and Nature of Business

Some materials are based on world prices market such as gold, copper, steel prices which may fluctuate. The Company has managed various ways to cope with the price fluctuation such as finding second source of substitute raw materials, advanced planning for material ordering in conjunction with our suppliers and customers.

Hana values the importance of product quality and standard as priority, we employ rigorous testing procedures for all incoming materials before releasing them to the assembly lines in order to ensure that production high standards will be maintained in accordance to international standard requirements.

Production capacity

The production capacity in 2020 is as follows.

(Unit: pieces/year)

Manufacturing Plants	2020		2019		2018	
	Production Capacity	Actual Production	Production Capacity	Actual Production	Production Capacity	Actual Production
A) IC						
• Ayutthaya plant	6,021,802,885	4,886,756,929	5,084,970,286	4,661,234,467	5,252,969,000	4,947,572,288
• Jiaxing plant	1,783,044,000	1,438,654,000	1,779,112,000	1,149,903,000	1,781,584,800	1,274,227,000
B) PCBA						
• Lamphun plant	1,400,000,000	1,100,000,000	1,400,000,000	1,200,000,000	1,200,000,000	1,000,000,000
• Jiaxing plant	39,343,000	28,627,000	39,343,000	27,378,000	57,252,000	43,703,000
• Cambodia plant	22,360,000	4,060,670	22,360,000	18,157,601	36,360,000	29,660,000
C) MICRODISPLAY						
• USA plant	150,700,000	113,810,000	150,700,000	120,320,000	151,000,000	104,550,000

Industry Competitive Condition

In 2020 the electronic markets were weak due to the Covid-19. The Company remains competitive by providing assemblies to the high quality level demanded by the customers at a competitive cost. The management believes that the Company maintains a competitive cost structure equal or lower to the majority of its competitors. Controls were implemented throughout all plants to minimize the risk of Covid-19 spread. The result was that we had no occurrence of persons suffering from Covid-19. With such effect, we had zero work hour interruption during the whole year.

To compete with our competitors:

1. Hana (Thailand) position is towards higher technology and better infrastructure than those in the more labour intensive countries, such as China, India, and Vietnam. Even with the recent wage increase, Thailand still competitive. With the recent high cost situation in China, business is re-flowing back into Thailand, which leads Thailand to be better competitive with our neighboring countries for more complex assemblies. In addition, the US/China trade conflict benefits Thailand industries.
2. Hana (China) also provides a competitive geographic location but with more corporate technical and administrative support to distinguish them from local competitors. This also strengthen our domestic market inside China.
3. Furthermore, Hana is also planning to cope with the labor cost increase. Our manufacturing plant in Cambodia starts to operate, to take advantage of the lower labor cost there as well as to handle the non-China manufacturing requirements.
4. Hana provides a wide range of products and processes in various locations to distinguish itself from other competitors who also have multiple factory sites but a smaller product range.

Overview and Nature of Business

5. Even with the recent fluctuations in the worldwide economy, Hana has maintained a strong cash flow.
6. Hana has multiple sites which provide alternative production facilities in case any one site has difficulty.

Future Projects in Plan

In the Semiconductor divisions, Hana continues to place a greater emphasis on design and development of new packaging solutions and has been successful in registering patents for such designs which will broaden our capabilities for our customers. In 2021, we continue to invest in new technology equipment to expand our capacity and capability.

For the microelectronics division in Lamphun, we had implanted the SAP ERP system to build a first class manufacturing IT structure. We shall continue to broaden our capabilities and increase automation to maintain a competitive cost structure.

Company General Information

Name:	Hana Microelectronics Public Co., Ltd.
Company registration number:	0107536000773
Contact address:	
Headquarter:	65/98 Soi Vibhavadi-Rangsit 64 Junction 2, Kwang Talad Bangkhen, Khet Laksi, Bangkok 10210, Thailand Tel.: 66 2551 1297-8, 66 2521 4935-9 Fax: 66 2551 1299, 66 2552 4906
Branch 1:	101/2 Moo 4, EPZ Northern Region Industrial Estate, Chiangmai – Lampang Road, T. Baan-Klang, A. Muang Lamphun, Lamphun province 51000, Thailand Tel.: 66 5358 1567 - 73, 66 5355 2361 Fax: 66 5358 1573 - 4, 66 5358 1290
Branch 2:	123 Moo 5, T. Pa Sak, A. Muang Lamphun, Lamphun province 51000, Thailand Tel.: 66 5309 0254, 66 5309 0210 Fax: 66 5353 7629
Website:	www.hanagroup.com
Nature of business:	Electronics Manufacturing Service “EMS” Producer
Registered share capital:	974,403,900 ordinary shares at par value of Baht 1
Paid-up capital:	804,878,860 ordinary shares at par value of Baht 1
Other type of shares:	None
References:	<p>Auditor: EY Office Limited 33rd Fl., Lake Rajada Office Complex, 193/136-137 New Rajadapisek Road, Bangkok 10110 Thailand Tel.: 66 2264 0777 Fax: 66 2264 0790</p> <p>Solicitors: Civilian Co., Ltd. (Former - Damrongtham Law Office) 63 Soi 8 (Soi Preeda), Sukhumvit Road, Wattana, Bangkok 10110 Thailand Tel.: 66 2255 2550-2, 66 2653 1133-4 Fax: 66 2653 1135, 66 2253 3427</p> <p>Share Registrar: Thailand Securities Depository 93 Rachadapisek Road, Dindaeng, Dindaeng, Bangkok 10400 Thailand Tel.: 66 2009 9000 Fax: 66 2009 9991</p> <p>Investors can get more information of the Company from 56-1 report that is posted at www.sec.or.th and www.hanagroup.com</p>

Overview and Nature of Business

Major shareholders

Major Shareholders as of the latest closing registration book on 26 October 2020

Type of Shares: Ordinary shares

No.	Name	No. of Shares	%
1.	OMAC LIMITED, OMAC (HK) LIMITED, RAINBOW JOY LIMITED	253,419,360	31.49
2.	LGT BANK (SINGAPORE) LTD	84,831,700	10.54
3.	THAI NVDR COMPANY LIMITED	77,592,017	9.64
4.	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	26,394,160	3.28
5.	STATE STREET EUROPE LIMITED	19,621,251	2.44
6.	UBS AG LONDON BRANCH	13,888,400	1.73
7.	BNP PARIBAS SECURITIES SERVICES, LONDON BRANCH	11,600,700	1.44
8.	THE BANK OF NEW YORK MELLON	10,848,600	1.35
9.	BBHISL NOMINEES LIMITED	10,767,480	1.34
10.	SCB DIVIDEND STOCK 70/30 LONG TERM EQUITY FUND	9,229,200	1.15

Remark: No. (1) are related companies under Section 258 of the Securities and Exchange Act (No. 4) B.E. 2551

Dividend Policy

The Company's dividend policy to pay shareholders is approximately 30 - 100% of its consolidated net income after deduction of all specified reserves, subject to the company and its subsidiaries' cash flow and investment plans, including justifications and other considerations as deemed appropriate. The dividend policy the subsidiaries to pay the Company is 0 - 100% of appropriated earnings.

Dividend payment detail	2020	2019	2018
Interim dividend (Baht/share)	0.65	0.65	1.00
Annual Dividend (Baht/share)*	0.75	0.65	1.00
Total dividend payment (Baht/share)	1.40	1.30	2.00
Total amount paid (Baht)	1,126,830,404	1,046,342,518	1,609,757,720
Percentage of total dividend payment against the net profit	59%	58%	68%

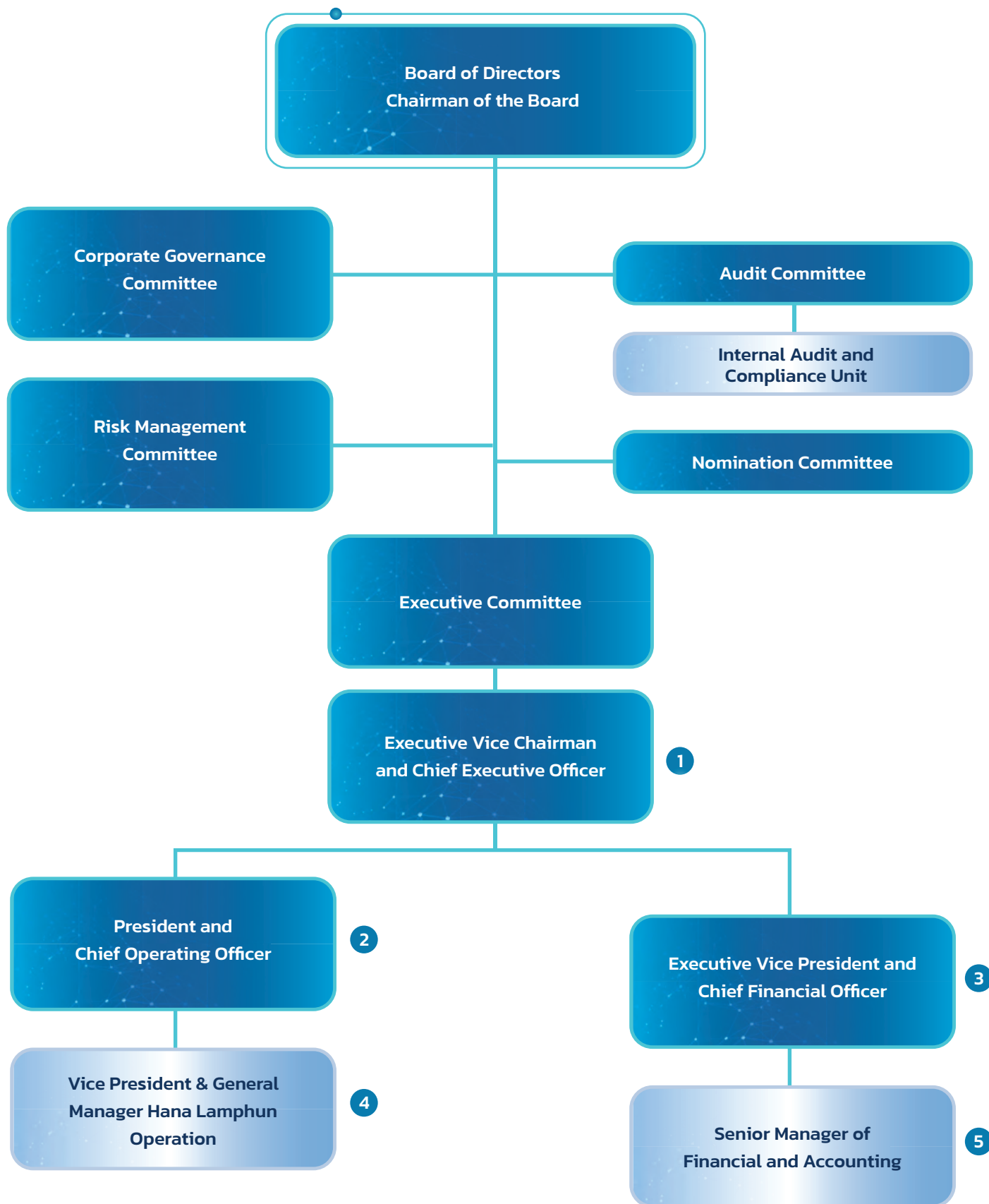
*Paid in May of the following year

Non-Financial KPI

Non-Financial KPIs are other measures used to assess the activities that the Company sees as important to the achievement of its strategic objectives. Following are the common non-financial KPIs that the Company uses as part of performance management.

KPI	Target	Actual in 2020
1. Training hours per year (average hour per person)	40 hours	48 hours
2. Continuous Improvement Program (CIP) participation rate	70%	75%
3. Customers' satisfaction	80%	84%
4. Zero audit failures (customer audit and 3rd party audit)	0	0
5. Customer complaint handling cycle time	100%	100%
6. Zero type A accidents	0	1

Management Structure



1 - 5 is the Company's Executives according to SEC Regulation

Management Structure

Board of Directors

The Board of Directors consists of six directors of whom three are executive directors and three are independent directors.

The Board of Directors as of 31 December 2020 is as follows.

Name	Position	Appointment Date
1. Mr. John Thompson	Independent Director	01 January 2017
2. Mrs. Salakchitt Preedaporn	Independent Director	01 December 2013
3. Mr. Yingsak Jenratha	Independent Director	01 December 2013
4. Mr. Richard David Han	Executive Director	26 July 1993
5. Mr. Winson Moong Chu Hui	Executive Director	26 July 1993
6. Mr. Terrence Philip Weir	Executive Director	26 July 1993

Term of service of independent directors:

The Board of Directors set the term of service of independent directors shall not over than nine years from the date of their first appointment, with no exception.

Authorized Directors:

The directors authorized to bind the Company shall be the joint signatures of any two directors and affixed with the Company's seal.

Board duties and responsibilities:

In conducting the business of the Company, the Board of Directors shall perform their duties with responsibilities, due care and loyalty in the best interest of the Company and its shareholders. The duties and responsibilities of the Board of Directors are as follows.

1. To ensure that directors and executives perform their responsibilities with duty of care and loyalty and that the Company operates in accordance with the relevant laws and objectives enumerated in the Company's Memorandum of Association and have the authority to perform duties provided or related thereto under the resolution of the shareholder meetings
2. To ensure that the Company's annual and medium-term objectives, goals and strategies align with the Company's long term objectives, which shall be reviewed and updated annually as well as to monitor and oversee the implementation of corporate strategies
3. To determine the vision and mission of the Company and to review annually
4. To consider decisions on the material transactions or significant matters such as large investment, the Company's key policies, management authority, and any transactions as prescribed by law
5. To review the system of sound internal control and risk management system to be effectively implemented and maintained
6. To ensure that the major related party transactions or conflict of interests are in compliance with the relevant notifications, regulations and guidelines of the Stock Exchange of Thailand
7. To ensure the appropriate accounting systems, the preparation of financial reports and accounting policies in accordance with generally accepted accounting and review by independent auditors
8. To put in place a mechanism for an annual performance evaluation of the Board and sub-committees
9. To ensure business continuity in the long term including the development and succession plans for the executives to be in place and annually request reporting the implementation of the development and succession plans
10. To review the corporate governance policy and its compliance at least annually
11. To govern the subsidiaries in order to protect investor benefits including assigning directors of its subsidiaries to control management under the policies of the Company, including transactions related to securities and exchange laws or SET regulations.

Management Structure

12. To attend every Board of Directors' meeting except special reasonable circumstances
13. To support the Company's policies and practices related to anti-corruption in all forms

Authorities of the Board of Directors:

1. **Related to the Company business** - To approve the Company's vision, mission and business objectives/goals, the matters impacted to financial, debt, future business strategic and performance of the Company, project with capital investment over than Baht 100,000,000 and the change of capital structure and accounting policy
2. **Related to shareholders** - To approve the dividend payment, financial statement and its notes, the auditor opinion, annual report, calling shareholder meeting, the change of the Company's Memorandum of Association, appointment of auditors and their remuneration and the ordinary share issuance and to recommend to shareholder meetings.
3. **Related to the Board and executive management** - To approve the appointment and removal of director and secretary of the Company and its subsidiaries, delegation or empower the roles and responsibilities to CEO, sub-committee, the charter of Board of Directors and sub-committee, the other Board seats held by director, CEO and executive management as well as related party transactions and conflict of interest
4. **Related to organization principle** – To approve the corporate governance policy, the code of conduct, social responsibility, risk management and internal control including management of enterprise information technology

Duties and Responsibilities of the Chairman of the Board of Directors:

The Chairman of the Board has additional responsibilities more than other directors as follows.

1. To oversee and ensure that the Board efficiently carries out its duties to achieve the Company's objectives
2. Together with CEO, to call the Board and shareholder meetings and set the agendas of the meetings which important matters should be included
3. To allocate sufficient time to discuss important matters and encourage directors to exercise independent judgement
4. To act as a chairperson at the meetings of the Board and shareholders including review and sign minutes of meetings
5. To cast a vote to break a tie for the Board and shareholder meetings
6. To ensure that all directors promote the Company's ethical culture and good corporate governance
7. To promote constructive relationship between independent directors and executive directors, and between the Board and management

Segregation of duties between the Board of Directors and Management

The roles and responsibilities between the Board and management are clearly segregated as follows.

Board of Directors	Management
<ul style="list-style-type: none"> To have the ultimate responsibility for the Company's long-term prosperity To approve the large projects/investment, major transactions, policies, etc. To oversee the overall performance of the Company and to monitor the efficiency and effectiveness of the implementation of the policies and plans 	<ul style="list-style-type: none"> To run the business of the Company and set its business strategy in accordance with the delegated authority of the Board To have the authority to approve day-to-day operational expenditures, investment, commercial agreement, etc. according to the limited amount approved by the Board To report results to the Board

The Board has approved the separation of duties and authorization and management such as approval limits of day-to-day operational expenses. However, such authorization shall not include that where the grantee can approve the transaction of which he or she is a person who might have any conflict of interest with the Company or its subsidiaries regarding such transaction.

Management Structure

Management Team

As of 31 December 2020, the executive of the Company consists of 5 members as follows.

Name	Position
1. Mr. Richard David Han	Executive Vice Chairman and Chief Executive Officer
2. Mr. Winson Moong Chu Hui	President and Chief Operating Officer
3. Mr. Terrence Philip Weir	Executive Vice President and Chief Financial Officer
4. Mr. Wing Keung Chow	Vice President and General Manager
5. Ms. Achara Chaicharncheep	Senior Financial and Accounting Manager

Duties and Responsibilities of Chief Executive Officer:

The Board delegate authority and responsibility for the conduct of the Company's business to CEO who has following responsibilities:-

1. To manage and monitor the Company's daily operations and performance consistent with the Company's objectives, strategies and relevant policies
2. To recommend to the Board any significant operational changes and major capital expenditures beyond delegated authority
3. To propose appropriation of earnings to the Board for interim and/or annual dividend payments
4. To assign responsibilities to the senior management and supervising the work of executive directors
5. To empower the engagement and commitment for the Company in accordance with all applicable laws and the Company's standards and policies
6. To conduct other duties in accordance with the resolutions of the Board meetings and/or shareholder meetings

Sub-Committees of the Board of Directors

The Board currently has five committees - Executive Committee, Audit Committee, Nomination Committee, Corporate Governance Committee and Risk Management Committee in fulfilling its responsibilities.

Executive Committee:

Structure: The Committee currently comprises of three members.

Term: There is no term limit.

Name	Position
1. Mr. Richard David Han	Executive Vice Chairman and Chief Executive Officer
2. Mr. Winson Moong Chu Hui	President and Chief Operating Officer
3. Mr. Terrence Philip Weir	Executive Vice President and Chief Financial Officer

Duties and responsibilities of the Executive Committee:

1. To perform and manage the Company's business to comply with the policies, mission and business plans as determined by the Board of Directors
2. To determine budget and the management's authorities of the Company
3. To monitor and follow up the operation of the Company's policies to ensure its efficiency
4. To monitor and follow up the performance of the Company to ensure its compliance with the business plan
5. To have the authorization for approval limits of day-to-day operational expenses in accordance with the approval authorization policy of the Company and to consider the large investment projects such as a joint venture, a construction of new plant etc. and any significant transactions over than Baht 100,000,000 shall be proposed to the Board for approval
6. To perform other duties as assigned by the Board of Directors

Management Structure

Audit Committee:

Structure: The Audit Committee was formally established since September 10, 1999. The Committee consists entirely of independent directors, who are independent from Hana operations and free from any relationship that might in the opinion of the Board of Directors to be construed as a conflict of interest.

Term: The Chairman and members are appointed for an initial term of three years.

Name	Position
1. Mr. John Thompson	Chairman
2. Mrs. Salakchitt Preedaporn	Member
3. Mr. Yingsak Jenratha	Member

Mr. John and Mrs. Salakchitt have the expertise and experience to review the financial statements while Mr. Yingsak has the full experience with the electronic company.

Duties and responsibilities of the Audit Committee:

1. To review the Company's financial reporting process in order to ensure that it is accurate and adequate
2. To review the Company's internal control system and internal audit system to ensure that they are suitable and efficient, to determine an internal audit unit's independence, as well as to approve the appointment, transfer and dismissal of the head of an internal audit department
3. To review the Company's compliance with the laws on securities and exchange, the regulations of the SET and other laws relating to the Company's business
4. To consider, select and nominate an independent auditor including propose their remuneration including consider the performance of auditors and dismissal as well as attend the meeting at least once a year with the external auditors without executive management present
5. To review the connected transactions or transactions that may lead to conflicts of interests in order to ensure that they are in compliance with the SET regulations and applicable laws, and are reasonable and for the highest benefit of the Company
6. To prepare and disclose in the Company's annual report, an Audit Committee's report which shall be signed by the Chairman of Audit Committee and consist of at least the following information:
 - 6.1 an opinion on the accuracy, completeness and creditability of the Company's financial report,
 - 6.2 an opinion on the adequacy of the Company's internal control system,
 - 6.3 an opinion on the compliance with related laws i.e. the Securities and Exchange Act, the SET regulations, or the laws relating to the Company's business,
 - 6.4 an opinion on the suitability of an auditor,
 - 6.5 an opinion on the transactions that may lead to conflicts of interests,
 - 6.6 the number of the Audit Committee meetings, and the attendance of such meetings by each committee member,
 - 6.7 an opinion or overview comment received by the Audit Committee from its performance of duties in accordance with the charter, and
 - 6.8 other transactions which, according to the Audit Committee's opinion, should be known to the shareholders and general investors, subject to the scope of duties and responsibilities assigned by the Board of Directors
7. To support and monitor the risk management systems and ensure the measures of the Company are appropriate
8. To review the Company's compliance with private sector's anti-corruption and certification program, including the Collective Action Coalition Against Corruption's Self-Evaluation Tool
9. In its performance of duties, if it is found or suspected that there is a transaction or any of the following acts which may materially affect the Company's financial condition and operating results, the Audit Committee shall report it to the Board of Directors for rectification within the period of time that the Audit Committee thinks fit:
 - 9.1 a transaction which causes a conflict of interest;
 - 9.2 any fraud, irregularity, or material defect in an internal control system; or
 - 9.3 an infringement of the SET regulations or any law relating to the Company's businessIf the Board of Directors or management fails to make a rectification within the period of time under the first paragraph, any Audit Committee may report on the transaction or act under the first paragraph to the SEC and the SET.

Management Structure

10. To perform any other duties as assigned by the Board of Directors
11. To review and revise the Audit Committee Charter and propose any revision to the Board of Directors for approval

Nomination Committee:

Structure: The Nomination Committee was established in November 2004. It consists of two independent directors and one executive director. The Committee will at all time consist of a majority of independent directors.

Term: The Chairman and members are appointed for the term of three years.

Name		Position
1.	Mr. Yingsak Jenratha	Chairman
2.	Mr. Richard David Han	Member
3.	Mrs. Salakchitt Preedaporn	Member

Duties and responsibilities of the Nomination Committee:

1. To ensure a formal and transparent procedure for the appointments of new directors and key executive management to the Board
2. To select the potential candidates whose qualifications best meet the criteria and propose to the Board
3. To propose and review the executive management succession plan
4. To review annually the size and composition of the Board and to recommend any proposed changes to the Board

Corporate Governance Committee:

Structure: In 2013, the Board established the Corporate Governance Committee that composed of the majority of independent directors.

Term: The Chairman and members are appointed for an initial term of three years.

Name		Position
1.	Mr. Terrence Philip Weir	Chairman
2.	Mrs. Salakchitt Preedaporn	Member
3.	Mr. Yingsak Jenratha	Member

Duties and responsibilities of the Corporate Governance Committee:

1. To consider, review and revise the corporate governance policy at least once a year to keep the Company's corporate governance policy update and in line with the international standards, laws, criteria, rules and regulations
2. To monitor and evaluate at the end of each year, the performance of the directors and executives in compliance with best practices as specified in the corporate governance policy
3. To perform any other duties assigned by the Board

Risk Management Committee:

Structure: The Risk Management Committee was established in 2008. In 2020, the Board has restructured the Committee to compose of directors at the board level. The Committee can appoint their management team of each Hana location responsible for ensuring an appropriate risk management process is in place.

Term: The Chairman and members are appointed for an initial term of three years.

Management Structure

Name	Position
1. Mr. Terrence Philip Weir	Chairman
2. Mrs. Salakchitt Preedaporn	Member
3. Mr. Yingsak Jenratha	Member

Duties and responsibilities of Risk Management Committee:

The Risk Management Committee has the duties and responsibility that has been approved by the Board in implementing the risk management policy, reviewing the effectiveness of risk management profile, presenting the Company's overall risks and solutions to effectively prevent and limit Hana's overall risks at an acceptable level, and reporting the results to the Board periodically.

Meeting Attendance:

Meeting	Board of Directors	Audit Committee	Nomination Committee	Corporate Governance Committee	Risk Management Committee	Non-Executive Meeting	Annual General Meeting
Total number of meetings in 2020	7	4	2	1	1	1	1
Number of meeting attended/participated in 2020							
Independent Directors:							
Mr. John Thompson	7/7	4/4	-	-	-	1/1	1/1
Mrs. Salakchitt Preedaporn	7/7	4/4	2/2	1/1	1/1	1/1	1/1
Mr. Yingsak Jenratha	7/7	4/4	2/2	1/1	1/1	1/1	1/1
Executive Directors:							
Mr. Richard David Han	7/7	4/4	2/2	-	-	-	1/1
Mr. Winson Moong Chu Hui	7/7	-	-	-	-	-	1/1
Mr. Terrence Philip Weir	7/7	4/4	-	1/1	1/1	-	1/1

Corporate Secretary to the Board of the Directors

The Board has formally appointed the corporate secretary since 11 August 2008 to carry out the duties and responsibilities according to Section 89/15 and 89/16 of Securities and Exchange Act No. 4 B.E. 2551 effective from 31 August 2008. The corporate secretary shall perform duties with care and responsibility and in good faith as well as in compliance with all applicable laws, the objectives, the Articles of Association of the Company, and the resolutions of the Board of Directors and the shareholders' meetings.

Detail of the corporate secretary:

Name	Education	Experience
Ms. Jirapa Kongmanee	<ul style="list-style-type: none"> Bachelor of Accounting, Bangkok University Master of Business Administration, Butler University (USA) 	<ul style="list-style-type: none"> 1999 – present: The head of internal audit department of Hana Group 2008 – present: Corporate Secretary of the Board of Directors 2013 – present: The head of Compliance Unit

Management Structure

Duties and responsibilities of the corporate secretary are as follows:

1. To prepare and maintain following documents.
 - 1.1 Director registration
 - 1.2 Notification and minutes of the Board of Directors meetings including annual reports
 - 1.3 Notification and minutes of shareholder meetings
2. To maintain Report on Interest of Directors, Executives and Related Persons and send a copy of the report under Section 89/14 of SEC regulation to the Chairman of the Board and Audit Committee within 7 days from the date that the report is received.
3. Other duties regulated by the Securities and Exchange Commission
4. Other duties assigned by the Board of Directors such as
 - Advice on the laws and regulations involved and oversee the activities of the Board to be in accordance with the applicable laws
 - Conduct the Board of Directors and shareholders meetings
 - Liaise with regulatory agencies such as the SET and ensure disclosure and press release according to the applicable laws

Remuneration of the Board of Directors and Executives

Remuneration for Directors:

The Company provides the remuneration to the independent directors while the executive directors receive the remuneration as the role of employees of the Company. Therefore, the Company has not established the Remuneration Committee as the Board considers and reviews the remuneration of the independent directors by the whole Board. The Company provides the remuneration to the independent directors in forms of meeting allowances and bonus of which the rates are up to the responsibilities of the members. There is no other benefit. The remuneration for directors has been compared with the rate of the same industry and the structure of the remuneration of the Company. All types of the remuneration of directors have always been approved by shareholders every year.

Individual disclosure of remuneration for the Board of Directors in 2020 is as follows.

Name	Position	Meeting Allowance (Baht)	Bonus (Baht)	Total (Baht)
1. Mr. John Thompson	Independent Director Chairman of Board of Directors Chairman of Audit Committee	736,000	46,000	782,000
2. Mrs. Salakchitt Preedaporn	Independent Director Audit Committee Corporate Governance Committee Nomination Committee Risk Management Committee	412,500	27,500	440,000
3. Mr. Yingsak Jenratha	Independent Director Audit Committee Chairman of Nomination Committee Corporate Governance Committee Risk Management Committee	412,500	27,500	440,000
4. Mr. Richard David Han	Executive Director Nomination Committee	-	-	-
5. Mr. Winson Moong Chu Hui	Executive Director	-	-	-
6. Mr. Terrence Philip Weir	Executive Director Chairman of Corporate Governance Committee Chairman of Risk Management Committee	-	-	-
Total				1,662,000

Management Structure

Remuneration for Executives:

Basis of key executive remuneration – The Company is to ensure that key executive remuneration enhance its ability to attract, retain and motivate competent and experience staff. Remuneration of executives of short and long terms is in accordance with performance of each executive. The remuneration of executives including CEO comprises of base salary, cash bonuses (annual and performance-based bonuses) and employees' welfare such as provident funds, medical benefits, life insurance, etc. The provident fund is a part of the incentive programs to offer executives, management and employees a secure income in the case of death, disability, resignation or retirement. The Company contributes at the rate of 3 - 7.5 percent of their salaries depending on the length of year service with the Company. Other long term incentive program is the retirement benefit which is eligible to receive when retires from the Company.

The Board of Directors has established the written CEO remuneration policy that covers the short-term and long terms incentives. The Board delegates the CEO compensation process to the executive committee. The short-term incentive depends on the group's financial performance and on CEO's own success evaluated by the independent directors. For the long-term incentive, the CEO shall be eligible for long-term incentive programs with the same terms and conditions as employees. For other long term incentives of CEO if any, the executive committee shall seek recommendation from the Board.

Measurement criteria - The performance-based has been recognized for the legitimate difference in roles, individual contribution, complexity and responsibility of the position they hold, including the performance of the Company. The determination of remuneration also takes into account the current market rate and annual salary increase of the staff with consideration of the market survey performed by Human Resources Department.

In 2020, the total remuneration of 5 executive managements is as follows.

Type of remuneration	Amount (Baht)
Salary	21,531,308
Bonus	2,051,680
Provident fund	1,117,152
Board remuneration	-
Total	24,700,140

Human Resources

As of 31 December 2020, the Company and its subsidiaries had a total number of employees of 9,810. For 2020, the total remuneration including salary, overtimes, bonus, provident funds, etc. was Baht 3,520 million. In Thailand, there were 8,032 employees (accounted for 82% of total group employees) with Baht 2,623 million paid for remuneration (accounted for 75% of total group remuneration).

Management Structure

Number of employees and remuneration in Thailand:

Number of Employees as of 31 December 2020			
Department	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.	Total Employees
CEO Office	2	1	3
Customer Service and Business Development	32	22	54
Finance and Accounting	25	18	43
Human Resources / Administration / Training	97	113	210
Management Information System (MIS)	41	21	62
Operation Support	662	964	1,626
Production	2,347	2,731	5,078
Quality Assurance	406	256	662
Supply Chain Management	130	164	294
Total employees	3,742	4,290	8,032

Employees' remuneration	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.	Total remuneration
2020	THB 1,190 million	THB 1,433 million	THB 2,623 million

Number of employees' movement in Thailand:

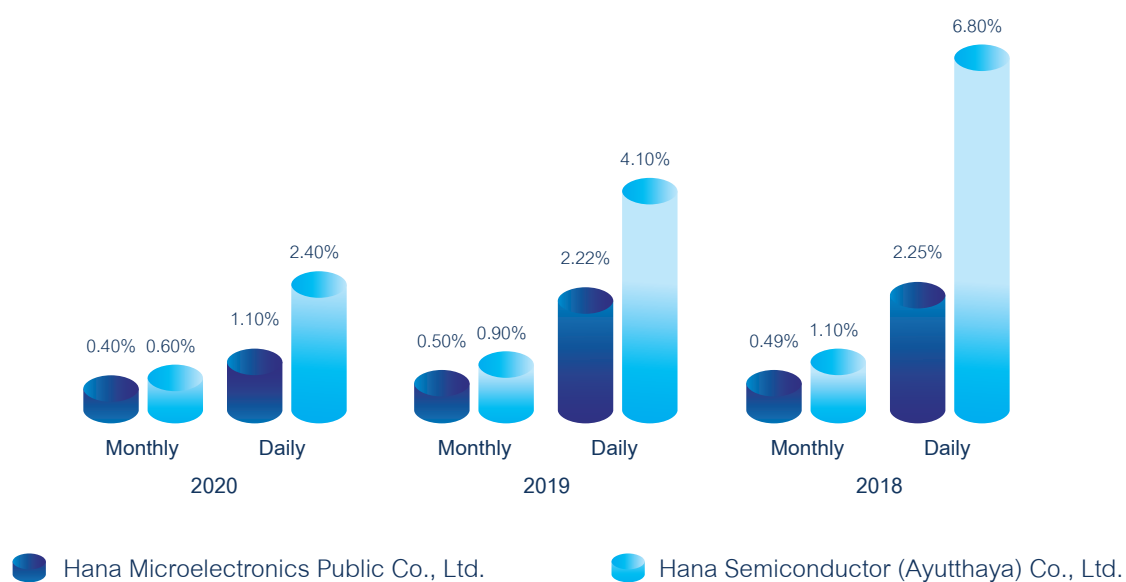
	2020	2019	2018
Total female	5,606	5,880	5,994
Total male	2,426	2,516	2,628
Total number of Employees	8,032	8,396	8,622
Increase / (Decrease)	(364)	(226)	481
% Change	(4.34%)	(2.69%)	5.58%

Management Structure

Employees' turnover rates in Thailand:

	2020		2019		2018	
	Monthly	Daily	Monthly	Daily	Monthly	Daily
Hana Microelectronics Public Co., Ltd.	0.40%	1.10%	0.50%	2.22%	0.49%	2.25%
Hana Semiconductor (Ayutthaya) Co., Ltd.	0.60%	2.40%	0.90%	4.10%	1.10%	6.80%

Employee monthly turnover rates in Thailand



Corporate Governance

The long-term success of a company is largely determined by the support we earn from our employees, customers, business partners, investors, local community and other stakeholders. Hana believes that good corporate governance will enhance the credibility and reputation of the Company as well as promoting and safeguarding the interests of shareholders and other stakeholders. Hana is committed to good corporate governance by compliance with the best practices of corporate governance wherever possible and practical for the Company. The corporate governance policy, which is published on the Company's website, provides the guidelines under which the Board of Directors operates. We will continue to seek improvements to our solid foundation in good corporate governance to achieve sustainable long-term growth.

Compliance with Corporate Governance Code developed by SEC

A compliance program is an important element in the corporate governance. In 2020, the Board of Directors approved the resolutions as proposed by the Corporate Governance Committee to consider and review the application of the Corporate Governance Code for Listed Companies 2017 (the "CG Code"), developed by the Securities and Exchange Commission, by means that are suitable for the Company's business towards eight principles as follows.

- Principle 1: Establish Clear Leadership Role and Responsibilities of the Board
- Principle 2: Define Objectives that Promote Sustainable Value Creation
- Principle 3: Strengthen Board Effectiveness
- Principle 4: Ensure Effective CEO and People Management
- Principle 5: Nurture Innovation and Responsible Business
- Principle 6: Strengthen Effective Risk Management and Internal Control
- Principle 7: Ensure Disclosure and Financial Integrity
- Principle 8: Ensure Engagement and Communication with Shareholders

In 2020, the Board also resolved to approve the non-application areas with the reasons provided so that the Board could review annually.

Compliance with the SET Principles of Good Corporate Governance

The Board of Directors recognizes the importance of continuous compliance with the Principles of Good Corporate Governance for Listed Companies 2012, revised by the Stock Exchange of Thailand that covers the following five key principles.

- Principle 1: Rights of Shareholders
- Principle 2: Equitable Treatment of Shareholders
- Principle 3: Roles of Stakeholders
- Principle 4: Disclosure and Transparency
- Principle 5: Responsibilities of the Board

In 2020, the Company has reviewed our corporate governance practices and there are a couple areas that the Company adapted alternative approaches, having regard to the Company's particular circumstances. As a result, the Company has not complied with certain good corporate governance best practices for the following reasons.

Corporate Governance

Disclosure of non-compliance	Reasons
1. Independent directors more than 50% The independent directors should make up more than 50% of the Board.	<p>The board structure of the Company consists of three independent directors and three executive directors, which is accounted for 50% of the Board, whereby:</p> <p>The Chairman of the Board and the Chief Executive Officer (CEO) is not the same person;</p> <ol style="list-style-type: none"> 1. The Chairman is an independent director; 2. The Chairman and the CEO are not immediate family members; 3. The Chairman is not part of the management team. <p>Furthermore, in 2020 the Board upon the recommendation of the Nomination Committee considered that a current mix of directors with the expertise and experience to fulfill their essential oversight roles is still appropriate.</p>
2. Appointment of Remuneration Committee The Remuneration Committee should be appointed and composed of majority of independent directors with specified sets of duties and responsibilities and held at least 2 meetings per year.	<p>As the remuneration structure of the Board has been set for the independent directors only, whereas the remuneration of executive directors is paid as senior company employees. The Company has not established the Remuneration Committee as the Board of Directors is capable of reviewing the remuneration of the independent directors by the Board as a whole. The Board is responsible for determining remuneration policy and structure of compensation for independent directors with transparency, benchmarking with industry and considering each director according to individual duties and responsibilities. For the Board's remuneration in all kinds, the Board has proposed to shareholders for final approval annually.</p>
3. Disclosure of CEO remuneration	<p>The Board is of opinion that the compensation disclosure is highly sensitive as the CEO receives remuneration as a managerial or employee of the Company, not as a director.</p> <p>The Company has disclosed the remuneration in the form of group executives, the policy on CEO remuneration and performance evaluation of the CEO. Therefore, the disclosure of CEO's remuneration to the public may be considered as deemed appropriate in future.</p>
4. Adopt an internationally recognized reporting framework The sustainability report should be prepared in form of Global Reporting Initiative (GRI) and more advance to adapt integrated reporting based on IIRC framework.	<p>The Company has not yet prepared the sustainability report in form of GRI and Integrated Reporting. However, the Company has prepared the CSR report in accordance with the CSR-DIW Reporting Initiative, for the fourth year, which is in line with the industry context in Thailand, and disclosed on the Company's website (www.hanagroup.com). The Company plans to prepare sustainability report according to the international standard in 2021.</p>

In 2020, Hana has adhered to and complied with the good corporate governance for a listed company as recommended by the Stock of Exchange of Thailand in 5 principles as follows.

Corporate Governance

1. Rights of Shareholders

Hana recognizes the importance of shareholders' rights and treats all shareholders either individual investors or institutional investors equitably, fairly and in line with relevant laws where no actions shall be taken to materially diminish shareholders' rights.

- **Rights to attend the shareholders' meeting and vote**

One of the basic rights of shareholders is the right to attend and vote at shareholders' meetings. To encourage shareholders to exercise their rights in shareholders' meeting, the Company takes following actions.

Before the meeting day:

The Company sets the date, time and place of the meeting by taking into consideration the convenience of shareholders in attending and encouraging shareholders, including institutional investors, to attend the meeting. The Company holds the Annual General Meeting of Shareholders (AGM) within 4 months after financial year ends. In 2020, the Company held the AGM on 30 April 2020 at 14:00 hrs. at its head office located at 65/98 Soi Vibhavadi-Rangsit 64, Junction 2, Kwang Talad Bangkhen, Khet Lakxi, Bangkok making it convenient for shareholders including institutional investors to travel and attend the meeting. The Company arranged with the Thailand Securities Depository Co., Ltd. or "TSD" which is the Company's securities deposit registrar send the notice of shareholders' meeting by posted mail 21 days prior to the meeting date in order to provide sufficient time for shareholders and institutional investors to review the details of information disclosed in the notice of meeting. The notice of meeting expressly indicated the matters to be tabled at the meeting, whether for acknowledgement, approval or consideration, including the Board's opinion on each agenda. Other supporting information and documents were also attached to the notice. In addition to the direct delivery, the notice of meeting was made available to the shareholders through the Company's website (www.hanagroup.com) 30 days in advance and the notice of meeting was published through SET's information system or "SET Link" in both Thai and English versions, which were the same as the original notice mailed to shareholders.

The Company also provides opportunities for shareholders to submit questions or enquiries in advance prior to the meeting with the procedures enclosed in the notice of meeting and available in the Company's website. Further, the Company encourages the exercising of voting rights by shareholders who cannot attend the shareholders' meeting by appointing their proxies to participate in the meeting or appoint the Company's independent directors on their behalf to attend the meeting and vote by providing the proxy form B on which shareholders are able to specify their votes, with the notice of meeting.

On the meeting day:

The Board of Directors is to ensure that the meeting is conducted transparently and efficiently as well as to facilitate the exercise of shareholders' rights. The quorum including the total number of shareholders in attendance in person or by proxies, voting procedures and voting count method are clearly advised to the meeting prior to the discussion of the agenda items. The chairman shall convene the meeting according to the terms and conditions in line with the Company's Articles of Association and manage appropriate time for each agenda set forth in the meeting invitation. During the meeting, shareholders are given the opportunities to raise questions, recommendations as well as provide their opinions on the Company's performance or other concerns on an equitable basis. In regards to the AGM conducted in 2020, 6 out of 6 directors (100%) attended the meeting which included the chairman of the Board, the chairman of all sub-committees, Chief Executive Officer, Chief Operating Officer and Chief Financial Officer. The external auditor also attended the meeting with the directors so that they could listen to shareholders' opinions or suggestions and also answer any questions.

The Board has adopted the technology in using the barcode system for registration and vote counting in order to bring more accuracy and the results of voting can be announced in a timely manner. Each matter of the agenda is required the use of barcode voting card so that shareholders are able to vote as they deem appropriate. Ballots are collected in the event of an objection or abstention and kept for further evidence and verification. In addition, the Company arranges the inspector who was an independent person to count and check the votes in the meeting and clearly inform the voting results as agree, disagree, abstain and invalid ballot.

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After the meeting day:

The meeting minutes recording the course of the meeting, the list of directors and executives attending the meeting, voting procedures, vote counting methods, the agenda discussed, the results of shareholder voting counts on each agenda and the decisions made by the meeting with the number of votes of shareholders casting affirming, opposing, abstaining and invalid votes including shareholders' questions and answers are made available within the appropriate time to shareholders. The minutes of the AGM in 2020 were posted to the Company's website within the following business day after the meeting and at the same time sent to the Stock Exchange of Thailand. If shareholders have any inquiries or comments on the minutes, they can contact to the corporate secretary. The minutes are maintained at the Company's head office.

- **Rights in Addition to voting rights**

The Company has provided shareholders in addition to voting rights as follows.

- The rights to be counted as a shareholder, for example, a right to buy, sell, transfer shares or a right to inspect shareholder records, etc.;
- The right to receive full and fair returns without inequitable treatment from any group of shareholders.;
- The right to access the Company's information such as the quarterly financial results, the minutes of shareholder meeting, the right to request the Company's visit, etc.;
- The right to participate in decision-making for material matters such as the appointment or dismissal of the Company's directors and approval of their remuneration, appointment of auditors and approval of their remuneration, etc.;
- The right to inspect the management of the Board of Directors, who are representatives of shareholders, such as to inspect the Company's books and records through the Company's public filings including annual report, 56-1 report, etc.;
- The right to obtain a redress or a rectification for any violations of their rights.

In 2020, the Company had no actions that violated the right of shareholders, such as not changing or adding agenda items without notifying shareholders in advance or which limit the access to the Company's information that is released to public.

In addition, the Company did not prevent or obstruct any opportunities for shareholders to communicate with each other.

2. Equitable Treatment of Shareholders

Hana pays special attention to the interest of the Company's owners - the shareholders. Equitable treatment is given with fairness to all categories of shareholders as follows.

Treat all class equally:

The Company ensures fair treatment of shareholders irrespective of the size of each of their shareholdings. Foreign shareholders and owners of small stakes (minority shareholders) as well as individual investors or institutional investors are treated equally. All of shareholders, in respect of each class of shares, are entitled to the same dividend payments, and have equal rights in the event of share capital increases. The Company's shareholder meetings are open to all shareholders, and all shares of the same class have the same voting rights. Voting at the shareholder meeting is done by the principle of one share, one vote.

Protect minority shareholders' rights:

The Company has the policies to promote the right of minority shareholders by allowing minority shareholders to propose agenda items and nominate candidates to be elected as the directors in advance at the AGM. During October – December, shareholders have the right to submit proposals for the upcoming AGM to the Board of Directors for consideration. The procedures and criteria to propose agenda items and nominate the directors to the Board of Directors have been posted to the Company's website under section "Investor Relation" title "Corporate Governance."

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However, in 2020 there were no shareholder proposals sent to the Board of Directors for consideration.

The matters discussed in the AGM and voting were in sequence as given in the invitation letter without changing important information or adding agenda items without notifying shareholders in advance so shareholders had the opportunity to adequately study the information before making the decision. Further, the Board of Directors allowed shareholders to elect each director eligible for election on individual basis.

Prevent insider trading:

The Company has the policy to prevent directors and executives from taking advantage of inside information, from dishonest dealing for themselves and their related parties. Insider trading is prohibited. Hana has established a system to prevent the use of inside information for personal benefits as follows.

- Communicate the compliance of the policy of Business Code of Conduct of the Board of Directors, executives and employees. The directors and executives are required to sign on acknowledgement of the policy on an annual basis.
- Inform the Board and executives by a circular letter that those who may gain inside information shall avoid trading the Company's securities for the period of one month before the Company announces its financial statements to the public and at least 24 hours after the information is widely spread out to the public.
- Inform the Board and executives for the duties to report the Company security' holdings and movements to the Securities Exchange Commission (SEC) under the Securities and Exchange Act B.E. 2535 and the Stock Exchange of Thailand's regulation.
- Require the Board and executives to inform to the Board or the corporate secretary at least 1 day in advance before actual trading of the Company's security.
- Confirm the shareholding status with individual director and executive through the corporate secretary on a monthly basis. Report to the Board for the shareholding status of individual director and executive at every Board's meeting.

In 2020, no director or executive traded the Company's shares by using inside information.

3. Roles of Stakeholders

Hana recognizes the rights of stakeholders starting from employees, customers, partners, shareholders, competitors, creditors, communities, society and the environment including government agencies and related organizations. The Board believes that taking into account the concerns and interests of stakeholders according to the legal and regulatory requirements and the respect of the legitimate expectations of all the stakeholders should benefit all parties in the long run. We have the guidelines to encourage active participation between the Company and stakeholders as follows.

Employees

Employees as the internal stakeholders who are those within an organization play an important role in contributing to the long-term success and performance of the corporation. Our key focus is to retain deserving and talented employees while employees' satisfaction is of utmost importance for them to remain happy and also deliver their level best.

Health and safety in the workplace: The combined efforts of the Company and employees are required to improve the health and wellbeing of employees at work. Hana has been certified for the Occupational Health and Safety Management Systems in accordance with ISO 45001. The Company's policy is to provide the safe and proper workplace to protect injury and illness from work. In order to eliminate or reduce health, safety and welfare related risks to our employees, various health and safety management programs have been implemented such as health and safety risk management system including audit, safety activities and safety incentive program to promote health and safety awareness. Employees take part in work environment management, e.g. by reporting hazards, incidents, illness and suggesting measures to be taken.

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Improving health and safety at work: A workplace health and safety plan and its program has been set and approved by management on a yearly basis for managing the prevention of work-related injuries and diseases in the workplace including creating a healthy organization. In 2020, specific activities undertaken by improving employees' health and well-being included the training and awareness-raising about health and safety in the workplace, the implementation, monitoring and evaluation.

- **Provide training to promote employees' well-being** – In 2020, the Company provided health and safety training for newly hired and existing employees, including our partners and subcontractors, to ensure full awareness of occupational hazards, to encourage and promote safety in the workplace as follows.

Safety, health and environment training for employees – The Company aimed to equip new hired employees with the basic knowledge to ensure they have the skills, knowledge and attitudes to make them competent in the safety and health aspects of their work. There were 368 new hired employees attending the training in 2020. Their level of knowledge regarding health, occupational health and environment was measured by means of a questionnaire distributed before and after the session.

Safety, health, and environment training for contractors – The Company provided training to 214 people for suppliers, contractors, as well as other related personnel to ensure the primary stage of the effective working conditions and safe working environment in reducing the risk of injuries and accidents at work.

Prevention of musculoskeletal disorders in the workplace - The Ergonomics training was provided to 70 employees that help lessen muscle fatigue, increases productivity and reduces the number and severity of work-related musculoskeletal disorder such as office syndrome.

Publishing information to promote well-being – The Company provided health and nutrition information/news on the bulletin boards to promote health care and good nutrition.

- **Health and safety implementation** – The Company has provided a safe and healthy workplace that is suitable for our employees such as quality of light, sound/noise level, air, temperature in accordance with the standards and requirements. The Company further supports the good health of employees both physical and mental health. Hana Sport Complex has been available as a gym and/or fitness related activities for employees to get greater health benefits and reduce stress. In addition, the Company provides flexibility of working hours and workplace (e.g. female employees able to work at home along with taking care of kid). Pregnant employees are not allowed to work overtime or work on holiday. Work from home and flexible working arrangement during Covid-19 has been implemented to help provide a quality work-life balance for employees and reduce the risk of spreading infection in the workplace.
- **Workplace environment measurement** – The Company regularly monitor the extent to which employees are protected from work-related hazards and risks by measuring physical, chemical & biological hazards present in the workplace that may affect employees' well-being such as the noise level, temperature, light intensity, humidity, ventilation, concentration of substances to ensure employees working in a safe and healthful environment. Evaluation of the existing control measures and recommendation to improve the work environment in reducing health and safety risks has also put in place.

Regarding employees' health monitoring, the Company has provided an annual health checkup both general health examination including those who work with risk factors. If employees found abnormalities, they must visit a doctor and receive advice on taking care of the health on a continuous basis. The Company also provides additional checklists based on age group risks such as prostate cancer, pancreatic cancer, gastrointestinal cancer, etc. to cover diseases that may arise from daily life.

Workplace accidents or injuries: The accident statistic report is posted on the bulletin board by detailing the target and accident statistics and being updated every day. In 2020, there were totally 4 accidents with 3 cases of small accident and 1 case that an employee took leave more than 3 days but no accident death. When an accident occurs, a report describing the circumstances is submitted, and steps are taken to identify the cause and implement necessary improvements. With the trend of accident in working increasingly during the past years, the Company further reviewed the safety risk management, improvement of accident prevention processes and monitoring mechanism enhancement in order to prevent accidents at work and reduce the number of accidents that could occur in the future.

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Workplace accidents or injuries (case)	2020	2019	2018
Minor accident when employees stop working less than 3 days	3	4	6
Accident that employees stop working more than 3 days	1	0	0
Total	4	4	6

Employee remuneration: Compensation paid to employees is complied with all applicable wage laws, including those relating to minimum wages, overtime payment, and legally mandated benefits. The Company has provided the long-term welfare benefits that retain and motivate employees, particularly for the retirement benefits and the provident fund to help employees to save a portion of their salary in the event of retirement, disability, sickness or unemployment. The Company's provident fund is an alternative saving scheme for retirement where employees contribute a portion of their salaries and the Company makes the contribution equal to the rate of the employee's savings. Employees will benefit from the savings provided by the provident fund management in the form of investment. In summary, the Company has provided various welfare programs for employees to provide them with better life, to make them happy and satisfied, to keep the moral and motivation of employees high, and to raise their standard of living so as to retain our employees for longer duration.

Summary of welfare program provided to employees:

Economic betterment	Healthcare improvement	Family support	Amenities and others
<ul style="list-style-type: none"> Retirement benefits Provident Fund Social Security Fund Hana Cooperative Fund Shift allowance Attendance allowance Long Service Award Outstanding employee awards 	<ul style="list-style-type: none"> Life and accident insurance Annual physical check-up and specific test in case the work environment can affect health Influenza vaccination Medical benefits Nursing room for first aid clinic Fitness center and stadium Health promotion programs such as employee training on hypertension and high cholesterol, cancer in women, pulmonary tuberculosis, and training for pregnant and child care Provide helmets to employees for safe driving 	<ul style="list-style-type: none"> Right to leave for vacation, sick leave, maternity leave, etc. Employee assistance program i.e., maternity benefit, employee death benefit, disaster victim, etc. Child education support 	<ul style="list-style-type: none"> Uniform Canteen and low-price consumer goods Dormitory Transportation Recreation activities

In addition, the Company provides the compensation to employees in line with their performance in both the short term such as bonuses and the long term performance through Career Development Program which has been continuously provided to employees in order to define the development of skill sets and identify how individuals move through the organization. The career development process has considerable benefits from both an individual employee and an overall organizational perspective. The Company has set the policy and the committees to assess potential candidates, identify the core competencies and perform assessment to verify candidates' abilities and determine strengths and weaknesses to match with currently holding position and the readiness for advancement of each candidate, and plan for training and other development tools.

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Employee training and development: Hana has always recognized the need to develop its employees as the most important asset in the organization through employees' development program and employees' training program.

Human Resources Development Policy - Hana is committed to equal opportunities and to ensure that individuals are treated equally and fairly based on the assessment of employee's development needs, competencies, organizational needs irrespective of their sex, age, marital status, disability, race, color, ethnic or national origin or sexual orientation. Employees are expected and encouraged to take ownership and responsibility for their personal training and development including training evaluation/effectiveness monitoring in relation to their works, within the framework of support provided by organization. This is to ensure that the employees have the competences to perform their jobs effectively and to encourage the employees to maximize their potential and contribution supporting the overall strategic business plan and objectives in short and long term. Besides, the Company has provided the employees of all levels the understanding of their future career opportunities. This leads to increased motivation, morale and job satisfaction among the employees.

In 2020, the Company developed our employees as following major areas.

Career Path Development Program: To ensure sustainable business growth, the Company has continued the development program for senior staff and manager level called "Career Path Development Program" or CPDP Program. Employees reaching senior staff level have equal chance to undergo the development program which includes the assessment and development activities. The participants have the opportunities to share their expertise, interests and perspectives with management. The program aims to align between the company's expectation, goals and strategies, and the employee strength and contribution. In 2020, there were total 29 employees participated in this program.

The Company also realizes the importance of developing junior staff as the young generation, who will become the future successor. The "Talent Program" has been established and continued in order to identify high potential individuals and equip them with essential managerial skills and the right mindsets. In 2020, there were 15 courses provided to the selected participants such as Crisis Management, Managerial Skills for New Managers, Customer Service Excellence in Your Work, etc.

Competency-based development: The Company has provided training to employees both daily and monthly employees in all levels including operators, staff and managers. The training focusing on short-term and long-term development consists of new employee orientation in order to familiarize the employees to new organizational culture and environment, and other trainings needed for work such as quality system, health and safety at work, 5S, Code of Conducts, etc. from internal and external instructors to upskill and reskill the employees to effectively perform current job functions and to be prepared for future changes and work opportunities.

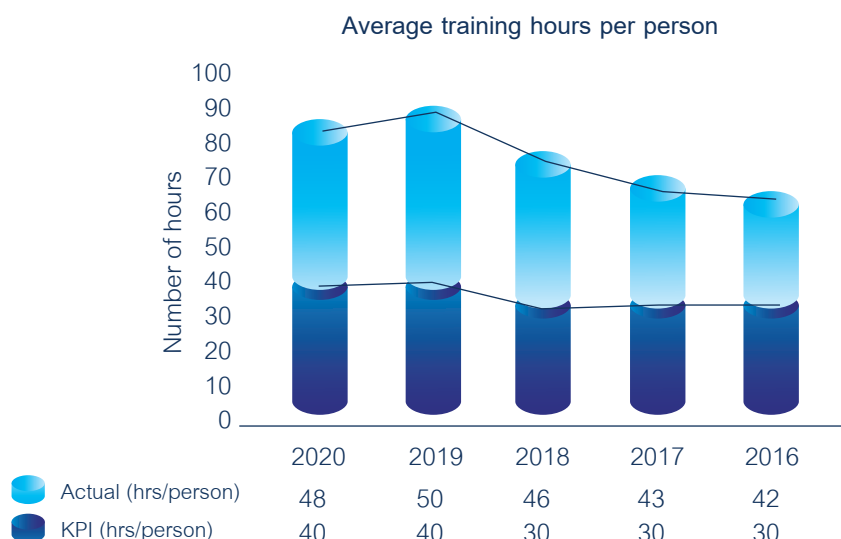
Training and People Development: Hana value our employees and focus on enhancing competency of our people to excel in their current roles and responsibilities as well as to be ready for future challenges and growth. The shared vision would bring individuals and the organization towards the greater performance and sustainable success.

Training needs analysis: The Company arranges the annual survey of training necessities from the opinion survey of management and supervisors in consideration of both internal and external factors. The internal factors are job positions, performance assessment according to the competency of each job position, project evaluation such as CPDP Program and Talent Program and business strategic plan. The external factors are customers' requirements, technological advancement, requirement of legal and international standards and etc. In addition, the Company provides opportunities for employees to participate in the introduction of useful training courses through the suggestion box and employee satisfaction survey form. The result of survey will be considered and carried out for annual training plan as well as individual development plan (IPD). In 2020, there were 80 executives and supervisors completed the survey equivalent to 80%. The training courses that were recommended essential covered in 6 categories such as Technical Skills, Quality, Management Skills, Safety, Health and Environment, Computer Skills and General. The specific course names included the Continuous Improvement Program, Root Cause Analysis, Motivate Employee Through Performance, Profit and Loss Analysis, and SAP course and etc. with additional introductory courses such as Internet of Things and Digital Manufacturing which will be included in the annual training plan in 2021.

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Training hours: In 2020, the Company provided trainings to employees totally 178,446 hours for total 3,742 employees, of which were for daily employees 118,377 hours and for monthly employees 60,069 hours, resulting in an average training per person is 48 hours per year.

The average training per person per year for monthly and daily employees versus the KPI in 2020.



In 2020, a wide range of courses was provided to employees, which can be broken down into the following categories:

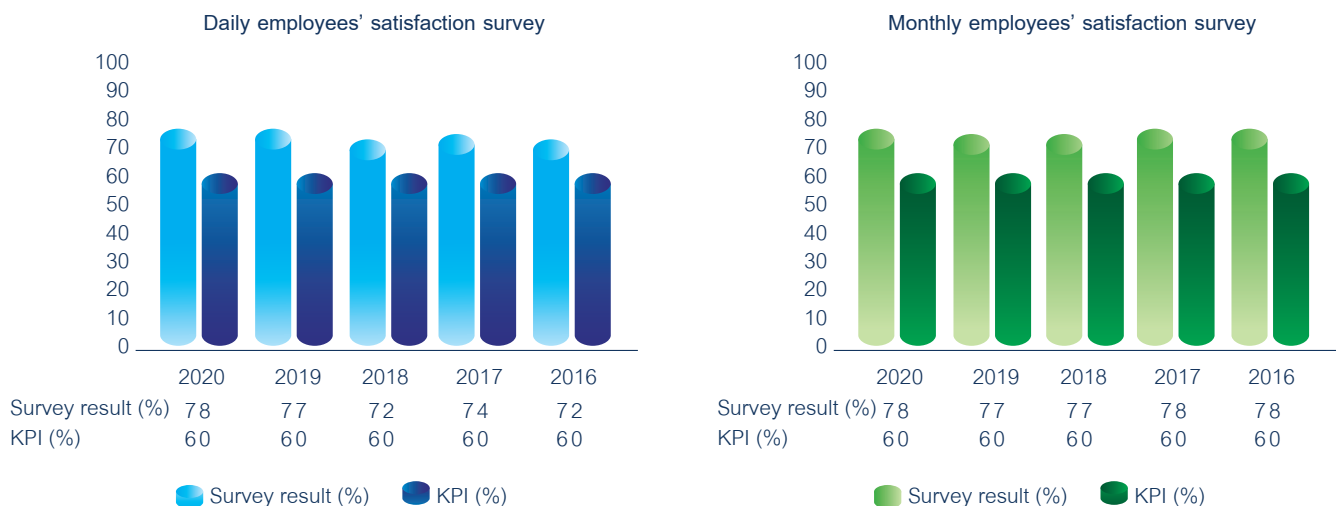
Training courses (type)	Number of training hours			%
	Daily employees	Monthly employees	Total hours	
Professional certification	42,037	6,217	48,254	27.00
Professional re-certification	29,279	13,366	42,645	23.90
Technical skills	24,188	12,171	36,360	20.40
Quality	1,539	14,437	15,976	9.00
General	4,472	4,458	8,930	5.00
Management skills	7,458	1,131	8,589	4.80
Safety & EMS	4,872	3,541	8,413	4.70
Computer skills	529	4,727	5,256	2.90
Multi-Skills	3,082	21	3,103	1.70
Job transfer	920	-	920	0.50
Total	118,377	60,069	178,446	100

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Personnel Development Evaluation: The Company evaluates the satisfaction and benefits that employees and the Company obtain from our human resource development with a percentage index of satisfaction by assessing the satisfaction of the instructor, the content and the benefits received from the training through the training satisfaction assessment form after the training or after the project complete. In 2020, the training satisfaction of monthly staff achieved 86.5% and 80.5% for daily employees, compared with the target of 80%. The satisfaction of the employees of the Talent Program was achieved at 100%. For the Talent Program, the Company has evaluated the benefits that the Company has received from the number of employees below managers in the Talent Pool. In 2020, the number of employees in the Talent Pool has increased to 69 employees from 44 headcounts in 2019, representing 5.8% compared with 5% KPI.

Employees' satisfaction survey – Hana realize the importance of employees' satisfaction. The Company conducts the employee satisfaction surveys for both daily and monthly employees twice a year to encourage them to provide comments and suggestions as to improve the organization in various areas covering wages and welfare, work environment, job assignment, career advancement, supervisor, colleague, etc.

Employee satisfaction survey vs. KPI of year 2020 compared with the previous years:



The result of employee satisfaction survey has been summarized and communicated to employees through public relation boards, canteen bulletin boards, radio communication and the Company's intranet.

Employee satisfaction survey results - The Company has analyzed the employee satisfaction survey results for further improvement plans. The improvement project from employees' feedback in the latest year was for work environment related comment. The Company improved the relaxation area outside the building as employees need additional well ventilated resting corner. Therefore, the Company provided marble tables and chairs. The re-assessment of the employees' satisfaction after improvement was found that employees were 100% satisfied.

Human rights

Hana aims to conduct its business with ethics holding on to responsibility to society and all groups of stakeholders based on the corporate governance principle and the code of conduct. For human rights protection, the Company has complied with laws and international standards especially giving support to and complying with Universal Declaration of Human Rights: UDHR, United Nations Global Compact: UNGC, United Nations Guiding Principles on Business and Human Rights: UNGP and the International Labor Organization Declaration on Fundamental Principles and Rights at Work: ILO.

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To ensure the Company's business is free from human rights violation, in 2020 the Board of Directors has approved the Human Rights Policy to prevent violation of human rights in every activity of the Company's business including the Company's business partners. Employees' training, risk assessment, and measure to monitor on the complaint related to human rights violation has been implemented. In 2020, the Company has not received any complaints or reports of human right violations from employees, business partners, or local communities.

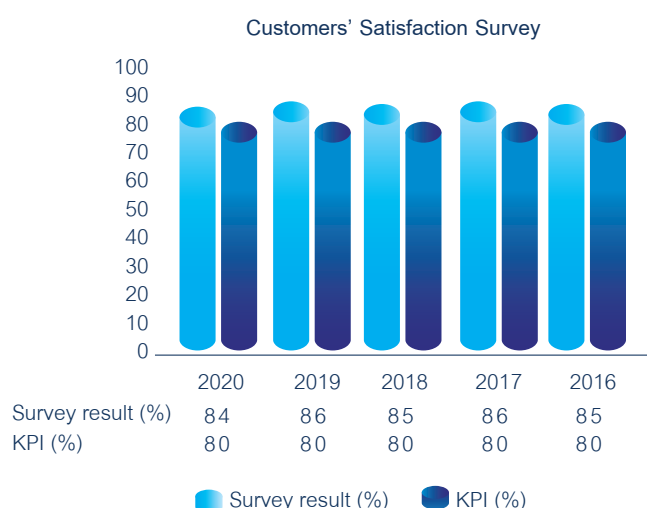
Customers

Hana places the highest value on our customers. The Company aims to meet or exceed our customers' expectation for product quality, delivery, reliability, and competitive prices. Hana has been accredited to Quality Management System (QMS) with the aim to deliver high quality products on time. Our policy is to strive for the customer satisfaction, zero defects, and meeting the international standard requirements. Over 20 years of ISO 9001 certification demonstrates our commitment towards quality, continuous improvement, and sustainment.

The Company and its subsidiaries continue to support the supply chain management particularly for the customers so that we could coordinate such business activities and processes to minimize their total costs and maximize their effectiveness in the marketplace including problems' solving solutions of their complaints or recommendations by meeting their needs and honoring commitments. Customer partnership is a foundation of success that also requires commitment to build long- term relationships by creating synergies of knowledge, security, and adaptability for both parties.

A Customer Feedback Procedure exists under the control of quality, in order to ensure that the customer feedback is identified, analytics are required and action plans are put in place and feedback to the customers to satisfactory resolution. Performance measurement parameters have been developed as part of the business and Quality Management System and a significant number of these are aimed at assessing and improving customer satisfaction. Our customer satisfaction surveys conducted yearly help the Company to get actionable customer feedback and to focus on the importance of fulfilling and exceeding customer expectations.

Customers' satisfaction survey vs. KPI of year 2020 compared with the previous years:



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The result of customers' satisfaction survey has been evaluated for further improvement. The continuous improvement to increase our customers' satisfaction is as follows.

- Cost - Continuous Improvement Program (CIP) to reduce cost and improve productivities
- On time delivery – Review supply chain management and related factors
- IT System - Implement factory 4.0 by linking all manufacturing data through computer system as well as upgraded ERP system to be SAP
- People - Organization restructuring to allow the product oriented concept so the team can put full focus on different sets of product/customer requirements
- Technology - Define technology roadmap to both vertically & horizontally capable to provide “one-stop-shop” service with high flexibility

Intellectual property

Hana has the policy on the intellectual property and copyrights in order to safeguard the tangible and intellectual property of those with whom we do business, which may be used in fulfilling work assignments, and we will comply with all regulations or contractual requirements governing the use of such property. Any reward and copyrights received from the assignment/ work given by the Company or any byproduct assignment/work that originated or result from training/tutoring by the Company shall belong to the Company. Directors, management and employees shall use computer and information technology related work according to Computer-Related Crime Act and other local intellectual property and copyright laws. All employees are required to sign for acknowledgement of the agreement of compliance with intellectual property and copyrights and related laws.

Business partners

Ethical business practice is part of Hana corporate culture. The Company promotes the communication about ethics and commitments as the Company continues to grow. The ethic and commitment become our core value for the whole organization. Hana has a long history of establishing trust and strong partnership with our key suppliers and business partners, hence, Supplier Code of Conduct has been established to ensure that suppliers conduct their business in accordance with legal standards and high ethical requirements as well as being responsible for society and the environment. Suppliers are required signed for acknowledgment and strictly abide and follow.

As we have been practicing, Hana promotes fair and open competition so the procurement of goods and services have been conducted in a manner of the highest ethical standards. The hiring of services or the purchase of goods will be based solely upon price, quality, service, and delivery. All procurement activities are performed based upon following principles:

- Impartial selection of capable and responsible suppliers and contractors Maximum use of competition
- Compliance with laws, relevant regulations and contractual obligations
- Adopting of an effective monitoring system and management controls to detect and prevent bribery, fraud or other mal-practices in the processes of procurement and tendering

Supply chain management: The US-China trade war hit semiconductor industry earlier and the performance of semiconductor sector has been tied up to the situation between the world's two largest countries for a period of time. In 2020, there was another crisis of Covid-19 pandemic with no one could have anticipated and the spread of the lethal illness has interrupted global supply chain and caused the disruptive impacts to the industry. Some of our major suppliers suddenly shut down their operation for several weeks following the demand from local authorities on health and safety concerns and the cross border logistics were also interrupted.

The immediate execution to minimize the impact from the sudden shortage was to activate the second source suppliers right away to avoid interruption to the operation. This strategy became our key criteria to manage future supply chain. For Supplier Group, our critical suppliers were required to work on business continuity plans while Hana also reviewed and addressed the risk of geographical concentration of critical suppliers and re-evaluate the possibility of qualifying suppliers in different geographical zones to secure supply flexibility.

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Hana conducts suppliers' audit both self-assessment and site visits including business review regularly every quarter and use these activities as a tool to develop and strengthen relationship with our strategic suppliers, especially supplier in tier 1 or critical suppliers. However, with the Covid-19 pandemic and physical distancing requirements, travel bans and the site visits were not possible. We still maintain supplier business review and managed it via Webex and Zoom meetings for both critical and non-critical suppliers as we are confident that supplier relation, communication and collaboration are the key to our success.

Sustainable development: For supplier selection criteria, the Company has various criteria for evaluation not only covering price, service, quality, delivery, credit term, but also covering environmental criteria such as ISO 14001 certification of Environmental Management System, ISO 45001 certification of Occupational Health and Safety Management System, or other environmental management.

To raise the awareness of sustainability, we support and promote internal activities of environmental friendly program as well as focusing the impact to community by working with key suppliers to improve their impact on the environment. As such, Green Procurement is considered wherever possible as a forward-looking approach to minimize climate change.

Shareholders

The Company attempts to achieve growth in earnings for shareholders over the long term. The Board members and executive management shall be qualified for their positions and have a clear understanding of their roles in corporate governance and exercise sound business judgment in the best interest of the Company and shareholders including the preparation and disclosure of financial and non-financial information accurately, completely and timely and devote the time and ability to perform their duties.

Our treatment toward shareholders shall comply with the good corporate governance principles for the right and equitable treatment of all shareholders. The disclosures shall be made on a consistent basis, completely and truthfully in regards to the status of the Company, its operating results, financial standing, accounts and other reports. There shall be no disclosure of inside information to individuals associated with the management or directors, which cause damage to the shareholders as a whole.

Business competitors

The Board focuses on running its business with open and fairness and have a practical guidance for the competitors such as fair competition, not involved in the competition by the dumping, persecution or deprivation influence in order to avoid competition, not take any action that violates the intellectual property or copyright of competitors, not use dishonest methods to discredit a competitor or no trade secret violations. In 2020, there was no dispute or lawsuit between the Company and any competitors.

Creditors

The Company treats creditors responsibly with honesty and fairness to obtain a fair return to both parties and comply with the agreement including the terms of guarantee and managing cash flow to be able to pay to the creditors according to the terms and conditions. The Company will notify the creditor status in the event of payment default and to comply with the Consumer Protection Law and other related laws. In case that the Company cannot comply with the agreed terms, the Company shall notify the creditors in advance to jointly find solutions. In 2020, there was no dispute or lawsuit between the Company and any creditors.

Communities, society and environment

Hana has been certified by the International Standard for Environmental Management Systems or ISO 14001 which provides practical tools for the Company to manage not only its environmental responsibilities but also the business development by focusing on the pollution prevention and environmental protection so overall help reduce the environmental impact as well as reduce operating costs of the business.

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The Company has been certified by international standards for Occupational Health, Safety and Environment (OHSAS 18001 and TIS 18001) and 2019 has achieved the new ISO 45001 certification for Occupational Health and Safety Management System with the policy expressing the commitment to operate business not only to resolve health and safety at work but also cover ways to prevent accidents to the workers and the surrounding community.

The Company encourages the use of resources efficiently by arranging various energy saving projects (refer to Corporate Social Responsibility Section). The Board supports the training of all employees to achieve a better understanding and create awareness of the environment. In 2020, various environmental training courses had been provided to employees by both internal and external instructors such as:

Environmental aspects' assessment: To identify environmental issues arising from activities, products and services within the scope of the environmental management system for the environmental aspects so the Company can plan to make improvement.

ISO 14000 Environmental Management: To develop the knowledge and skills required to implement and maintain the ISO 14001 environmental management system.

Advanced energy saving: To raise awareness of the issues of natural resources and awareness of the environment and energy conservation so that employees can apply the skills, knowledge and experience into practice and everyday life properly and in accordance with the relevant policies.

Intensive use of chemical safety: To train employees who perform work related to chemical, emergency team and related functions to understand what the chemical hazards in the workplace and their effect on health and the environment including the control or management of such hazardous chemicals.

Safety, Occupational Health and Working Environment: To provide management and staff, as well as contract workers working on site for training and awareness of safe work practices and preventive measures to contribute to the goal of reducing occupational risks of hazards, accidents, injury and disease and improving workplace health and safety.

Basic fire safety training course: To raise awareness of fire hazards in the workplace and how to act safely in the event of an emergency fire situation, including preparation of fire prevention and suppression plans.

By providing those courses to our employees, the Company could determine priorities and set objectives better for eliminating hazards, reducing risks and the developing continuous improvement. The Company also gains from the efficient use of resources including better effective environmental management.

Government authorities and associated organizations

Hana requires its executive, directors and employees to understand and abide by those laws, regulations, policies, and procedures that applicable to them in the performance of their job duties including the duties to pay tax to the government properly. In 2020, the Board of Directors has established a corporate tax policy as a framework for tax management and practices to be in accordance with legal compliance and the rules and regulations governing the tax of each country in which the business operates including adhere to the business operations with the principles of good corporate governance, business code of conducts and social responsibility.

Anti-corruption

Anti-corruption policy: The Company established the anti-corruption policy and has been approved and reviewed by the Board yearly. The anti-corruption policy is as follows.

Corporate Governance

“Hana has a zero tolerance of bribery and corruption. The Company prohibits the Board of Directors, management, employees or third parties in their relationship with the Company, being involved in any act of corruption in any form in all business transactions to benefit directly or indirectly and shall comply with the applicable laws and regulations in all the countries in which the Company operates.”

Risk assessment: In 2020, the Risk Management Committee assessed the potential corruption risks by conducting the corruption risks separate from other risks. The risk profile was reported to the Board by having the Compliance Unit perform compliance audit in mitigated risks with the established policy.

Training and communication: In 2020, the Company communicated and provided training to employees regarding its anticorruption policy and related policies i.e., corporate code of conducts, gifts and hospitality policy, conflict of interest policy, etc. Employees can get access to the policies via the Company’s bulletin boards and intranet website. The supplier code of conduct covering the anti-corruption policy has been communicated with both overseas and local suppliers for their acknowledgment and compliance. In 2020, the Company received the signed acknowledgement from 1,724 suppliers, which was accounted for 100% from the goal of 100%.

Monitoring and review: The Audit Committee reviews the anti-corruption policy on an annual basis and proposes any amendment to the Board for approval. The Audit Committee also monitors the implementation of the policy and makes recommendations accordingly. Internal control systems and procedures shall be reviewed periodically by an internal audit department to ensure that they are effective in countering bribery and the audit results are to be discussed with relevant operational personnel and reported to senior management and the Audit Committee. In 2020, the risk assessment included the anti-corruption was reported to the Board for consideration.

Certification: The Company has been certified as a member of Thailand’s Private Sector Collective Action Coalition Against Corruption (CAC) for the Company’s actions and effort to support the mobilization of the private sector in the fight against corruption since 2013. In addition, the Company also became the partnership of PACT Network established by the Thaipat Institute to promote concrete anti-corruption in the private sector.

Channel of Complaints

The Board provides channels for stakeholders to communicate any concerns about illegal, any suspected fraud or corruption, human right violation, unethical conduct or violation of the good corporate governance, any suggestion or any complaints regarding to activities or conduct of the Company or any of its staff or business partners relating to the Company. Stakeholders can report such complaint or concern in good faith directly to following channels.

Position	Name	Email
Chairman of the Board of Directors and the Audit Committee	Mr. John Thompson	john@ntasset.com
Chairman of Corporate Governance Committee and Risk Management Committee	Mr. Terrence Philip Weir	terry@hanabk.th.com
Chief Executive Officer	Mr. Richard David Han	richardh@hanabk.th.com
Sr. Corporate Administration and Human Resources Director	Mrs. Puntipa Tanthana	puntipat@hanabk.th.com
Corporate Secretary and the head of Internal Audit	Ms. Jirapa Kongmanee	jirapak@hanabk.th.com

Mailing address: Hana Microelectronics Public Co., Ltd., 65/98, Soi Vibhavadi-Rangsit 64, Junction 2, Kwaeng Talad Bangkhen, Khet Laksi, Bangkok 10210, Thailand

Corporate Governance

Any whistleblower in Hana group should initially make a complaint or report any act of misconduct or suspicions through the respective channels such as through an employee's direct supervisor (manager level and above); the head of Human Resource Department of each Hana location or suggestion/red box available at each Hana location. If employees cannot go to their respective channels, they could report to the above channels.

Handling of complaints: The Company will decide how to respond in a responsible and appropriate manner. An investigation will be conducted as speedily and sensitively as possible in accordance with all relevant laws and regulations. The internal audit department will report the details of complaints and investigation results to the Executive Committee or the Audit Committee and the Board depending on the complaint, dispute or issue raised.

Protection of reporting individual: It is a policy that the Company will not discharge, demote, suspend, threaten, harass or in any other actions against any person reporting any such complaint that made in good faith.

In 2020, the Board did not receive any complaints about corruption/fraud, breach of business ethics and corporate governance, human right violation or no complaint that damage to the Company's reputation due to the administration of the Board of Directors, as well as no legal dispute concerning labour, human rights, and the environment.

4. Disclosure and Transparency

The Company ensures timely disclosure of all material matters and all relevant information is reported to the Stock Exchange of Thailand in accordance with the disclosure requirements. It is critical to have as much information as can be available so that continuous evaluation of investment performance may be conducted. The Company will make the effort to disclose information broadly and proactively through channels of communication that allow equal access to market participants. New information that is likely to materially influence the valuation of the Company's shares shall be disclosed to the market immediately and the information disclosed to investors will be accurate, not misleading and sufficient for investors to make decisions. In addition to the information disclosure in accordance with relevant regulations, through the channels of the Stock Exchange of Thailand and annual report as well as 56-1 report, the Company also discloses information in both Thai and English versions through other channels such as the Company's website with regularly post and update. The Company has the Communication and Disclosure Policy to ensure all information relevant and material disclosure in an appropriate, equal and timely manner. There was no violation that Hana breached the disclosure rules and regulations. The financial reports have been disclosed in a timely manner during the past years.

The Company has not set up the Investor Relations Department, but the Company's executive directors are actively involved in the role of investor relations on a continuous basis as the Company believes that their ability to deliver confident and clear presentation is as important a skill as technical and managerial capabilities. The Corporate Affairs Department is also available to provide basic information upon request. The Company has the IR Code of Conduct to set clear directions and support the investor relation function and ensure the effective communication between the Company, investors, shareholders, the financial community and other stakeholders.

The Company usually arranges an analyst meeting each quarter to inform the investor community of the financial result and also clarify all inquiries from Institutional Investors, Fund Managers, analysts and press who attend the meeting. Additionally, the Company's visits by interested analysts are also welcome and can be arranged by appointment.

Corporate Governance

In 2020, the Company participated in investor relation's events and presentations as follows.

Participation events	Domestic	Foreign	Total
Non-deal roadshow	4	-	4
Meetings at the Company's headquarters (No. of organization)	31	-	31
Total investor meetings , phone calls and online (No. of organization)	35	3	38
The Company's site visit	-	-	-

All investors can access the Company's financial and non-financial information through the SET's Public disclosure system and at the Company's website: www.hanagroup.com, or contact to following person.

Name	Department	E-mail address	Phone number	Fax number
Mr. Terrence Philip Weir	Finance	terry@hanabk.th.com	0 2551 1297	0 2551 1299
Ms. Jirapa Kongmanee	Corporate Affairs	jirapak@hanabk.th.com	0 2551 1297 # 117	0 2551 1299
Ms. Penpimol Kotchabhakdi	Corporate Affairs	penpimol_k@hanabk.th.com	0 2551 1297 # 226	0 2551 1299

Conflict of interest

The Company has the policy in place to deal with conflicts of interest. The Board of Directors has established the policy and procedure for directors and executives to report on conflict of interest to ensure that they are abided by their fiduciary duties in the way that they must not have interest, whether directly or indirectly, in the matter under their decision. Directors and executives are required to disclose any material interest in transactions or matters affecting the Company and its subsidiaries through the established form approved by the Board of Directors. The corporate secretary is responsible for receiving reports from directors and executives who disclose their interests and those of their related parties to the Chairman of Audit Committee and the Chairman of the Board, respectively.

Related party transactions between the Company and a director or executive and/or connected persons, which may lead to the potential conflict of interests, must be considered by the Audit Committee. For material related party transactions, such transaction must be approved by the Board of Directors and/or the shareholders' meeting depending on the nature and the size of transaction as required by Notification of the Capital Market Supervisory Board where those directors and executives shall be excluded from decision making involving transactions in which they have interests or are connected.

In 2020, there was no conflict of interest from directors and executives reported to the Board.

5. Responsibilities of the Board of Directors

The Board of Directors consists of 6 directors which are 3 executive directors and 3 independent directors whose is accounted for 50% of the Board. The Board would increase the number of the independent director whenever that will be suitable for the size and structure of the business. The Chairman of the Board is not the same person who holds the Chief Executive Officer position and the chairman is an independent director.

Board diversify

The Company is open wide to the diversity of the structure of the Board of Directors. The person who will serve as a director should provide complementary qualification to the existing directors such as expertise in specific field, gender, etc. As part of adopting our diversity policy, the Board had nominated a female independent director to serve as its member.

Corporate Governance

Nomination of director and independent director

The Board of Directors gives emphasis on the transparency of director nomination. The Company has the policy to use a professional search firm, IOD director pool for new director recruitment or personal recommendation. In addition, the Company has the policy to give the right to minority shareholders to propose appropriate candidates for election to the Board. The Nomination Committee is responsible for review of the qualification and performance of the candidates or those directors who retired by rotation and make recommendations to the Board of Directors for proposing to shareholders for approval.

In 2020, there was no proposal for candidates sent by shareholders to the Nomination Committee to review. Therefore, the Board considered those directors who retired by rotation and which the Board considers based on their qualifications in line with a company's business strategies including working experiences, expertise, previous year performances, willingness and time devoted to the Board that are suitable to be considered for re-election.

Qualification of director

A person who serves as a director of the Company shall possess the knowledge, ability, personal contribution and shall have at least the following qualifications.

1. To have qualification and have no prohibited characteristics as specified by the laws on public company limited including have no manner indicating a lack of trustworthiness to manage the Company from the view of shareholders according to the regulation of Securities and Exchange Commission.
2. To have knowledge, skill, expertise, experience, education and gender as the Board deems appropriate for its composition, diversity and such qualifications can contribute to the Company's strategies. In addition, at least 1 executive director is to be experienced in the electronic industry or related to the Company's business.
3. To devote time especially for making key decision and handle duties for the best interest of the Company and able to participate in all the Board and shareholder meetings unless necessary or emergency.
4. To have a moral, ethical, and any other features that may be required by law or deemed appropriate by the Board.

Qualification of independent director

A person who serves as an independent director of the Company shall possess the knowledge, ability and personal contribution. At least one member of the Audit Committee must have financial knowledge and other qualifications not contrary to any regulations of the Securities Exchange of Commission (SEC) or the Company policies.

To ensure that the Board includes such directors who can exercise their best judgment, all independent directors shall be affirmatively determined that such director meets the requirement set by the Securities Exchange of Commission (SEC). In particular, an independent director is a director who:

1. Holds shares less than 0.5% of the total shares eligible to vote of the Company, subsidiaries, associates, or controlling parties, including the shares held by the related parties of an independent director (This shareholding threshold of the Company shares held by the independent directors is more strict than the minimum requirements of the SEC and SET.)
2. Who is not an executive director, employee, or consultant who receives remuneration from the Company or any of its subsidiaries, who is also neither a controlling person of the Company or subsidiaries nor a related person at least for the past two years.
3. Is not the person who has relationship by means of descent or legal registration as father, mother, spouse, brothers and sisters, and children, nor being spouse of daughters and sons of management, major shareholders, controlling party/person who is in the process of nomination to be the management or controlling person of the Company or its subsidiary.

Corporate Governance

4. Have no or never have business relationship with the Company, subsidiaries, associates, or related person that deprives such independence nor being a major shareholder, executive director, management of related person who has business with the Company, associate and subsidiary unless the foregoing status ended at least two years. This also includes normal business transactions, rent or lease of fixed assets, financial assistance, loan granting or receiving, guarantee, or other related transactions obliged the Company or its contractual party for the liability to pay the other party that is accounting from 3% of net tangible assets of the Company or twenty million baht whichever is lower.
5. Is not or has never been the auditor of the Company, subsidiaries, associates, major shareholders, or controlling person, nor being a major shareholder, controlling person, or partner of the auditing firm unless the foregoing status ended at least two years.
6. Is not or has never been the professional service provider, nor legal or financial advisor with receive service fee more than two million baht per year from the Company, subsidiaries, associates, major shareholders, or controlling person, and is not a major shareholder, controlling person, or partner of the above mentioned service firms unless the foregoing status ended at least two years.
7. Is not the director who is nominated to be the representative of directors of the Company, major shareholder, or any other shareholder related to the major shareholders.
8. Does not conduct the same business and compete business with the Company or subsidiary, nor being a business partner or executive director, paid employee or hold more than 1% of voting shares from other companies which have the same business and compete with the Company.
9. Has no other conditions that unable to exercise independent opinion regarding the business operation of the Company.

Appointment of directors

The appointment of directors shall comply with the Company's Article of Association that is from the majority vote of shareholder meeting. Each shareholder shall have one vote on each share. Election of directors may be carried out on either an individual basis or en bloc basis as the meeting deem appropriate. In voting, either on an individual or en bloc basis, a shareholder shall so vote in accordance with the number of votes each shareholder has under and the said shareholder may not allot any number of his votes to any such person. The person obtaining the highest votes and the persons obtaining lesser votes, respectively, (in the case of en bloc election) whose total number does not exceed the positions under the election shall be elected as directors. In the case of tied votes, the last person shall be decided by the casting vote of the chairman of the meeting.

In case a directorship becomes vacant other than on retirement by rotation, the Board shall elect a person who has qualifications and who is not disqualified under the Public Companies Limited Act as replacement at subsequent meeting of the Board of Directors. Unless the remaining duration of the director's term of office is less than two month, the replacing director shall hold office for the remaining term of office of the director whom he replaces. The resolution of the Board of Directors shall be supported by a vote of not less than three-fourth (3/4) of the number of remaining directors.

Supervision of subsidiary and associated companies

The Board has its mechanisms to manage and oversight the subsidiary and associated companies. The Board has delegated to the Executive Committee to oversee and responsible for the operations of its subsidiaries and associates include appointing the representative to be a director or a controlling person and shall report to the Board accordingly. From the Board's resolution No. 6/2013, the Board has resolved that the appointed person must be approved by the Board prior to vote on important matters in the same approval levels of the Company that has to approve by the Board. This includes the connected transaction and the acquisition or disposition of assets by the rules relating to the disclosure of information and the transaction is in line with the rules of the Company. In addition, the maintenance of information and accounting records of the subsidiaries can be verified and financial statements can be consolidated within timelines.

Corporate Governance

Board of directors' meetings

The Board of Directors set the meeting schedules in advance by informing in the meeting agenda before each year-ending so that the directors can arrange their times to attend the meetings. In 2020, the Company held 7 meetings of the Board of Directors, which are the normal agenda items. The total number of directors attending the meeting must be no less than one half of the total number of directors to constitute a quorum. The chairman of the Board and CEO set the agenda of the Board's meetings. Any director may suggest agenda items and may raise at meetings other matters that they consider importance of discussion. Information and data for the Board's understanding of the business to be discussed at meetings are distributed in advance of meetings according to the policy that is to provide 5 days in advance. To prepare for meetings, directors are responsible for reviewing the materials that are sent to them in advance. If there are additional inquiries, the directors can contact the CEO, the corporate secretary or designate executives. At the Board meeting, ample time is scheduled to allow full discussion of important matters. Management presentations are scheduled to permit an appropriate portion of the Board's meeting time to be available for discussion and comments. The Board's policy is to vote on the agenda item by having at least 2 out of 3 of total directors present in the meeting for each agenda item. In 2020, the Board invited the General Manager of Hana Ayutthaya plant to attend the Board's meeting in order to provide additional business information and to allow independent directors to visit the plant. The minutes of Board of Directors meeting are properly made and contain key facts such as the timing of start and finish, name of directors present and absent, summary of items of major discussion and resolutions, the minute taker and certifier. The minutes are maintained at the Company's head office and cannot be edited without prior consent of the Board's approval.

The meeting without attendance of management

The Board encourages the non-executive directors to have a separate meeting in absence of management to encourage more open discussion without management present. In 2020, the independent directors conducted a meeting without attendance of management one time on 13 November 2020. The meeting was conducted with the participation of internal and external auditors. The meeting agenda topics covered the discussion of the significant matters and other concerns related to financial statements and internal control issues, fraud awareness, the auditor's confirmation of independence including the level of management support.

Orientation for new directors

The newly appointed director shall receive an orientation regarding the Company's business, duties and responsibilities of directors. The brief review shall be led by the Chief Executive Officer, Chief Financial Officer or his appointee. All other necessary information shall be given by the corporate secretary. In 2020, the Company provided the factory visit for independent directors to interact with factory management and employees in order to help them to gain more understanding and update our business activities, operation and production technology.

Director development

The Board's policy is to encourage the development of directors for continuous trainings organized by various institutions such as SET, SEC, IOD or the audit firm, etc.

Corporate Governance

In 2020, the director attended following training courses/seminar.

Name and position	2020 Training course/seminar
1. Mr. Terrence Philip Weir, an executive director	<ul style="list-style-type: none"> MSCI-SET Exclusive Sharing by the Stock Exchange of Thailand – November 2020 Accounting for revenue from contracts with customers by CPA Australia Ltd. – December 2020 Accounting for employee benefits by CPA Australia Ltd. – December 2020
2. Mrs. Salakchitt Preedaporn, an independent director	<ul style="list-style-type: none"> IAASB's work plan and value of the audit to the users of financial statements International Auditing and Assurance Standards Board (IAASB) by The Stock Exchange of Thailand and International Auditing and Assurance Standards Board (IAASB) – January 2020 MSCI-SET Exclusive Sharing by The Stock Exchange of Thailand – November 2020
3. Mr. Yingsak Jenratha, an independent director	<ul style="list-style-type: none"> MSCI-SET Exclusive Sharing by The Stock Exchange of Thailand – November 2020

Mr. Terrence Philip Weir, an executive director and Chief Financial Officer, has completed 2 courses of 2020 refreshment programs in financial and accounting totally 13 hours from CPA Australia Ltd. Those courses were reviewed by the Audit Committee to be beneficial to the Company and related to accounting principles/standards that are consistent with the nature of the Company's business.

In addition, the Board also encourages the corporate secretary to develop her knowledge for proper execution of duties and responsibilities. The corporate secretary, Ms. Jirapa Kongmanee, had attended following training courses.

- Corporate Secretary Program organized by Thai Institute of Directors Association (IOD)
- Effective Minute Taking organized by Thai Institute of Directors Association (IOD)
- CS Seminar for key documentation keeping organized by SEC

In 2020, the corporate secretary further attended the training courses/seminars held by the SET, Thai Investors Association and other institutions such as:-

- THSI (Thailand Sustainability Investment) Exclusive Coaching by Stock Exchange of Thailand (SET) – January 2020
- Personal Data Protection for directors and management by Securities and Exchange Commission (SEC) – February 2020
- Working Paper for Better Corruption Prevention by Thai Institute of Directors Association (IOD) and Thai Private Sector Collective Action Against Corruption (CAC) – September 2020
- SD Professional Sharing 2/2020 by Stock Exchange of Thailand (SET) – September 2020
- Live Road to Certify 4/2020 by Thai Private Sector Collective Action Against Corruption (CAC) – November 2020
- ASEAN CG Scorecard Coaching by Securities and Exchange Commission (SEC) and Thai Institute of Directors Association (IOD) – November 2020
- MSCI-SET Exclusive Sharing by Stock Exchange of Thailand (SET) – November 2020

Service on Other Boards

In order to give proper attention and contribution to the assigned responsibilities, the Board believes that directors including the CEO should limit their services to not more than 3 boards of publicly traded companies with no exception.

Corporate Governance

Performance assessment of the Board of Directors

The Board has conducted its annual performance for individual and as a group evaluation by adopting the self-assessment method from the Stock Exchange of Thailand to assess performance in the latest year. The Board self-assessment questionnaire allowed the Board to assess their effectiveness into 6 aspects:

1. Board structure and qualifications
2. Roles, duties and responsibility of the Board
3. The Board meeting
4. Duties of directors
5. Relationship with management
6. Director's self-improvement and management training

Further, the Board also can provide feedback in the assessment form to improve the Board's performance. The corporate secretary concludes the Board's group performance and report to the Board meeting. In 2020, the overall performance of the Board's group was assessed at "very good" ranking. The Board also has conducted the performance evaluation of an individual director using the self-assessment method with evaluation criteria. In 2020, the corporate secretary concluded the Board's individual performance and reported to the Board's meeting with the average performance was "very good" ranking.

Performance assessment of the sub-committees

The Board has also annually conducted the performance evaluation of all sub-committees that are the Audit Committee, the Nomination Committee, the Corporate Governance Committee and the Risk Management Committee. Those Committees evaluate their own assessment and the corporate secretary reports the result to the Board. In 2020, each sub-committee got the average score as "very good".

Performance assessment of CEO

On an annual basis, the performance of CEO is evaluated by the independent directors, where the evaluation criteria have been applied from the guidance of the Stock Exchange of Thailand. The areas to assess CEO cover his leadership, strategy formulation, strategy execution, financial planning and performance, relationships with the board, external relations, human resources management and relations, succession, products/service knowledge and personal qualities. In 2020, the independent directors assessed the CEO with satisfactory performance.

CEO succession plan

The Board of Directors has improved its succession planning approach by developing the formal CEO succession planning policy in adopting a more comprehensive program that anticipates internal CEO succession while preparing for the possible need to recruit an external candidate depending on the circumstances whether on a planned or emergency basis.

An emergency succession is required when CEO is unable to perform the duties due to accident or other unexpected circumstances. A special meeting of the Board would be convened to decide which of the executives might be appointed as Acting CEO for the remainder of the time required.

In the event of permanent changes due to retirement or planned vacancy, the entire Board shall be involved in choosing a successor. However, the Board could delegate much of the responsibility to implement the search to the Nomination Committee or a special ad hoc committee to work with the Board and current CEO to identify and develop potential internal candidates, monitor the development of candidates and assess the readiness of candidates, or conduct an external search if cannot come to an agreement on an internal candidate, etc.

Corporate Governance

Managing the CEO succession plan is the Board's responsibility. In 2020, the Board reviewed the succession plan to ensure that key components are up-to-date, particularly the CEO's job description, minimum qualification requirements, minimum experience and personal characteristics and the succession readiness improvement.

Business ethics

The Board of Directors attempts to operate its worldwide business in accordance with the highest ethical standards and relevant laws. The Company expects and requires that its directors, officers and employees perform their duties with the highest standards of integrity in the conduct of business. Therefore, the corporate code of conduct has been written as the Company's policy and procedure in order to provide the general guidance for those in recognizing and resolving ethical and legal issues while conducting the Company's business. The written code of conduct is available on the Company website. All directors and employees are notified and encouraged to comply with the set codes. The compliance to the code of conduct is regularly monitored by senior management. The Company shall not tolerate any illegal or unethical acts. Anyone violating the code of conduct will be disciplined, which may include termination of employment.

In 2020 to ensure that employees have the knowledge and understanding of the policies and practices of business ethics, the Company conducted trainings for employees and provided the post-tests to evaluate the training results. In addition, all the directors were required to sign a certification of acknowledgement and compliance with the code of conducts for the Board of Directors. The internal audit department also monitored the implementation and compliance for the code of conducts.

For the available whistleblowing channels, no compliant or dispute regarding ethical issue was reported in 2020.

Auditor's remuneration

In 2020, the Annual General Meeting of Shareholders approved the appointment of Ms. Kamontip Lertwitworatep, Certified Public Accountant No. 4377 of EY Office Limited to be the Company's auditor with the remuneration of not exceeding Baht 2,600,000.

The Company and its subsidiaries paid the audit fees to EY Office Limited, Thailand as follows.

Audit fee:

(Unit: Baht)			
Company	Auditor name	2020	2019
Hana Microelectronics Public Co., Ltd.	Ms. Kamontip Lertwitworatep	2,600,000	2,450,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	Ms. Kamontip Lertwitworatep	1,260,000	1,260,000
Hana Semiconductor (BKK) Co., Ltd.	Ms. Kamontip Lertwitworatep	150,000	150,000
Hana Semiconductor International Co., Ltd.	Ms. Kamontip Lertwitworatep	340,000	340,000
Total		4,350,000	4,200,000

Corporate Governance

Non-audit fee:

(Unit: Baht)

Company	Non-audit fees	2020	2019
Hana Microelectronics Public Co., Ltd.	BOI audit fee	450,000	360,000
	Inventory destruction fee	20,000	60,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	BOI audit fee	270,000	270,000
	Inventory destruction fee	0	0
Total		740,000	690,000

For the financial year ended 31 December 2020, the external auditors confirmed to the Audit Committee on the actions they take to maintain their professional independence with respect to the Company and its affiliates in accordance with the Code of Ethics for Professional Accountants issued by Thailand's Federation of Accounting Professions by not holding any shares in the Company and its affiliates and not purchasing goods and services from the Company and its affiliates.



Internal Control and Risk Management

The Board of Directors is responsible for establishing and maintaining the internal control system. The Board has appointed the Audit Committee to review the appropriateness and effectiveness of the internal control system provided by management. The Audit Committee shall ensure that such existing internal control systems are achieving their objectives and that they should provide reasonable assurance concerning the accuracy of financial statements, the safeguard of assets against loss, unauthorized use or fraud, and the assurance of transactions that are executed consistent with the Company's policies and procedures.

In 2020, the Board has performed self-assessment to evaluate the internal control system by applying the control assessment criteria from the Stock Exchange of Thailand. There is an Internal Audit Department and Compliance Unit to monitor and oversee the overall company activities in line with established system and applicable laws and regulations. The Risk Management Committee has been appointed to ensure implementation of the risk management policy to be monitored and limited overall risks at an acceptable level.

From the Board of Directors' Meeting No. 7 held on 10 December 2020 with the Audit Committee attended the meeting, the Board has assessed the Company's internal control system based on 5 components of COSO's Internal Control Integrated Framework which are Control Environment, Risk Assessment, Control Activities, Information & Communication, and Monitoring Activities.

The Board agreed with the Audit Committee that the existing internal control system is considered appropriate and adequate as summarized below.

1. Control Environment

The Company has established organization structure, line of control, approval authorities for different managerial levels, and the charter of various committees to assist in discharging duties and responsibilities of the Board of Directors. The policies on corporate governance, code of conduct, anti-corruption policy and the operation policies and procedures are written as guidelines for directors, executive and employees to perform their duties with integrity.

2. Risk Assessment

The Risk Management Committee has been appointed to ensure implementation of the risk management policy to be monitored and limited overall risks at an acceptable level. Substantial risks are identified in consideration of both internal and external factors and prioritization based on the impact and likelihood of identified risks for further suitable risk mitigations.

The Company also considers the potential for fraud in assessing risks to the achievement of objectives. The Company's risk profile has been reviewed by the Risk Management Committee and proposes to the Board regularly whereas the risk management policy has been reviewed annually.

3. Control Activities

The Company develops general control activities to mitigate risks such as the segregation of duties among approval, accounting booking and asset's custody, the security control of information technology system, the policy to approve transactions done by people who have no interest in the transaction.

Internal Control and Risk Management

4. Information and Communication

The Company's management provides the Board with adequate information for decisions and sends the notice or document to the Board in advance for their preparation. Board meeting minutes could be able to track back concerning the duties of the directors. The Company has the whistle blower channels for internal and external parties.

5. Monitoring Activities

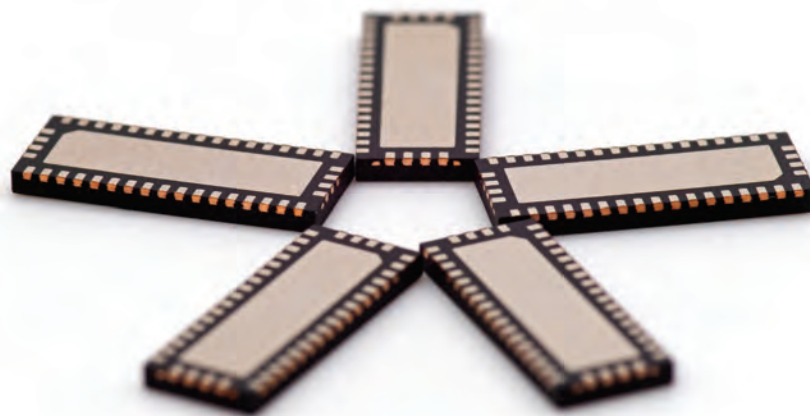
The appropriateness and adequacy of internal control is monitored regularly through a combination of management review, self-assessment, compliance and internal & external audits. The results of internal & external audit and compliance reviews are reported to the Audit Committee on a regular basis. The Audit Committee also approves the internal audit and compliance unit plans.

Internal Audit

The Audit Committee has appointed Ms. Jirapa Kongmanee to the position of head of internal audit unit from 10 September 1999 due to having adequate experiences in internal audit field and have been trained in the training courses related to the scope of internal audit such as Internal Audit Role in Governance, Risk and Control, Business Management Skills, Business Analysis and Information Technology, COSO Internal Control Framework, including training course related to the new laws and new accounting standards, and she understands the activities and operations of the Company so she is appropriate to perform such duties properly and adequately. The internal audit has a reporting line to the Audit Committee who considers and approves the appointment, transfer and dismissal of the head of internal audit.

Compliance Unit

The Board of Directors' Meeting No. 5 held on 13 November 2013 has appointed Ms. Jirapa Kongmanee to the position of the head of Compliance Unit to be responsible for overseeing the business operations of Hana group in accordance with the laws, rules and regulations of the relevant authorities.



Related Party Transactions

Related Transactions in 2020:

According to the Note 8 on related party transactions of the consolidated financial statements for the year ended 31 December 2020, relevant details of related party transactions entered into by the Company and its subsidiaries were disclosed. Those related party transactions were entered into in the ordinary course of business between the Company and its subsidiaries and such transactions have been conducted with fair and at arms' length on commercial terms.

In 2020, there was no related party transaction between the Company or its subsidiaries and connect persons who may have conflicts of interest or any other situations which could be against the best interest of the Company and its shareholders (as regulated by the Securities and Exchange Commission or the Stock Exchange of Thailand).

Procedures for Related Party Transactions:

In case of normal business transactions made with related parties under Section 89/12 (1) as required by the Securities and Exchange Act such as general trading conditions or transactions that support the normal course of business, such transactions shall be approved by the Board of Directors or in compliance with the principle approved by the Board of Directors. For related party transaction that may have a potential conflict of interest, the Audit Committee shall review and approve by the Board. In case that there is any transaction which has or may have the conflict of interests of directors or related persons, directors who have interests shall inform foresaid transaction to the Board and abstain from voting in that agenda.

In addition, the Company and its subsidiaries shall comply with the notifications and regulations of the Securities and Exchange Commission and the Stock Exchange of Thailand. The related party transactions which the Company discloses on the note in financial statements shall be presented and considered by the Audit Committee quarterly in order to prevent potential conflict of interest.

Any material related party transactions required shareholders' approval under the notification of Stock Exchange of Thailand, the Company shall disclose the details and rationale of the transactions to shareholders in advance before execution with the below minimum disclosures:

1. The name and relationship of the person who has conflict of interest.
2. The nature and volume of transactions during the year, as well as the continuous transactions or time by time transactions.
3. The reasons to engage the transaction with a person who may have conflict of interest, the benefit to shareholders, and pricing policy and terms is fair and reasonable.
4. The opinions of the Audit Committee.

The transaction shall be approved by the shareholders' meeting and shareholders who have interest in foresaid transaction have no right to vote on such resolution so the decision shall be made by disinterested shareholders.

Protecting Investors:

When there is any related transaction between the Company or its subsidiary, and the related parties in the future, the transaction shall be approved by the Board of Directors, which has the Audit Committee providing its opinion for the necessity and the appropriateness of the transactions and how utmost benefits to the Company. Directors who have an interest in such transactions shall have no right to vote. If the Audit Committee doesn't have an expertise in the matter of such transactions, the Company shall provide an independent expert or the Company's auditor to provide an opinion as to the necessity, reasons for decision by the board or shareholders in making the transactions, as any case may be. The Company shall also disclose the transactions in the notes of the financial statements audited by the Company's auditor.

Related Party Transactions

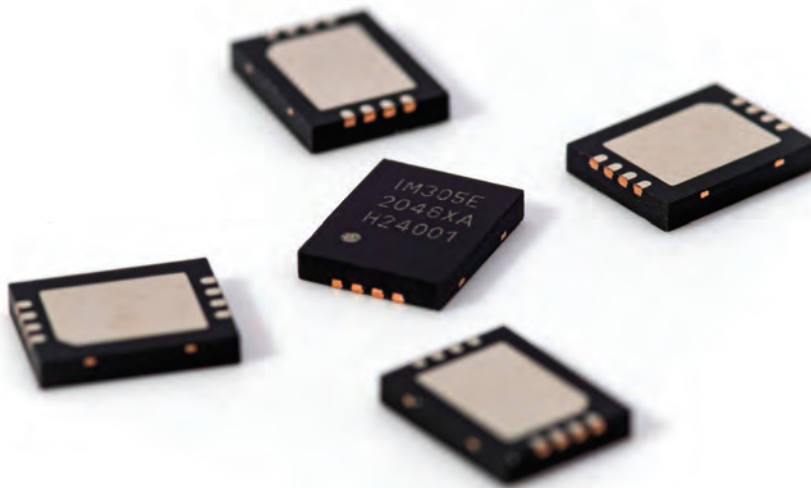
Policy of related transactions in future:

The policies of the Company and its subsidiaries regarding related transactions in future shall be in compliance with the Securities and Exchanges Act, the regulations of Stock Exchange of Thailand and compliance to the requirements regarding the disclosure of the connected transactions and acquisition or disposal of the Company's assets.

The Company's policy is to operate business in the best interest of the Company and its subsidiaries. The Company and its subsidiaries have engaged into the normal business transactions. As such, the related transactions shall be done under the normal course of business conditions with fair and at market prices.

Opinion of the Audit Committee:

The Audit Committee has considered the previous and current related transactions between the Company and its subsidiaries or the related parties or transactions that may have conflict interest, has the opinion that the Company has disclosed the information correctly and completely. Such transactions were under the normal business conditions with fair and at arms' length.



Corporate Social Responsibility



Hana recognizes that our long-term success depends on our ability to manage our operations soundly, efficiently in an increasingly complex environment, to create value for our stakeholders and to further contribute to society.

CSR Policy, Vision, Strategies and Sustainable Development:

- Policy:** The Board of Directors commits that the Company will conduct business with respect to its economic, social, and environmental responsibilities, as well as for other stakeholders. The Board also commits that the Company's business will be conducted in an open, honest, and ethical manner. Hana and its subsidiaries recognize the importance of protecting human rights, consumer rights, environmental management, compliance with applicable laws, regulations and to contribute to community development for long term success of the Company, society and stakeholders.
- Vision:** To operate our business in harmony with society for the mutual benefit of our stakeholders and community
- Strategy:** Hana's business environment is highly competitive. The Company seeks to expand its sales each year and to continually improve the capabilities and productivity of its production processes. Whilst doing so the management and staff are mindful of the CSR policies for sustainable development and review each change to ensure compliance with the CSR objectives toward sustainable development with regards to the economic, social and environmental impact. In addition, the Company and its subsidiaries have established CSR committees at each plant with representatives from different departments which focus on the Company's relationship with our stakeholders.

Corporate Social Responsibility



CSR Development: In 2020, Hana received CSR-DIW Continuous Award from the Department of Industrial Works for sustainable development for the fourth year by adopting the CSR-DIW (Corporate Social Responsibility: Department of Industrial Works) 7 standards composed of corporate governance, human rights, labour practice, fair operating practice, consumers issue, environment and lastly the community involvement and development, including prepared the CSR report in accordance with the CSR-DIW Reporting Initiative which is in line with the industry context in Thailand and is recognized internationally.

Stakeholder Engagement:

The Company has the policy to provide opportunities for stakeholder involvement with those who are affected by or may affect from the business activities of the Company. The stakeholder feedbacks are used to assess key issues in order to find ways for mutual benefits.

Our key stakeholder groups are identified as follows.

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Shareholder/ Investor	<ul style="list-style-type: none"> Analyst meeting Annual General Meeting of Shareholders Annual Report, 56-1 Report, Press Release ESG scorecard questionnaire 	<ul style="list-style-type: none"> Consistent dividend payment Steady growth Environment, Social and Governance 	<ul style="list-style-type: none"> Dividends paid each year based on the Company's cash flow Company vision for constantly strives to grow and be competitive Corporate governance scorecard Environmental management

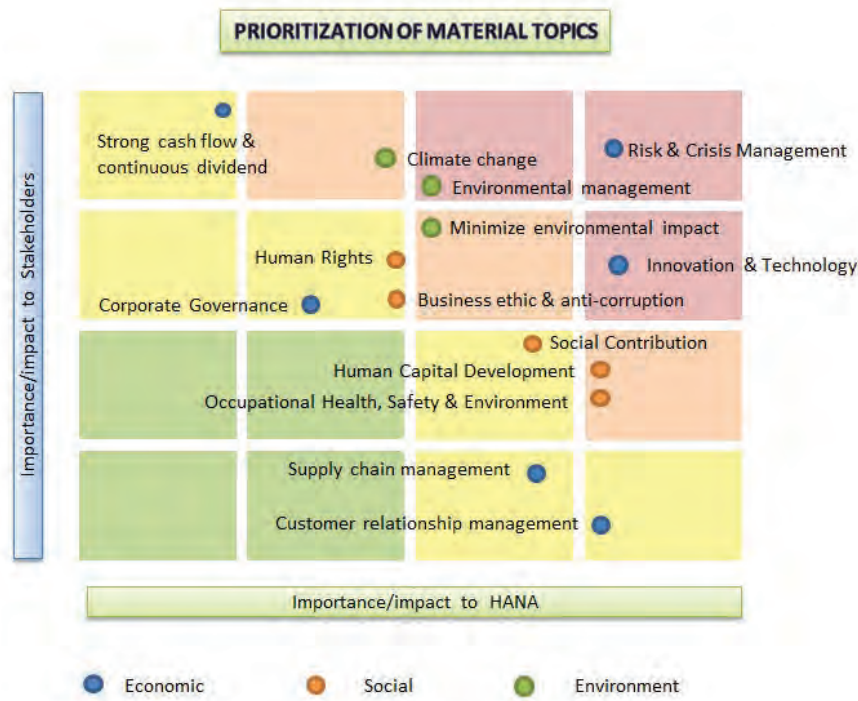
Corporate Social Responsibility

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Customer	<ul style="list-style-type: none"> Customer audits Customer's satisfaction survey Customer visits Risk assessment 	<ul style="list-style-type: none"> Quality products with on time delivery and competitive product pricing Ethical and environmentally responsible Occupational health, safety and environment 	<ul style="list-style-type: none"> Quality management system Supply chain management Code of conduct and The Responsible Business Alliance (RBA) Version 6.0 Occupational health, safety and environment Green product Productivity improvements Cost reduction programs Working to grow with new and existing customers
Employee	<ul style="list-style-type: none"> Employee's satisfaction survey Orientation, exit interview Training and workshop Complaint channels Operation meeting Risk assessment 	<ul style="list-style-type: none"> Appropriate compensation and welfare Occupational health, safety, and environment Career development 	<ul style="list-style-type: none"> Employee Relation Committee Occupational health, safety and environment Career development program
Business Partner/ Supplier	<ul style="list-style-type: none"> Supplier audit Supplier quality management Risk assessment 	<ul style="list-style-type: none"> Fair and transparent supplier selection Payment on time Supply chain management 	<ul style="list-style-type: none"> Code of conduct Treatment of creditors Supply chain management
Community	<ul style="list-style-type: none"> Activities conducted outside the Company Advice/feedback from Industrial Estate Community visit program Recruitment Procurement 	<ul style="list-style-type: none"> Operate with no impact to the environment Support low-income and disadvantaged communities Employment opportunities for local people Support local business 	<ul style="list-style-type: none"> Environmental management CSR to support community project Hiring local people when qualified Products and services purchase from local business when qualified

Materiality Prioritization:

Prioritize material topics based on the strategic importance to the business, importance to stakeholders and the social, economic and environmental impact of each topic in the value chain were reviewed and approved by the Corporate Governance Committee as follows.

Corporate Social Responsibility



Sustainable Development Goals: SDGs

The Company promotes the stakeholder participation through its various activities by integrating the United Nations Sustainable Development Goals (SDGs) into the organizational sustainability practices.

Supporting the implementation of SDGs in 2020:



Goal 3: Good health and well-being

Promote employees' health and safety in the workplace, measurement to prevent and respond to the epidemic situation of Covid-19 including the project to support protective equipment for staffs and hospitals, as well as career development and community engagement



Goal 4: Quality education

Scholarship program with the aim to enhance educational opportunities for the child of low-income employees, internship program for students to promote practical learning and knowledge to enhance their skills necessary for future careers by ensuring application and training provided equally to all women and men



Goal 5: Gender equality

Hiring, employee development and promotion that take into account the individual's abilities, gender equality, no discrimination, which is contributed to the stability of the staff career.

Corporate Social Responsibility



Goal 6: Clean water and sanitation

Implementing improvements in water quality by reducing pollution and control water quality, reducing water consumption by increase the reuse of wastewater from production processes



Goal 7: Affordable and clean energy

Increase the proportion of renewable energy, increase energy and technology efficiency



Goal 8: Decent work and economic growth

Respect human rights, fair treatment of employees, promote safe and secure workplace including promote career development for people with disabilities



Goal 9: Industry, innovation and infrastructure

Industrial trend toward automation and industrial 4.0, promote staff at all levels to participate in innovation and improvement projects through Kaizen and Quality Control Cycle (QCC) group activities



Goal 11: Sustainable cities and communities

Green industry initiative, eco-factory and eco-excellent aiming for sustainable development towards ESG



Goal 12: Responsible consumption and production

Managing the efficient use of natural resources, reducing landfilled waste, reduce the emission of toxic chemicals and waste into the nature with waste management principles: Reuse, Reduce, Recycle (3Rs)



Goal 13: Climate action

Continuously improve the efficiently use of internal resources within the organization, implement renewable energy project to drive a low-carbon society as part of climate change mitigation



Goal 16: Peace, justice and strong institutions

Anti-corruption certification and the implementation of the principles of good corporate governance

Corporate Social Responsibility

Corporate Responsibility and Sustainability

In 2020, the Company and its subsidiaries operated our businesses by integrating with CSR principles of the Stock Exchange of Thailand as follows.

1. Corporate Governance

The Board realizes and commits to conduct business with the good corporate governance in conformance with OECD Principles of Corporate Governance as a key international standard in making an organization more efficiency, transparency, enhancing the credibility and strengthening sustainable growth. The Board has established and approved the corporate governance policy and the corporate code of conducts as the guidelines for the directors, executives and employees in discharging their duties. Due to our continued development of good corporate governance, the Company received an “excellent or five-star” CG rating as evaluated by Thailand Institute of Directors (IOD) in 2020.

The Board continues making development of good corporate governance practices in order to create maximum benefits to shareholders and other stakeholders resulting in sustainable corporate performance over the long term.

2. Fair Operating Practice

Fair and open competition: Hana conduct its business in compliance with competition laws and regulations, advising employees to realize the important of fair competition policy, avoiding and anti-monopoly trading, not asking for and not receiving or paying any benefits that are not honest with trading partners or government officers, and not seeking the confidential information of competitors by fraudulent, dishonest, inappropriate, immoral or illegal acts.

Safeguard the property right of others: Hana respects the rights of tangible and intellectual property of others by not engaging in any activity that violates such rights e.g. using a superior market power to make abuse, making fake products or violating intellectual property right, etc.

Customer relationship management: The customer satisfaction surveys are conducted annually to improve the Company's products, services and other business processes in order to meet the customers' needs and requirements enabling the Company to maintain and expand its customer base in the long term. Our responsible principle toward customers is to operate our business in compliance with applicable laws, rules and regulation as well as compliance with Responsible Business Alliance (RBA) Version 6.0 which is the code of conduct for electronic industry best practices.

Promote value supply chain: The Company is taking its efforts to build open business relationships and ensure fair and even-handed dealings with its suppliers, cooperative and support CSR activities in aiming at building a sustainable society in full partnership with its suppliers such as ensure to comply with established purchasing procedure. The Company also encouraged its business partners to respect human rights and threat their employees fairly by requiring suppliers to sign on acknowledgement and compliance with the code of conducts for suppliers as well as performing the supplier audit in order to develop a sustainable business relationship.

3. Anti-Corruption

Hana has been a signatory company of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) since 2013, with the objective to support the Coalition against Corruption aiming to counter corruption in any forms. The Company was certified as a member of Thailand's Private Sector Collective Action Coalition Against Corruption since 2015.

Corporate Social Responsibility

The Company realizes the importance of the fight against corruption. The written anti-corruption and related policies have been established with the monitoring process to ensure that employees and concerned parties comply with the policies and anti-corruption programs. The Company also provides whistleblowing channels, set up an anti-corruption committee with the senior management as a chairman, does corruption risk assessment, employees' training as well as participating with partners to fight against corruption. In addition, the Company organizes activities to promote the honesty and integrity of employees and business partners as part of anti-corruption measures.

4. Respect of Human Rights

Hana respects the basic human rights of individuals. The Company has policies to ensure that there shall be no human right violation, all employees treated equally and operate in a workplace that is free from discrimination. The Company has the career development program for employees to enhance their knowledge and skills and open opportunities for future growth. Employees' remuneration shall be the same standard for men and women. Open communication and direct engagement between workers and management are the best ways to resolve workplace and compensation issues. The Company respects the rights of workers' councils in accordance with local laws. Workers shall be able to communicate openly with management without fear of reprisal, intimidation or harassment. Employee satisfaction surveys have been regularly conducted to provide management with the knowledge and tools to build positive employee relations and a positive work environment. Channels of complaint are also opened to all employees while protecting employees who report violations or wrongdoing in the Company.

In 2020, the Company had no major issues regarding labour and human rights from our key customers' in-depth audits, where those audits had focused on anti-discrimination, anti-harassment and abuse, prevention of involuntary labour and underage labour, working hours, compensation, freedom of association, and etc.

5. Fair Labour Treatment

Non-discrimination in employment: Hana supports the principles of equal opportunities in employment, promotion or termination and is opposed to all forms of discrimination, including those on the grounds of nationality, color, race, religion, gender, age, disability, marital status, political affiliation, union membership, or any other status protected by the country laws. All employees will be treated as individuals solely according to their ability to meet job requirements. The Company has implemented the procedure starting with the recruitment process by not having on the employment application form any requirement for candidates to complete the specific information of age, religion, gender, nationality, and disability in order to avoid discrimination in hiring.

In addition, Hana supports projects of the government to protect the rights of disabled persons to provide them with employment opportunities. The Company employs persons who are disabled and arranges the appropriate job matching to their capability. The Company also improved workplace environment to enable employees with disabilities easier access to the Company's facilities. Furthermore, Hana also arranges a place for disabled persons to open shops in the factory compound at no cost, which gain the good support from employees.



Corporate Social Responsibility

Number of disability employment in the workplace having the hiring proportions in line with Empowerment of Persons with Disabilities Act:

Number of disabled employees per total workforce (as at the report date to the Department of Empowerment of Persons with Disabilities)					Pay money to the Fund for Empowerment of Persons with Disabilities during the past 3 years
	2020	2019	2018		
Hana Microelectronics Public Co., Ltd.	40 : 4,032	39 : 3,920	43 : 4,014		-
Hana Semiconductor (Ayutthaya) Co., Ltd.	54 : 4,467	62 : 4,606	54 : 4,515		-

In 2020, Hana Semiconductor (Ayutthaya) Co., Ltd., a subsidiary of the Company, joined the International Day of Persons with Disabilities having the theme of “Building Back Better: toward a disability-inclusive, accessible and sustainable post Covid-19 World”. Hana Ayutthaya received a prize of “The excellent organization that support persons with disabilities” by the Office of the National Development and Disabilities, the Ministry of Social Development and Human Security by empowerment and supporting disability programs for 8 consecutive years. Hana Ayutthaya also received a prize of the excellent organization that supported persons with disabilities in Ayutthaya province. This represents our commitment to promote and create opportunities for hiring people with disabilities and improving their well-being.



Not using forced labour or child labour: The Company does not use trafficked, forced labour or child labour. The Company shall comply with applicable laws whether laws prohibiting complaints to support slavery or trafficking, and shall not use or enter into the agreement for forced labour including slavery such as assign employees to certain types of work which they either do not willing to do or as punishment. Employees are free to resign from the employment by giving advanced notice and the Company shall not keep their identification cards, passport or work permit with the Company as part of employment obligation.

Social protection: Our compensation policy is fair and reasonable according to employees' capability by considering the packages with the same industry and in accordance with their position, experience and their performance in the Company as well as the economic and social situation. Moreover, the Company provides various employees' welfare for example annual vacation, overtime with the consent of employees, medical treatment, employees' cooperatives and other welfares such as group life and accident insurances, annual health check, special vaccination such as Influenza vaccine, Employee Fitness Center, library at certain location, etc. More importantly, the Company provides the children education allowance for children of low income employees. In 2020, Hana Lamphun and Hana Ayutthaya gave the employees for educational expenses of their children almost 1,500 students amounting Baht 2.5 million.

Corporate Social Responsibility

There are also long service awards for employees to honor and recognize their contribution over a period of years. The Company also provides the reward program to recognize exemplary performance of employees who have excellent work attendance, no record of disciplinary action, significant contributions and innovations to reduce the Company's cost or improve efficiency, or demonstrated their ability and willingness to work positively, respectfully, and effectively with others, etc.



The Company provides pregnancy care support for pregnant employees by providing training regarding midwifery and newborn care, gift sets and pregnancy allowance per month. Hana Lamphun arranged the breast milk corner for employees with a refrigerator dedicated to storing milk. The Company has provided the support to 118 pregnant employees worth of Baht 200,000 in 2020.

Safety, health and environment at the workplace: The Company gives priority for employee development and focus on their wellbeing both physical and mental health. The Company was certified for both OHSAS 18000 and TIS 18001 which was an international and Thai's occupational health and safety management system since 2005 and changed to a new ISO 45001 since 2019. The Company is committed to developing environmental and safety, health of employees and those involved, as well as uphold social responsibility and labour, along with operating the business and making continuous improvement.

Corporate Social Responsibility

In 2020, 2 factories of Hana Lamphun received the gold award for excellent Safety, Occupational Health and Environment in the workplace at a country level, given by the Ministry of Labour. This shows the importance and cooperation between employers and employees in developing the labor relations and welfare system to improve the quality of life of our employees.



Hana Lamphun received the certification for the for “The National Award for Safe, No Disease, and Happy Workplace” from the Department of Disease Control, the Ministry of Public Health which is valid until 30 September 2020. This project has extensive benefits for the Company, its employees and society as healthy employees are productive and increase the efficiency of the work whereas improve the organization quality and reduce the burden on the government as well as generate income for the government in the form of more taxes. As a result, it is good for the economy and society as a whole.

Recreational activities for employees: The Company realizes the importance of employees by arranging various recreational activities as part of the Company’s strategy to develop and build relationships between management and employees, as well as creating a “family” culture within the organization which allows employees to enjoy their work. In 2020, the Company and its subsidiaries provided a variety of recreational activities for employees such as Team Building, New Year Party, Sport Day, Food Festival and etc.



Corporate Social Responsibility

The Company also held a “Teacher’s Day” to honor employees who dedicated their times and efforts being a volunteer teacher or lecturer to train staff. In 2020, there were totally 73 internal instructors joining the knowledge sharing program.



6. Customer Responsiveness

The products and services that we make are safe and not harmful to consumers and related parties. The Company is accredited with following international standards.

- ISO 9001 is a quality management system where the Company can demonstrate procedures to consistently provide products that meets customer, applicable statutory and regulatory requirements.
- IATF 16949 is a quality management system for automotive industry which focuses on the technical production of high quality automotive parts.
- ISO 13485 is a quality management system used in the medical device industry which mostly focuses on the products’ quality and safety for the consumers and related personnel.
- ISO 14001 is the environmental management system (EMS) as part of the management system used to manage environmental aspects, make businesses strive beyond environmental compliance by focusing on pollution prevention and environmental preservation.
- ISO 45001 is an occupational health and safety management system emphasizing the importance of preventing accidents and occupational diseases to reduce the risk in the workplace and create safe working environment for employees and those who are involved.

In addition, the Company promotes fair trading and has the policy to assess customer satisfaction both before and after sale to improve customer satisfaction and continuous improvement.

Quality improvement program: It is the policy of the Company to encourage all employees to participate in improving their own work processes i.e., reduce defect in production line, reduce cycle time, reduce error and customer complaints and improve quality through multiple initiative projects such as Quality Control Circles (QCC), improvement project, special projects assigned by the chairman for employees level supervisors or engineers and technicians, employees’ suggestion, small group activity, and continuous improvement program (CIP). Our quality improvement programs have been continuously developed and recognized by both internal and external organizations.



Corporate Social Responsibility

National quality award: Our employees participated in group activities for Thailand Quality Prize organized by Technology Promotion Association (Thailand-Japan). Hana Microelectronics Public Co., Ltd. received various awards from 2009 to 2020. In 2020, the Company received totally 8 prizes composed of 2 gold awards for the Manufacturing QCC Prize and 6 gold awards for Junior Manufacturing QCC Prize. Those are the performance of small groups of staffs working together to contribute to the improvement of production processes aiming for waste reduction or zero defect enabling the cost reduction to the Company more than Baht 4 million per year. The group activity program leads to employees' involvement and participation at all levels working toward common goals for continuous quality improvement as an approach to identify, investigate, analyze and solve their work-related problems so enhance productivity and quality while achieving customer satisfaction. QCC program is also a tool to increase the morale of employees, promote human relations, reduce accidents at work, improve two-way communication with the management and encourage both employees and management at all levels to focus on continuous improvement of our manufacturing processes.

7. Environmental Care

Environmental Policy: The Company has an environmental policy approved by management to suit the context and support the strategic direction of the organization in showing its commitment to protect the environment, use resources efficiently, reduce the impact on the environment including complying with legal requirements and continuously promote the employee participation in environmental management initiatives.

Hana's Occupational Health, Safety and Environment Policy

Hana Microelectronics Public Co., Ltd., a leading electronic contract manufacturing company, has committed to preserving the environment, caring for our employees and interested parties on matters of occupational health, safety and environmental aspects and adhering to the social and labor accountability with respect to the business and continuous improvement.

- Provide safe and healthy working conditions for the prevention of work-related injury and ill health according to OH&S risks and opportunities
- Eliminate hazards and reduce OH&S risks
- Support OH&S consultation and participation of workers and workers' representatives
- Protect environment for sustainable resources use, enhance applicable technology to reduce any environmental aspects for our business, prevent pollution and implement substitutes or less hazardous substitutes in manufacturing
- Fulfill and comply with related OHS&E legal and other specific commitment/ obligations(s) relevant to the context of organization (e.g. The Responsible Business Alliance (RBA) Code of Conduct)
- Enhance the Continual improvement of Environmental and OH&S management system and activities

The main content of this policy has been communicated to employees at all levels through the Company's noticeboard, the intranet website, and post on employee's ID card as the guidelines for employees to perform their work with the same objectives. In addition, the Company's policy has been released to the public by posting in front of the factory and communicating to business partners outside the Company.

Environmental management: The Company set up the environmental committee responsible for overseeing the safety, health and environmental management and the effective implementation. There is an environmental engineer to supervise, control and mitigate the effects of pollution and prevent environmental pollution problems that may be emitted from the factory. There are also the responsible supervisors and controllers for wastewater pollution treatment system, waste management and air pollution, to monitor the environmental pollution emitted from the factory and to maintain minimum emission levels within the standards imposed by legislation, and to provide action plans to comply with environmental management requirements. The performance report including suggestions for improvement shall be presented to management for review and comment.

Environmental target: The Company sets its environmental performance as a target or KPI with the long-term goal for the effective use of resources, reduce environmental pollution to the minimum or better than the standard set by law. The Company has set annual environmental targets or KPIs which are reviewed by management every two quarters.

Corporate Social Responsibility

Environmental KPI and performance in 2020 are as follows:

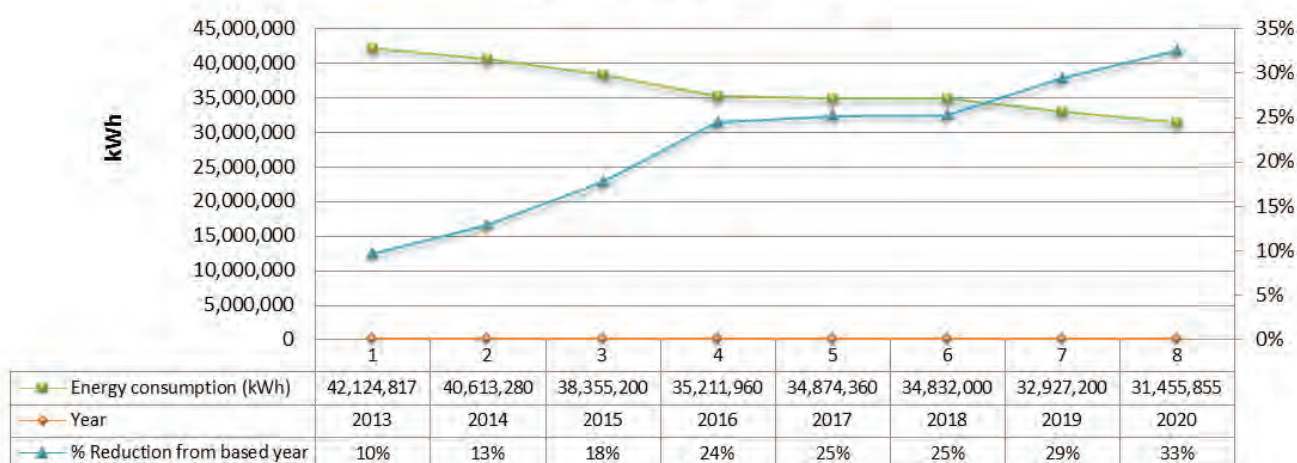
KPI	Q1		Q2		Q3		Q4	
	Target	Performance	Target	Performance	Target	Performance	Target	Performance
1) External compliant (Environment, Health, Safety)	0	0	0	0	0	0	0	0
2) Air Emission TSP (mg/Nm ³)	<5	1.06	<5	1.06	<5	0.38	<5	0.38
3) Air Emission CO (PPM)	<87	2.40	<87	2.40	<87	1.60	<87	1.60
4) Air Emission SO ₂ (PPM)	<50	1.30	<50	1.30	<50	1.30	<50	1.30
5) Wastewater emission - BOD (mg/L)	<90	71	<90	65	<90	57	<90	77

Use of resource efficiency: In 2020, the Company implemented the programs to efficiently utilize the resources, reduce and prevent pollution to the environment and the community as follows:

Electricity/energy usage: The Company invested in various projects to reduce energy consumption or the use of energy from non-renewal energy sources. In 2020, the Company succeeded in its reduction of electricity consumption by improving facility system efficiency mainly for the compressed air system, air handling units, exhaust scrubber, condenser water pump, and air compressors. All of which had a total energy saving of 629,934 kilowatt-hours and reducing CO₂ emissions of 302,998 Kg CO₂ per year. The value of reducing electricity consumption is worth more than Baht 2 million per year. In addition, the Company had also implemented a project to reduce the use of nitrogen in the production process with a target of 3% or 164,160 cubic meters per year by integrating an Intelligent Flow Control (IFC) system to the nitrogen gas distribution system used in the production process. The system adjusts the nitrogen gas pressure by plus/minus 1PSI, resulting in a reduction in the supply gas pressure after operation. This made the reduction of nitrogen gas consumption by 5% or the reduction of nitrogen gas consumption by 276,489 cubic meters per year, which was better than the target.

The Company has continuously worked to improve energy efficiency where the main energy used in the factory is the electric power. Since 2013, Hana Lamphun plant 1 (LPN1), the main factory, has reduced electricity consumption year by year. In 2020, the Company used less electricity compared to 2013 about 10.67 million kilowatts - Hours. LPN1 has set a target of electric consumption not more than 9 million kilowatt-hours per quarter in 2020, which the actual performance met the target with the total year usage of 31.5 million kilowatt-hours. So, LPN1 has consumed less electricity than the target of 4.5 million kilowatt-hours where the goal and actual result are reviewed by management every 6 months.

Energy Consumption Y2013 - 2020



Corporate Social Responsibility

Renewable Energy Strategy: Due to the increasingly severe climate change, the Company recognizes the importance of renewable energy as one of the strategies necessary to make our environment sustainable by reducing the use of fossil fuels and helping to mitigate climate change. Solar panels have been installed on the roofs of the three factories of Hana in Lamphun and Ayutthaya Provinces. The installation was completed and ready for use in October 2020. The three plants have total 3 MWs capacity. The renewable power generation result in a reduction of costs, combined with a reduction of CO2 emissions in excess of 2,000 tons per year.

This energy conservation project benefits Hana and society as follows.

- Help reduce the operational costs
- Solar cells act as roof shades which reduce the temperature below the roof, reducing the need for air conditioning which can keep electricity costs down.
- The electricity is made from sunlight which is a clean renewable energy source and helps reduce global warming.
- Reduce the peak demand for electricity in the daytime



Water quality: The Company established a list of water consumption, the amount of wastewater, Water Balance, Water Use Intensity and Wastewater Intensity by having wastewater continuously improved every year. The operation of wastewater system is monitored on a daily basis including checking the quality of the effluent that is discharged from the factory every month to ensure that the wastewater treatment is under control and better than the government standards.



In 2020, the Company's internship program composed of advisors from Chiangmai University has initiated the project to improve the efficiency of the wastewater treatment system in the canteen by assessing the cause of the poor efficiency of the canteen wastewater treatment system. The successful solutions to increase efficiency of the wastewater treatment system was able to reduce the average flow rate by 29% so enable the Company to save costs approx. Baht 140,000 per year and can reduce pollution in wastewater sources (BOD) by 10%.

Corporate Social Responsibility

Hana Lamphun 1 continues on major projects of recycle wastewater. The waste water from the production process was treated and filtered to increase the recycled water usage by 49.90% in 2020 from the target of 40% enabling the water savings of 106,578 cubic meters per year, from the target of 85,450 cubic meters per year or worth Baht 2.5 million per year. The recycle wastewater has reduced CO2 emissions of 30,811 Kg year. The amount of city water usage in 2020 has decreased from 2019 by 51,260 cubic meters (in 2019 water consumption = 264,879 cubic meters and in 2020 = 213,619 cubic meters.)

The Company also implemented additional projects which help in conserving water and reduce water loss by converting to the water-saving toilet types and zero chemical usage to reduce the drainage of the cooling tower. In 2021, the Company plan to implement the project to operate a chiller aiming to reduce the use of water, etc.

Hana Ayutthaya has implemented water saving program continuously with the project to increase the ability to recycle wastewater which can save a total of 231,747 cubic meters and reduce the cost of water supply by Baht 4,866,687 per year and reduce the amount of CO2 emissions of 59,674 Kg per year. The other project was to increase the wastewater reuse capability called "Close Loop of Machine Cooling in the Singulation Process (CSO)" production line that can save 24,883 cubic meters of water, or Baht 522,547 per year and reduce 6,407 Kg of CO2 per year.

Air quality: The control of air emissions are in line with the standards and related laws. The Company has air pollution list its sources, pollutant and its types, pollutant concentration, pollution control and treatment, measures identified and implemented to achieve reductions in air pollution. The Company monitors and does preventive maintenance of equipment related to various air pollution controls and performs measurement of air quality in the workplace. From the implementation, the air quality expelled from our factory is 20% better than the regulation required.



Noise level: The Company maintains machinery and equipment in good condition and provides personal protective equipment (such as ear plugs, ear muffs, etc.) to employees who work in a noisy environment. In working areas where noise levels exceed 85 decibels, the hearing health check-up for those employees have been provided periodically. In 2020, there were 26 areas of noise measurements in the workplace: 14 areas met the standard specified by law and 12 areas exceeded 85 decibels and the hearing conservation project was established to strictly control workers to wear protective equipment all times and organized the repeated hearing tests for those employees to monitor and follow-up the potential effects on health.

Illumination measurement: Insufficient or excessive illumination could cause the employees' fatigue. The Company has provided the assessment and measurement of the intensity of the light on a periodic basis as to determine whether improvement measures are needed to protect employees. In 2020, measurements of lighting levels in the workplace totally 853 areas were all met the standard as prescribed by law.

Corporate Social Responsibility

Heat stress measurement: The Company annually measures to identify whether those employees who may be at risk from heat stress are suffering from any heat related illnesses. The heat stress measurement has been in line with the standard requirement. In 2020, all heat measurements met the specified standards.



Waste management: Hana has the waste inventory, waste profile, waste flow diagram including the waste management and hazardous waste separation where the waste is collected separately from the production building and is disposed of by a licensed company authorized by the Ministry of Industry. The Company has implemented the separation of waste into three categories: general waste, recycle waste and hazardous waste. The waste disposition is managed according to legal standards of the Department of Industrial Works.

Hana Lamphun has committed to sustainable waste management toward resource-efficient consumption with the goal to reduce landfilled industrial waste as a solution to eliminate its influence on the environment by applying sustainable recycling process to convert waste into renewable energy used in the cement industry. The Company has the target to achieve 50% reduction in waste to landfill within 2023. As such in 2020, the project of waste disposal management has initiated from the electronic packaging waste called carrier tape which has a high volume each year. In the past, this type of waste was sent for disposal at a landfill site in Saraburi province as the standard waste disposal method, but with a new method of RFD* (Refuse Derived Fuel) to divert our packaging waste and send to the cement kilns in Lampang province resulting in lower landfill waste and lower disposal costs. This project has achieved the goal more than the target and this is a part of our renewal energy approach to reduce global warming.

KPI	Before	2020 Target	After
Reduce landfill disposal cost	Baht 517,052	Baht 413,642 (20% cost reduction)	Baht 268,025 (48% cost reduction)
Reduce landfill waste	98 Metric Tons/Year RDF 0 Metric Tons/Year	RDF 20 Metric Tons/Year	RDF 26 Metric Tons/Year
GHG emission	7,819 kgCO ₂ e	6,256 kgCO ₂ e	1,097 kgCO ₂ e (Reduce GHG 6,721 kgCO ₂ e)

*RDF is the solid fuel produced from Municipal solid waste and subject to basic processing treatment in order to obtain suitable fuel which can be utilized in terms of renewal energy either in the form of heat power generation or electric power.

Corporate Social Responsibility

Project's benefits of landfill waste reduction:

Economic dimension	Social dimension	Environmental dimension
<ul style="list-style-type: none"> • Increase efficiency of resource use contributing to sustainable development • Waste disposal cost reduction 	<ul style="list-style-type: none"> • Minimize mental and health problems in the community 	<ul style="list-style-type: none"> • RDF used as fuels in a cement kiln, replacing a portion of conventional fossil fuels i.e., coal • Reduce landfill waste faster and make landfill to restore to the original capacity • Reduce water pollution and water contaminants threaten groundwater • Lower GHG emissions from shorter transportation routes from 620 Km to 108 Km. • Prevent Methane from migrating into the atmosphere contributing to global warming impact

Hana HQ participated in the waste management project under the “Vibhavadi Zero Waste” campaign initiated by the Securities and Exchange Commission (SEC) by encouraging listed companies located along Vibhavadi Road to jointly find ways to efficiently manage waste within the organization by adhering to the 3Rs principle “Reduce, Reuse, Recycle” in order to reduce all wastes to a minimum. As a result of our implementation from March to December 2020, Hana HQ has an average recycling rate of 46% and has further applied to other projects in the office and factories such as Plastic Free Factory Project, Hana Organic Farm, etc.

Chemicals and hazardous substances: In addition to ISO 14001 certification, our manufacturing plant in China has been certified for IECQ QC080000:2005 Hazardous Substance Process Management “HSPM” since 2008. IECQ accreditation creates competitive advantage in compliance with laws and operations with the highest industry standards as we have the processes in place to properly manage our products to be free from hazardous substances.

Reducing the environmental impact:

Hana recognizes and places the importance on reducing the environmental impact caused by our business activities. The Company promotes the improvement of production processes and sustainable innovation to reduce the effects that may occur through important projects as follows.

Green Industry: The Company has taken steps to improve and develop clean energy for long term sustainability that aim to meet the applicable green industry standards. In 2020, our 3 Lamphun and Ayutthaya factories have been certified as “Green Industry Level 4” or “Green Culture” presenting that everyone in the organization provides cooperation to work toward an environmentally friendly manner in all aspects of business operations until becoming part of the corporate culture.

The following are the outcomes that the Company would benefit from being the Green Industry.

- Reduce impact on the environment and the community; as a result, reduce complaints and reduce the risk of future obligations.
- Create positive image and attitude towards the industry for a more environmentally friendly; resulting in a better understanding and acceptance between the industry and the surrounding community.
- Create more job employment related to environment fields, increase worker safety and satisfactory in the workplace.
- Reduce the use of resources and energy; resulting in cost savings and enhance competitive advantage.

Corporate Social Responsibility

Eco-Factory: Hana Lamphun received the Eco-Factory Award in the large factory category by focusing on creating an economic balance, society and environment under the framework of sustainable development in terms of physical, economic, social, environmental and management dimensions. The award has recognized that the Company have a good management system, safe environment, using resources and energy efficiently, minimal waste and support society and stakeholders for sustainable development.

Eco-Excellence: Hana Lamphun received the Eco-Excellence Award by honor the Company to develop and elevate the quality of life in communities and improve the quality of the environment based on the balance of economic, society and environment through the cooperation and networks of the enterprises, government and communities working together to achieve a common goal.

Environmental Governance Award: The Company was certified as an excellent for the project to promote public participation in the supervision of factories in the Industrial Estate (White Flag, Green Star) by applying the principles of good governance, environment and social responsibility.

Green Partner Program: Our Lamphun, Ayutthaya and China plants have been certified to the standards of our customers in the project of Green Partner Program regarding environmental management systems by controlling the use of chemicals in the production, prohibiting the use of dangerous substances, discontinuing and reduction in the usage of such substances that impact to the environment such as the use of lead solder inside the product. Further, it is not allowed to use material to make the product or packaging that is harmful such as lead, mercury, etc.

In summary, Hana Microelectronics Public Co., Ltd. consumed energy and released carbon dioxide in 2020 compared to prior years as follows.

Key energy measurement	2020	2019	2018	Reference
Electricity Consumption/ Revenue (kWh/MB)	5,859	5,468	5,386	Total electricity consumption divided by million baht of revenue
CO2 Emission/Revenue (Kg CO2e/MB)	3,058	2,854	2,811	Total CO2 emissions divided by million baht of revenue
Recycled Water Consumption (% of total water consumption)	59%	54%	51%	
Environmental Issues	None	None	None	

Complaint procedures: The Company assigned environmental supervisors and operators, to receive training and registration as required by law, to communicate information with the community and residents living around. The Company also has the procedure for complaints and resolving complaints arising from the operations of the Company. In 2020, the Company has no major environmental complaints from the employees or the community.

Corporate Social Responsibility

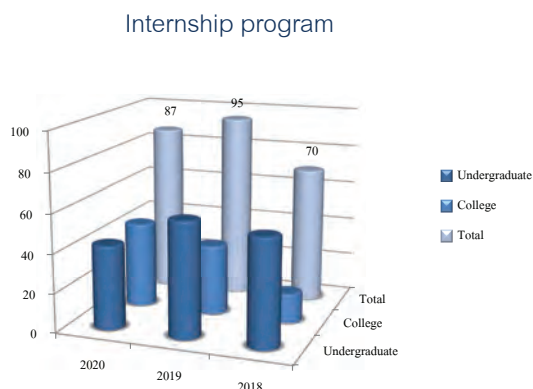
8. Social and Community Development

The Company participates with the community to support social stability and to be a good corporate citizen through following projects.

Career development for the community: The Company supports the community development and solving social problems through business strategy of sustainable consumption and production as follows.

- Internship program:** Hana recognize the importance of education and career exploration for college and undergraduate students. Our internship program gives students the opportunity to apply knowledge from their fields of study and gain real work experience in preparation for future work. On the other side, the internship program is part of the Company's risk mitigation measures to solve the shortage of skilled employees related to technical professional background such as software engineering, electronic engineering, logistics engineering, energy engineering, etc. Therefore, the Company has the policy offering the internship program in various fields and creating a candidate pool for the target group, whereby the Company is able to recruit or get candidates from the internship list in the desired positions more efficiently. In 2020, the Company was able to reduce the shortage of skilled personnel by 80% through the implementation of this project.

Number of students categorized by educational background in 2020



- Quality of life development for persons with disabilities:** From the community needs assessment survey by attending the meeting with Lamphun Provincial Social Development and Human Security Office and related agencies to promote equal opportunities through career development of persons with disabilities to be in line with the 20-year national strategy including the United Nations Sustainable Development Goals (SDGs), the Company therefore help support by accepting students from Kawila Anukul School under the MOU to support the education for persons with disabilities. The support can enable those students with hearing, intellectual and physical disabilities gain the appropriate skills, develop their knowledge and attitudes necessary to earn their livelihood. The Company has arranged the necessary facility adjustment including providing knowledge about the correct and safe use of technology, as well as get them trained for working discipline, the rules of the Company and working relationship with supervisors and colleagues, etc. These basic skills will help develop the readiness of people with disabilities and allow them to enter to the long term career path.



Corporate Social Responsibility

Further from a visit of remote community, the Company additionally assisted the other 2 families with disabilities by supporting their career needs as those need care or special treatment at homes. The Company donated funds and supported them with career supply/equipment that specifically needs: Longan Sorting Machine and the fabric bag hand-made project totally Baht 224,840.



- **Career development and income generation for the community:** From the survey of the needs in the community for career support to those with no income, Hana Lamphun continue to support “Mushroom greenhouse for community” which is a project that the Company built small-scale mushroom greenhouse farm and provided knowledge on farming system to the students in the community, and further support the market-place at Hana for them to sell to our employees. In addition, we also provided them knowledge on the correct and safe use of digital technology to develop their website as another channel to support their product sales wider. This mushroom farm project get earn for people with no income in the community, which are the school children about Baht 28,000 per year.



Corporate Social Responsibility

Prevent the spread of Covid-19: With the Covid-19 epidemic situation, the Company realized the importance of preventing and helping employees, including their families and communities. Therefore, the following projects have been developed.

- **Employee and family program:** To protect the welfare of employees and their families and to help reduce the risk of Covid-19, the Company has to ensure employees have the protective equipment to minimize the risk of infection at work with the face shield project for employees in Thailand and overseas over 35,000 pieces, including projects of eat hot food, use serving spoons, hand washing, and wearing masks”.



- **Government Program:** Hana supported doctors, nurses, and other health care workers on the frontlines of the fight against Covid-19. In the early stage of Covid-19 having protective equipment shortage, the Company had coordinated with Hana Jiaxing, China for the support of PPE suits. Mr. Richard David Han, Chief Executive Officer of the Company, presented the donation of PPE suits and the self-made face shields to the Thai Red Cross Infectious Disease Health Science Centre in support its mission of diagnosis and treatment severe emerging diseases. Hana Lamphun also donated PPE suits and face shields to the hospitals in Lamphun, Chiangmai, Lampang and Phrae provinces, and supporting the installation of partitions for Lamphun hospital. In addition, Hana Ayutthaya further donated PPE suits and face shields to the hospitals in Ayutthaya, Pathumthani and Nonthaburi provinces. The total donation was worth Baht 1.3 million to 13 hospitals. The Company also supported the sharing scheme “Pantries of Happiness” put up containers filled with food and other necessary items in public spaces to help the poor or those who faced problems in life during Covid crisis.

Corporate Social Responsibility



As part of our corporate responsibility in support the fight against Covid-19, our contribution aims at sustainability with the role of social protection so that we all have ability to deal with Covid-19 and protecting the economy and to overcome to the greatest extent possible.

Corporate Social Responsibility

Support the youth and people within the communities: The Company arranged various projects to improve the quality of life and strengthen the good relationship between the Company and the communities as below.

- To support the Industrial Estate project, the Company provided financial donation and medical equipment for patients in local communities
- To support Sahaphat Group Industrial Estate, the Company made the donation and supplies to the nursing home and the Center for the Protection of the Homeless at Chiangmai province.
- To donate funds, medical equipment, supplies and personal protective equipment provided to the hospitals with the shortage of medical supplies
- To donate cash and necessary items to the Northern School for the Blind under patronage of the Queen in Chiangmai province
- To donate cash and necessary items for the nursing home located in Jiaxing, China to help the poor elderly both physical and mental health



Social contribution activities: To encourage employees to care for society and help others, our employees have been joined society benefitting activities initiated by the Company as follows.

- **Employee and family assistance program:** Hana and employees provided financial support and necessary supplies to help victims of natural disasters and those who suffered from illnesses such as cancer, stroke, house fires, storms, floods, etc.



- **Environmental conservation:** The implementation of environmental conservation or restoration projects by raising awareness among employees and communities in order to realize the importance of natural resources and promote environmental sustainability through the following activities:

Corporate Social Responsibility

Say No To Foam: Since 2018 until to date, Hana Lamphun joined ceremony of LAMPHUN SAY NO TO FOAM Campaign at Ban Klang Municipality, Lamphun and we successfully implemented Hana Say No to Foam practice within the factory by encouraging employees not to use foam for food packaging and use containers that are safe for health and friendly to nature instead.

No Single-Use Plastic Program: Hana Group organized a campaign for employees to reduce the use of single-use plastic such as plastic cup, plastic bag, etc. and switch to reusable products such as cloth bags, reusable personal cups. The Company promotes the campaign for a discount if employees bring personal cups to buy drinks at the canteen. In addition, Hana Ayutthaya also organized “Save the World” campaign for employees, which is an internal activity to inspire the Company’s employees to realize the importance of taking part in mitigating negative impacts on society and the environment.



- **Reduce pollution activity:** Employees of Hana Lamphun and Lamphun Provincial Forest Department and the Industrial Estate Authority participated in an activity to build a forest fire line at Doi Khamo, Lamphun province to prevent fire during the dry season.



- **Community conservation projects:** The Company has initiated a volunteer project to support temples in the communities, which is a part of the activities to promote cultivating cultural awareness, harmony, no barriers among employees through activities as follows.

Religion and culture activities: Hana Cambodian joined the merit making ceremony and donated wooden pallets that the Company has no longer used so that the temple can convert into tables and chairs for further uses.



Corporate Social Responsibility

- **Volunteer spirit project:** The talent staff helped clean up rubbish and other cleaning at the temples in Chiangmai.



- **Animal conservation activity:** Hana Lamphun's employees organized fish release activities to conserve fish biodiversity.
- **Blood donation:** Hana Employees joined with the Thai Red Cross for blood donation. In 2020, there were 1,137 employees donated blood more than 411,700 milliliters.



- **Underprivileged support:** The Company seeks to contribute to improve the quality of life and reduce inequities for the underprivileged in society. Mr. Terrence Philip Weir, an executive director, made the donation amounting to Baht 30,000 and 1,500 old desk calendars which were donated by employees from Hana HQ, Lamphun and Ayutthaya, to the Foundation for the Blind of Thailand under the Royal Patronage of His Majesty the King. For those old desk calendars, the Foundation will use them to produce Braille word cards as well as educational materials for students of the Bangkok Blind School. This project is one of the projects that help reduce waste in the organization with the principles of 3Rs - Reduce, Reuse, Recycle, in line with the Stock Exchange of Thailand environmental project.



9. Innovation and its Dissemination

Organization development is considered essential in a rapidly changing environment. The Company places great emphasis on the innovation organization in order to create value to the business, social and environment by creating innovation atmosphere, providing opportunities for everyone to generate and apply their knowledge, skill, critical thinking or bring in technological know-how contributing to the development and improvement of working processes, equipment or products to foster the vision of innovation culture in the organization.

Corporate Social Responsibility

The Company has invested in manufacturing automation projects continuously as to modify the traditional manufacturing process to automation which can increase the competitiveness advantage of the Company by improving product quality, increasing operating efficiency, enhancing employees' capability toward industrial 4.0, responding to higher customer requirements, managing labour issues in regards to both labour costs and labour shortages, as well as reducing waste and environmental impact.

In 2020, the Company has the following innovation and dissemination projects.

Geared towards corporate excellence by Kaizen: With the continuous improvement projects, the Company encourages employee engagement in all levels working together to contribute to the work improvement by applying initiative ideas with the existing resources. From joining the competition with Thailand Kaizen Award in 2020 which was organized by the Technology Promotion Association Thailand - Japan, Hana Lamphun won 2 gold awards from the contest. The first gold award granted was for the Automation Kaizen by achieving the invention of automated equipment to improve production process. Having promoted employees to participate in the continuous improvement program applying the concept of creativity and innovation, the Company is able to meet the customers' needs and expectation. With the invention of an automatic deflection measurement replacing manual method which used 6 staffs/day, the working team has studied and developed their own equipment by using the Knockdown Automation strategy in the design resulting in 3 times increased in UPH that exceeded the target. In addition, the new equipment can reduce a number of headcount from 6 to 2 workers per day. Going forward, this development has extended to other two similar products, resulting in the cost saving to the Company amounting to Baht 927,900 per year.

The other gold award was also for the Automation Kaizen from designing the more advance equipment to replace manual process which was slow, ineffective workflow to the next step, employees get tired from work, as well as production yield loss. The working team therefore jointly designed equipment applying the concept from dolphin jumping through hoops to develop an automatic machine to operate with just one press button. The new development has increased efficiency and effectiveness as employees can work easier with more convenient methods so reduce working time from 30.45 minutes to 12.70 minutes as well as high accuracy so no defect found. The team also made further application to other 3 similar products resulting in the cost saving to the Company amounting to Baht 479,976 per year.

The factory automation projects applying Kaizen have been successfully implemented from developing the thinking process, brainstorming to increase the capacity and efficiency of the production process, eliminating waste (Lean Manufacturing) and brining into the practice of employees. With the development of innovative applications using Kaizen successfully, this could raise the Company's operations to a higher standard and strengthen the Company's competitiveness.

Manufacturing Innovation and IoT: Hana Lamphun has collaborated with the Department of Industrial Works and the Scientific and Technological Research Institute of Chiangmai University to develop initial pilot project adopting the industry 4.0 model creating the value to the business, social and environment. Industry 4.0 uses transformative technology to connect the physical operations with smart digital technology for the air conditioning system by installing a transducer sensor device to connect/ send signals online to Converter in order to convert signal through Smart Link for real-time data to be displayed on the Dashboard such as cold water temperature, chilled water flow rate, etc. The information is interactive and can drill down to find the detail immediately where the responsible person can analyze the data measured; for example, analyzing the cooling load of all buildings and take into account energy saving measures for efficient use of energy particularly the improvement and management of various machinery in order to reduce energy consumption in the air conditioning system.

From the innovation and IoT implementation to enhance the capabilities of air conditioning systems, the Company can reduce energy consumption by 183,195 units/year, reducing greenhouse gas by 88 tons of carbon dioxide/year, and reduce energy costs of Baht 604,543 per year. In 2020, the Company was selected as the "Industrial Innovation and IoT" award from the Department of Industrial Works. The Company shall continue our legacy of innovation to consider additional projects related to innovation and IoT technology in accordance with the strategy of the organization of innovation and the development toward Thailand 4.0 Model.



Audit Committee Report

The Audit Committee of Hana Microelectronics Public Company Limited is composed of three independent directors. Members of the Committee meet the qualification and the scope of work is in accordance with the rules and regulations of the Stock Exchange of Thailand.

In performing its oversight responsibilities, the Audit Committee held 4 meetings during 2020. The meeting attendance of each committee is as follows.

Committee		Meeting Attendance
1.	Mr. John Thompson, Chairman	4 of 4 times
2.	Mrs. Salakchitt Preedaporn	4 of 4 times
3.	Mr. Yingsak Jenratha	4 of 4 times

In 2020, the Audit Committee has performed its duties and responsibilities assigned by the Board of Directors and the Charter of the Audit Committee as follows.

- Review the financial statements of the Company and its subsidiaries to ensure the compliance with generally accepted accounting principles, and the disclosure of the notes to the financial statements in accordance with the financial reporting standards. The Audit Committee agreed with the auditors that the financial performance and cash flows of the Company and its subsidiaries for financial year ending 31 December 2020 presented substantial fairly and disclose with generally accepted accounting principles and financial reporting standards. Such disclosure has also made adequately and timely manner.
- Review the adequacy and efficiency of the internal control system by evaluating the internal controls, approving the annual audit plan, reviewing the audit reporting, as well as considering the risk assessment and risk control measures. From the review, the Audit Committee found no deficiency and concluded that the Company has adequate internal control and risk management systems which are appropriate to the business.
- Review the connected transactions to ensure no possible conflict of interests and in compliance with the Securities and Exchange Acts. The Company also has the policy that a director and an executive shall report his interest or a related person's interest which may cause conflicts of interest and the policy to require the board to approve the major transactions. In 2020, the Company's business transactions with related parties arose in the ordinary course of business under the commercial terms and bases agreed upon between the Company and those related parties. There was no connected transactions give rise to potential conflict of interests.
- Review to ensure compliance with rules and regulations of the Securities and Exchange Commission and applicable regulatory requirements and the board policies. The Audit Committee concludes that the Company has complied with the applicable laws, regulations and established policies.
- Recommend the appointment of the external auditors and their remuneration by giving due consideration to their experience, knowledge, ability, reliability, staff and workload, as well as the independence of auditors in performing such duties. Such auditors must be approved by the Securities and Exchange Commission (SEC). The Audit Committee has proposed to the board to seek further approval from the shareholders' meeting. For financial year ending 31 December 2020, the Audit Committee recommended to appoint Ms. Kamontip Lertwitworatep and/or Mrs. Sarinda Hirunprasurtwutti and/or Mr. Wichart Lokatekrawee of EY Office Limited as the auditors of Hana Microelectronics Public Co., Ltd. for a total remuneration of Baht 2,600,000.

Audit Committee Report

The Audit Committee concludes its satisfaction with the accuracy, completeness and creditability of 2020 financial statements' preparation and reporting, the adequacy of internal control systems and risk management, the compliance with applicable laws and regulations including reasonable related party transactions. As a result, the Audit Committee concluded no significant deficiency or irregularity.



Nomination Committee Report

The Nomination Committee consists of three directors, of which two are the independent directors. The Committee is to assist the Board of Directors to review annually the size and composition of the Board and to maintain the appropriate balance of skills, knowledge, experiences, and diversity to support the Company's strategies including the clear and transparent appointment process for directors. The Committee is responsible for selection and screening of candidate's qualifications and proposing the suitable candidates to the Board. The Board subsequently proposes to the shareholders' meeting for approval according to the nomination processes.

In 2020, the Committee held 2 meetings and the meeting attendance of each director is as follows.

Committee		Meeting Attendance
1.	Mr. Yingsak Jenratha, Chairman	2 of 2 times
2.	Mrs. Salakchitt Preedaporn	2 of 2 times
3.	Mr. Richard David Han	2 of 2 times

In respect of the candidate nominations for new director appointments in the shareholders' meeting in 2020, the Company invited shareholders to propose candidates for election to the Board. The policies and procedures to allow shareholders to propose candidates for the election of the Board are posted on the Company's website. However, there were no proposed candidates to the Committee from the shareholders in previous year. Therefore, the Nomination Committee reviewed those directors whose term expired by rotation in accordance with the Company's Articles of Association. The Committee has considered that those directors can continue to make further contribution to the Board and the Company.

The Nomination Committee believes the candidate nomination for director appointment process is proper and transparent and in compliance of its charter.



Corporate Governance Committee Report

The Corporate Governance Committee consists of three directors, of which two are the independent directors. The Corporate Governance Committee has performed its responsibilities in compliance with the Corporate Governance Committee Charter approved by the Board of Directors.

In 2020, the Committee held 1 meeting and the meeting attendance of each committee is as follows.

Committee	Meeting Attendance
1. Mr. Terrence Philip Weir, Chairman	1 of 1 time
2. Mrs. Salakchitt Preedaporn	1 of 1 time
3. Mr. Yingsak Jenratha	1 of 1 time

The Committee reviewed the application of 2017 CG Code's Principles and Sub-Principles that are suitable for the Company's business, and proposed to the Board of Directors to consider and review the application and non-application or "apply or explain" items.

The Committee conducted an annual review the corporate governance policy and established its sub-policies in compliance with the new CG Code to ensure the policy updated and in line with the international standards, laws, criteria, rules and regulations as well as reviewed the compliance and proposed recommendations including conducted corporate governance self-assessment with related checklists of Thai Institute of Directors Association (IOD), the Stock Exchange of Thailand, the Office of the Securities and Exchange Commission and the Thai Investors Association.

From our continuous implementation and improvement of good corporate governance, the Company has been assessed with "excellent" recognition level (5 stars) on corporate governance of Thai listed companies. Further with the notable efforts, the Company received ASEAN Asset Class Publicly Listed Companies 2019 Award by earning more than 97.50 points. The ASEAN CG Scorecard reflected our enhancement on the corporate governance quality to the internationally-accepted standards. As our continuing to prioritize sustainability, the Company was qualified for THSI list (Thailand Sustainability Investment) in 2020 which was based on the annual sustainability assessment by the Stock Exchange of Thailand's (SET). Despite potential uncertainties ahead, we look forward to uphold our commitment to the practice of good corporate governance with social and environmental responsibility in accordance to the national and international development goals.

The Committee believes that the implementation of good corporate governance with continuous development shape the growth and the future of the Company and long term sustainability to our stakeholders.



Risk Management Committee Report

To support the Board of Directors in overseeing the organization's risk management, the Board of Directors has appointed the Risk Management Committee forming at a board-level structure which consists of an executive director as the chairman and 2 independent directors as the members. The Risk Management Committee defined their roles in risk oversight and governance and has performed their responsibilities in compliance with the Risk Committee Charter approved by the Board.

In 2020, the Committee held 1 meeting and the meeting attendance of each committee is as follows.

Committee		Meeting Attendance
1.	Mr. Terrence Philip Weir, Chairman	1 of 1 time
2.	Mrs. Salakchitt Preedaporn	1 of 1 time
3.	Mr. Yingsak Jenratha	1 of 1 time

The Committee reviewed the risk management policies and guidelines, considered risk identification, measurement and mitigation for both enterprise and environment, social, and governance (ESG) risks, as well as reviewed new risks and emerging risks to make them correspond to the change of businesses in order to reduce material risks of the Company and reported the key risk profile to the Board in order for the Board to obtain a high level understanding of the current status of significant risks and opportunities of the Company.

The Committee believes that the Company has adequate risk management oversight and stay within their risk appetite.



Management's Discussion and Analysis

Overall Group Performance

Hana Microelectronics Group 'Hana' Sales Revenue decreased 5% year-on-year, at THB 19.3 billion in year 2020 from THB 20.4 billion in 2019. Sales Revenue in USD terms decreased by 6% to USD 616 million in 2020 from USD 656 million in 2019. Earnings from Operations increased 23% to THB 1,725 million in 2020 from THB 1,408 million in 2019.

Net Profit increased by 6% to THB 1,908 million in 2020 from THB 1,805 million in 2019 due to higher operating profits more than offsetting a decrease in exchange gain of THB 199 million in 2020.

Past Performance Analysis

Revenue Analysis

Group Sales decreased 5% in 2020 to THB 19,282 million from 2019 at THB 20,384 million due to market weakness from the lower sales revenues in (Q220 & Q320) and reduction of inventories held by customers in Q1-Q3 due to the COVID-19 pandemic. USD sales were 6% lower in 2020 at USD 616 million down from USD 656 million in 2019 as the average THB/USD exchange rate weakened 1% to THB/USD 31.29 in 2020 from THB/USD 31.05 in 2019.

The microelectronics divisions' sales revenue decreased 6% [-6% in THB terms] in 2020 over 2019. The microelectronics operation in Lamphun sales decreased 6% [-5% in THB terms] and JXG decreased by 8% [-7% in THB terms] in 2019.

In 2020 IC assembly sales overall decreased by 4% in USD terms [-4% in THB terms]. Specifically, IC AYT sales decreased 3% [-2% in THB terms], and IC JXG USD sales decreased by 17% [-17% in THB terms].

Hana Technologies, Inc. "HTI" (formerly Hana Microdisplay Technologies), sales decreased 19% [-18% THB] for the year.

The annual sales split was:

	2020	2019	2018
PCBA (Thailand)	44%	45%	40%
PCBA (China)	13%	14%	17%
PCBA (Cambodia)	1%	0%	0%
IC (Thailand)	34%	33%	33%
IC (China)	4%	4%	5%
HTI (USA)	4%	4%	5%
	100%	100%	100%

Gross Profit / Cost of Sales Analysis and Sales and Administration Analysis

Gross Profit increased by THB 357 million with the gross margin being 13% in 2020 up 2 percentage points from 11% in 2019. +2% points higher gross margin due to lower materials cost related exchange rate movements from Q419 to Q120 [+1%], reduced overtime and labour and salary cost reductions [+1%].

Operating Profit Analysis

The Earnings from Operations margin increased by 2 percentage points to 9% in 2020 from 7% in 2019 due to the increase in gross margin. SGA including R&D expenses were 7% higher in 2020 than 2019.

Management's Discussion and Analysis

Payout Analysis

For the year 2020, the Company paid full dividends of THB 1,126 million (THB 1.40/share). An interim dividend paid of THB 523 million in Q420 and the final dividend of THB 603 million in Q2/21.

For the year 2019, the Company paid full dividends of THB 1,046 million (THB 1.30/share). An interim dividend paid of THB 523 million in Q419 and the final dividend of THB 523 million in Q2/20.

For the year 2018, the Company paid full dividends of THB 1,610 million (THB 2.00/share). An interim dividend paid of THB 805 million in Q418 and the final dividend of THB 805 million in Q2/19.

The final dividend is normally announced in the board meeting in February of the following year for approval in the annual general meeting in April and paid out in May.

Financial Status

Net Cash reserves and financial investments were THB 9.7 billion at the 31st December 2020 up from THB 8.5 billion at the 31st December 2019

Asset Quality

Accounts Receivable

Most of customers are well known and have good reputation in the IC, and electronics industry. Provision is made of amounts outstanding over 90 days and amounts which the management believe may be doubtful. Our credit term varies from cash in advance to 60 days. Accounts receivable were 64 days in 2020, 64 days in 2019 and 63 days in 2018, which have been in line with the credit term policy.

(Thousand Baht)			
Trade Receivables	2020	2019	2018
Less than 3 months	3,318,590	3,212,509	3,668,482
3 - 6 months	18,861	9,054	34,940
6 - 12 months	3,203	3,579	7,737
More than 12 months	2,418	3,626	1,480
Total accounts receivable - other companies	3,343,072	3,228,768	3,712,639
Less : Allowance for doubtful accounts	(6,117)	(4,485)	(21,556)
	3,336,955	3,224,283	3,691,083

Inventory

In general, Hana's production is based on clients' order, consequently, the majority of inventory are raw materials, expendable tools and work in process with little finished goods pending for customer delivery. The group companies normally write-off out-of-date inventory, and make provision for aged inventory and depletion in the value of fixed assets, if material, each quarter.

Inventory days were 98 days in 2020, 98 days in 2019, and 89 days in 2018.

Management's Discussion and Analysis

Liquidity

The group has THB 9.7 billion in cash and financial investments with no interest bearing debt. Liquidity ratios are high at over 3 times current liabilities. Operating Cashflow (EBITDA) was THB 2,900 million in 2020 14% higher than THB 2,546 million in 2019.

EBITDA was THB 2.9 billion in 2020 and THB 2.5 billion in 2019 and 3.4 billion in 2018. Cash and financial investments in 2020 increased to THB 9.7 billion, due to EBITDA 2.9 billion less final dividend THB 0.5 billion 2019 paid in Q220, interim dividend Q420 THB 0.5 billion, net capital expenditure THB 1.1 billion, other items THB -0.8 billion.

Cash and financial investments in 2019 remained stable at THB 8.5 billion, due to EBITDA 2.5 billion less final dividend THB 0.8 billion 2018 paid in Q219, interim dividend Q419 THB 0.5 billion, net capital expenditure THB 1.1 billion, other items THB -0.1 billion.

Cash and financial investments in 2018 decreased by THB 1.0 billion to THB 8.5 billion, due to EBITDA 3.4 billion less final dividend THB 0.8 billion 2017 paid in Q218, interim dividend Q418 THB 0.8 billion, capital expenditure THB 1.9 billion, other items THB -1.1 billion.

Capital Expenditure

Net Capital Expenditure was THB 1,055 million in 2020, THB 1,076 million in 2019, and THB 2,333 million in 2018. Capital Expenditure was lower in 2020 due to the lower capital expenditure from Ayutthaya plant compared to recent years due to the COVID-19 pandemic in 2020 and weakening in the semiconductor industry in 2019 and high capital expenditure in 2018.

Generally, capital expenditure for production equipment will follow the increase in sales, particularly in the IC division. However, there is a 3 to 6 month time lag due to the ordering lead time. Plant expansion will depend on the current building utilisation and lead time to construct new plant or expand in an existing plant.

Source of Financial Capital

As the group has no interest bearing debt and operating working capital is positive the group's funding is from the shareholders equity.

Major Factors which could have an Impact on the Company's Performance

The company business is that of an electronics manufacturing service company. The company manufactures products on behalf of its customers for shipment to them or their customers. Therefore, the company's performance is mostly affected by its ability to win and retain business from the existing and new customers. In turn, customer demand is affected by world economic growth and the customer's sales growth.

The group's sales revenue are in foreign currency (primarily USD) and USD currency costs are approximately 60% percent of sales revenues. The Group operating profit sensitivity to change in the Thai Baht/USD and Chinese CNY/USD exchange rates is currently about Baht 200 million per quarter for every 10% change in the average Baht/USD and CNY/USD rates (i.e. $(1 - 0.60) \times \text{Sales Revenue} \times 10\%$).

Out of the group's foreign exchange exposure, USD 120 million is hedged, Foreign exchange contracts are used to buy THB and Sell USD on a rolling 3 or 6 months basis.

Whilst the book value of the offshore companies are represented in foreign currency, the effect of the change in the exchange rate is shown by the movement of the foreign currency 'Translation Adjustment' in the shareholders funds section of the balance sheet. There is no cash affect concerning its movement.

Management's Discussion and Analysis

For Hana being an export group of companies the currency movements cause volatility in earnings due to effects on the operating margins and also inventory valuations (which the management report each quarter when there is a material effect on the profits) and margins.

Foreign Exchange Rates

The THB/USD currency movements reflected the economic trends in emerging markets and commodities during period. The average rate for 2020 of THB/USD 31.29 was 1% weaker than the THB/USD 31.05 in 2019 which was 4% stronger than the THB/USD 32.31 in 2018.

Impact from COVID-19

Overall, there has not been a material impact on the Company or Group performance or financial condition from the COVID-19 pandemic. Our plant in Jiaxing, China was the most directly impacted due to an extended Chinese New year shutdown and shortage of labour which resulted in USD 20 million sales in Q120 being less than sales of USD 33 million in Q119. No other plants in the group suffered from any lockdown except for 2 cases at the subsidiary, Hana Technologies, Inc. in Ohio, USA, no other site's employees suffered COVID-19. Each factory made preparations for work-from-home if an outbreak occurred. Social distancing strategies, daily checking of all employees and visitors to each site for COVID-19 symptoms and regular disinfection of all surfaces in all non-production areas also have been implemented.

All customer demand was fulfilled and there were no financial liquidity, solvency, capital expenditure planning, cash flow or contractual impacts to the company or its subsidiaries from the pandemic.

Sales across the group were lower than expected from March to September 2020 with Revenues increasing in Q420. Customer demand was lower during that period due to reduced demand from their customers, inventory reductions throughout the supply chain and component shortages during lockdown periods affecting our suppliers.

Exceptional Items

There were no Exceptional Items in 2020, 2019 or 2018.

Subsequent Event

None

Risk Factors

With due recognition by the Board of Directors of the various risk factors posing as possible threats to the Company's business operations, the Board therefore assigned the Risk Management Committee to be responsible for the supervision of the organization's risk management practices in a systematic manner.

The Risk Management Committee has formulated risk management policies as follows:

1. To enable the Company to manage any probable risks in an efficient manner, with such management procedures implemented in a sound and systematic manner.
2. To promote preventive risk management procedures to be carried out in a swift, transparent, accurate, and complete manner on a systematic and consistent basis.
3. To encourage and develop all employees and management members at all levels to have thorough understanding and recognition of the significance of risk management procedures, while promoting participation in said risk management system throughout the organization.
4. To facilitate risk management procedures to be implemented in an appropriate manner well conforming to the Company's mission and policy.

For such purpose, the Risk Management Committee has engaged in the evaluation and analysis of those risks possibly affecting the organization, covering both internal and external risk factors, setting priorities for the risk management plan, as well as engaging in regular follow-up on the implementation of such plans and informing the Board of such plan and potential material risk management issues.

Those risk factors likely to have impacts on the Company's operations could be summarized as follows:

1. Risk Factors which effect to the Company Group's Business

a) Strategic Business Risk

- **Change in major customer base risk**

The largest risk management perceived is significant changes within our major client base which may be brought about due to any number of external factors such as a change in their ownership, or a change in their product program. Whilst Hana's key strategy is to maintain a diverse base of customers with different industry exposures; significant changes from any one of our major clients can affect the group's performance. Market conditions resulting from changes in economic growth rates of economies will also affect prices and demand for the Company's services.

To minimize the impact of customer risk, the Company has a broad spread of customers selling into a spread of end user markets, with the largest major customer contributing not more than 20% of the group's sales revenue.

- **Global economics risk**

The Company's selling prices and demand for products and services can be affected from economic condition of global markets derived from the impact of Brexit-related uncertainty, US/China trade war, disease pandemic, etc.

Risk Factors

The Company maintains a diverse base of customers and wide product portfolio to minimize the impact of global economic downturn. The Company and tries to maintain a low cost structure and adequate cash reserves to enable it to compete and survive within possible difficult environments. Change in US trade policy entails the business disadvantage for our China manufacturing base; however, the trade war created an opportunity for Thailand and Cambodia. The Company and subsidiaries stand ready to make timely adjustments in response to possible changes.

b) Operational Risk

- **Equipment technology change risk**

Changes in manufacturing technology could make existing equipment obsolete.

The Company minimizes this risk through regular purchases of the latest capital equipment to upgrade the Companies' manufacturing capabilities.

- **Hazard Risk**

A factory could be partially or wholly destroyed by fire, flood or earthquake. Whilst the Company has multiple factories, there would be a loss of customers and a period of months to years to install new equipment and recover customer orders.

The Company mitigates this risk through having multiple production sites in multiple countries. The Company further reduces facility risks at each factory with numerous measures to minimize the risk of a facility being damaged by such events. The management regularly reviews and audits the measures taken to minimize fire and flood risk. Furthermore, the Company has insurance for property damage and business interruption to further mitigate the risk from facility damage. At the group's major facilities in Thailand the Company has additional flood protection to reduce the risk of damage from flood.

- **Key management risk**

The Company employs a number of expatriate management in key positions. Whilst the Company does not have any individual staff or management who are key to the survival of the business, loss of senior management and the Company's ability to replace key management could affect the Company's market value and business performance.

The Company minimizes management risk through not having key man issues and sufficient management depth to be able to continue to operate the Company in the event of management turnover. The Company also has a succession plan at the executive level focus on replacing the incumbents of key positions particularly at the executive level and provide for the continued managerial development.

- **Skilled workforce risk**

The Company could face with inability to source suitably skilled staff and insufficient direct labour.

Each Hana division has experienced HR staffs and has programs to review remuneration levels each year in comparison with the Company's competitors. The Company also has training programs and staff development programs to increase the employee skill levels.

Risk Factors

- **Material supply chain risk**

The Company could face with inability of our suppliers to deliver materials consistently, on time and in accordance with specification.

To minimize supply chain interruption, each Hana division has experienced supply chain management team where the key materials are approved by the customers for each product produced and critical materials have multiple sourcing options. Further risk migration for managing supply chain risk and disruption includes evaluating alternative inbound logistics options, enhancing allocated available to promise capability and opening channels of communication with key customers.

- **Information security risk**

The Company could be affected by cyber attacks affecting hardware, systems, network, customer data and intellectual property that can cause damage to our business, affect our bottom line, business disruption as well as our business' standing and customer trust.

The Company has developed the Cyber Security Policy and Cyber Attack Guideline on the Information Technology System including Personal Data Protection Policy covering security incident response plan and security incident respond team, which have been approved by management. Our Hana Ayutthaya has been awarded ISO 27001 certification which is the international standard for information security management which is a risk-based approach to corporate information security risk management that addresses people, processes and technology.

c) **Financial Risk**

Other risk factors which may affect the Company are exchange rates movements of the Thai Baht, political risk and changes in interest rates and collection of receivables. However, the Company's sales revenues and material costs are almost wholly in USD which provides a natural hedge. Capital expenditure is also in USD as the machines are mostly imported from the region.

As all the groups sales revenue are in foreign currency (primarily USD) and USD currency costs are 60% percent of sales revenues, the Group operating profit sensitivity to change in the Thai Baht/USD and Chinese CNY/USD exchange rates is currently about Baht 200 million per quarter for every 10% of change in the average Baht/USD and CNY/ USD rates (i.e. $(1 - 0.60) \times \text{Sales Revenue} \times 10\%$).

To reduce the risk of volatile exchange rate, out of the groups foreign exchange exposure, USD 120 million is hedged, Foreign exchange contracts are used to buy THB and sell USD on a rolling 3 or 6 months basis.

The Company currently has no net interest bearing borrowings and therefore is not negatively affected by potential interest rate increases.

d) **Compliance Risk**

- **Regulatory risk**

As Hana group operates its businesses in different countries, our compliance with wide array of regulations and laws both local and in new foreign business locations could have the possibility of violating such laws.

Risk Factors

In regard to the statutory compliance, the Company and its subsidiaries recognize the importance and the need to adhere to local laws and regulations when entering a foreign market, and will not intentionally violate those rules. Ongoing adherence to local rules are regularly assessed and monitored.

Corruption risk

- The potential risks of corruption may vary among different locations and operating units of Hana Group, which could incur higher costs as well as reputation of the Company if not properly manage and monitor.

The anti-corruption policy and program have been implemented and monitored. The key internal controls are in place by having proper work flow establishment for key risk activities and ensure compliance with legal requirements, requiring the concerned management to confirm that the anti-corruption policy, putting in place the monitoring through the internal audit plan, etc.

e) Environmental Risk

A number of assessments have been considered to determine the environmental risks for both quantitative and qualitative water management, air pollution, waste management and greenhouse gas emissions.

The Company ensures the quality of wastewater before releasing into the treatment system. There is a project to change the aeration pump of the aeration system in the wastewater treatment system in order to increase the efficiency by receiving consultations and funding from the Ministry of Energy. The Company ensures the air treatment system regularly checked along with a maintenance system to be able to operate continuously and efficiently. Waste management to reduce the volumes of waste and control waste streams according to the hierarchy for different methods of treatment has been executed. In addition, electrical is primary energy use for our productions so the amount of greenhouse gas emissions is low. The Company has been implementing various projects to reduce the use of electricity continuously. In this regard, the Company organized a campaign for all employees to realize the conservation of the environment by strengthening the culture of environmental preservation by providing knowledge and training to staffs on the environment and various activities in accordance with the specified policies and plans.

In 2020, Solar panels have been installed on the roof of the Companies' facilities in Lamphun and Ayutthaya from which the Company uses this green electricity, which reduces electricity consumption which would otherwise be from using fossil fuels.

f) Shareholders' investment risk

The Company doesn't have any significant risks for shareholders' investment. There are no conflicts of interests amongst major shareholders and no other conditions that may affect shareholders outside of normal business as the Company. All shareholders have equal rights and the Company maintains good financial standing.

Risk Factors

2. Emerging Risk Management

A climate change brings warmer temperatures, the greenhouse effect, increased water pollution, and more frequent and extreme weather events causing severe impacts on the sustainability of an environmental dimension, social dimension and the economic dimension which creates both risks and opportunities to the business. The Company therefore emphasizes on the management and control of risks toward climate change with both short and long terms including monitoring the emerging risks.

To prepare and manage of climate change, the Company and its subsidiaries are pursuing a range of adaptive practices to identify, respond to, and stay ahead of current and expected disruptions. We are minimizing consumption of, and reusing, resources in response to increased demand and decreased availability and reliability. The Company has been investing in automation technology transformation for the changes in production and consumption patterns so could create environmental improvements compared with the processes used in the past. As electricity demand escalated, with supply depending largely on fossil fuels, concerns arose about carbon dioxide emissions contributing to possible global warming. The Company support the investment in renewable energy projects and investment to reduce GHG emissions and we shall regularly assess rooms for innovation, exploration, and collaboration to help fight climate change.

3. Business Continuity Plan

The Company has a business continuity plan to deal with significant risks particularly reducing the impact on disruption of production and delivery. With crisis management and communication plans, there are various execution measures to reduce damage to production buildings due to natural disasters, correct conditions that cause storage warehouse and finished goods damage, prevent loss of production capacity due to failures of machinery and/or human errors, ensure raw material supplies, and keep utilities operated. The Company has prepared emergency plans to support those various situations by requiring a Crisis Management Team to manage and communicate in such crisis.

4. Risk Culture

Risk management has been put in our Quality System Management Manual. The Company's policy risks and opportunities are analyzed in each process by using risk analysis tools such as SWOT, PESTLE, Process Approach, Risk-Based Thinking, Turtle Diagram, Failure Modes and Effects Analysis (FMEA), etc. to be used as a strategy for risk management as a major part of the occupational health, safety and environmental system including the environmental management system. The risk assessment is part of our criteria for developing or approving new products for the automotive industry and medical device products.

Report of the Board of Directors' Responsibilities for Financial Statements

The Board of Directors is responsible for the preparation of financial statements in accordance with generally accepted accounting principles and the adoption of appropriate accounting policies on a consistent basis including using judgment carefully and reasonably in preparation of financial statement. The important information is adequately disclosed in the notes to financial statement. The necessary clarification and analysis regarding the financial positions and performances of the Company and its subsidiaries have been provided for the interests of shareholders and investors.

The maintenance of the internal control system and risk management system are the responsibilities of the Board to reasonably assure that assets are safeguarded from unauthorized use or disposition and that the accounting records are sufficiently reliable to permit the preparation of financial statements that conform in all material respects with generally accepted accounting principles.

The Board of Directors has appointed an Audit Committee. The Committee meets during the year to review with management and the auditors any significant accounting, internal control, and auditing matters.

The Board is of the opinion that the financial statements of Hana Microelectronics Public Company Limited and its subsidiaries for the year ended December 2020 are materially accurate, true and fair representation.



Independent Auditor's Report

To the Shareholders of Hana Microelectronics Public Company Limited

Opinion

I have audited the accompanying consolidated financial statements of Hana Microelectronics 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 Hana Microelectronics 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 Hana Microelectronics Public Company Limited and its subsidiaries and of Hana Microelectronics 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 Note 3 to the consolidated financial statements. In the fourth quarter of 2020, the Group assessed the financial impacts of the uncertainties of the COVID-19 Pandemic on the valuation of assets. As a result, in preparing the financial statements for the year ended 31 December 2020, the Group decided to discontinue application of all temporary relief measures on accounting alternatives and recognised resulting losses, totaling Baht 75.09 million, in other comprehensive income in the statement of comprehensive income for the year ended 31 December 2020. These pertain to a decrease in the fair value of investments in unquoted equity instruments held by the subsidiary. My opinion is not qualified in respect of this matter.

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.

The key audit matters and how audit procedures respond for each matter are described below.

Independent Auditor's Report

Revenue recognition

Revenue from sales are the accounting transactions that have significant volume of transactions and amounts, and directly affect profit or loss of the Group. The majority of the Group's sales transactions are conducted with a number of major overseas customers under a variety of arrangements and conditions which may impact the recognition of revenue of the Group causing risks with respect to the amount and timing of such revenue recognition.

I examined the revenue recognition of the Group by

- Assessing and testing the Group's information technology general controls and internal controls with respect to the revenue cycle by making enquiry of responsible executives, gaining an understanding of the controls and selecting representative samples to test the operation of the designed controls.
- Applying a sampling method to select sales to assess whether revenue recognition was consistent with the conditions or arrangement made with the customers, and whether it was in compliance with the Group's policy.
- On a sampling basis, examining supporting documents for actual sales transactions occurring during the year and near the end of the accounting period.
- Requesting for confirmations of consignment inventory balances located at customers' hubs at the end of the accounting period, observing the physical count of inventories at significant locations and on a sampling basis, examining supporting documents whether the consignment inventories were correctly excluded from sales for the year.
- Reviewing of credit notes that the Group issued after the period-end.
- Performing analytical procedures of disaggregated data to detect possible irregularities in sales transactions throughout the period, particularly for accounting entries made through journal vouchers.

Inventories

Estimating the net realisable value of inventory, as disclosed in the related accounting policies in the Note 5.3 and Note 6.1 to the financial statements, is one of an area of significant management judgement, particularly with regard to the estimation of allowance for diminution in the value of slow-moving and obsolete inventory. This requires detailed analysis of the product life cycle, the competitive environment, economic circumstances and the situation within the high-technology industry. There is a risk with respect to the amount of provision set aside for diminution in the value of inventory.

I assessed and tested the internal controls of the Group relevant to the determination of provision for diminution in the value of inventory by making enquiry of responsible executives, gaining an understanding of the controls and selecting representative samples to test the operations of the designed controls. In addition, I also assessed the method and the assumptions applied by management in determining such provision. The procedures that I performed included:

- Gaining an understanding of the basis applied in determining the provision for diminution in value of inventory and reviewing the consistency of the application of that basis, and the rationale for the recording of specific provisions.
- Comparing the inventory holding periods and inventory movements to identify product lines with indicators of lower than normal inventory turnover.
- Comparing details of sales transactions occurring after the date of the financial statements with the cost of inventory for each product line.
- Comparing historical data of actual losses on sales and write-offs of inventory during each of the previous years with the provision for diminution in value of inventory recorded at the preceding year-end.

Provision for long-term employee benefits

The valuation of long-term employee benefit obligations is one of a significant accounting estimate to the financial statements because the Group has a large number of employees and has defined benefit plans as discussed in the related accounting policies in the Note 5.12 and Note 6.3 to the financial statements. In addition, the calculation of long-term employee benefit obligations requires the management to select the calculation method and exercise a high degree of judgement in determining appropriate assumptions such as discount rates, future salary increases, mortality rates and staff turnover rates. Due to the long-term nature of these plans, such estimates are subject to significant uncertainty. There is therefore a risk with respect to the amounts of the provision for long-term employee benefits.

I assessed and tested the Group's internal control with respect to the assessment of provision for long-term employee benefits by making enquiry of responsible executives, gaining an understanding of internal controls and testing the method and significant assumptions both demographic and financial aspects used by the management to calculate the long-term employee benefit obligations and considering the impact of changes in key assumptions on the valuation of long-term employee benefit obligations. In addition, I reviewed the disclosure in the notes to the financial statements with respect to the provision for long-term employee benefits.

Independent Auditor's Report

Other Information

Management is responsible for the other information. The other information comprises 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.

Independent Auditor's Report

- 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.



Kamontip Lertwitworatep
Certified Public Accountant (Thailand) No. 4377

EY Office Limited
Bangkok: 25 February 2021

Statements of financial position

Hana Microelectronics Public Company Limited and its subsidiaries

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	7	5,400,260,504	5,434,979,009	642,883,118	577,211,336
Current investments	9	-	3,132,585,955	-	-
Trade and other receivables	8, 10	3,460,919,582	3,340,723,349	1,593,935,281	1,508,440,693
Inventories	11	4,496,142,465	4,518,387,301	2,295,245,191	2,332,078,879
Current portion of long-term fixed deposits					
with financial institution	14	-	450,179,552	-	-
Other current financial assets	12	4,266,900,686	-	-	-
Other current assets		95,709,013	137,873,840	45,402,856	58,722,840
Total current assets		17,719,932,250	17,014,729,006	4,577,466,446	4,476,453,748
Non-current assets					
Investments in subsidiaries	13	-	-	3,583,449,264	3,583,449,264
Other long-term investments	15	-	135,790,090	-	97,000
Investment property	16	72,303,750	72,303,750	72,303,750	72,303,750
Property, plant and equipment	17	6,938,256,153	6,901,862,057	2,392,024,143	2,727,807,057
Land leasehold rights	18	-	115,504,445	-	-
Intangible assets	19	362,263,817	160,934,116	62,963,928	30,154,598
Other non-current financial assets	20	97,000	-	97,000	-
Deferred tax assets	30	1,613,504	1,173,780	1,613,504	2,276,247
Other non-current assets		85,665,665	23,885,071	10,000	10,000
Total non-current assets		7,460,199,889	7,411,453,309	6,112,461,589	6,416,097,916
Total assets		25,180,132,139	24,426,182,315	10,689,928,035	10,892,551,664

The accompanying notes are an integral part of the financial statements.

Statements of financial position (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

As at 31 December 2020

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Liabilities and shareholders' equity					
Current liabilities					
Short-term loans from financial institutions	21	-	500,000,000	-	500,000,000
Short-term loan from related party	8	-	-	-	210,000,000
Trade and other payables	8, 22	2,354,747,250	2,252,054,338	1,267,907,243	1,381,316,534
Current portion of lease liabilities	24	10,728,348	-	-	-
Short-term provisions	23	300,371,000	301,540,000	-	-
Income tax payable		12,337,830	22,447,412	4,500,116	6,595,456
Other current liabilities		127,928,278	105,660,618	25,303,636	21,727,972
Total current liabilities		2,806,112,706	3,181,702,368	1,297,710,995	2,119,639,962
Non-current liabilities					
Lease liabilities - net of current portion	24	7,910,821	-	-	-
Deferred tax liabilities	30	31,252,836	-	-	-
Provision for long-term employee benefits	25	721,243,292	698,864,226	333,195,962	327,677,243
Total non-current liabilities		760,406,949	698,864,226	333,195,962	327,677,243
Total liabilities		3,566,519,655	3,880,566,594	1,630,906,957	2,447,317,205
Shareholders' equity					
Share capital					
Registered					
974,403,900 ordinary shares of Baht 1 each		974,403,900	974,403,900	974,403,900	974,403,900
Issued and fully paid-up					
804,878,860 ordinary shares of Baht 1 each		804,878,860	804,878,860	804,878,860	804,878,860
Share premium		1,723,218,982	1,723,218,982	1,723,218,982	1,723,218,982
Retained earnings					
Appropriated - statutory reserve	26	456,462,666	456,462,666	100,000,000	100,000,000
Unappropriated		19,239,559,857	18,441,803,280	6,430,923,236	5,817,136,617
Other components of shareholders' equity		(610,507,881)	(880,748,067)	-	-
Total shareholders' equity		21,613,612,484	20,545,615,721	9,059,021,078	8,445,234,459
Total liabilities and shareholders' equity		25,180,132,139	24,426,182,315	10,689,928,035	10,892,551,664

The accompanying notes are an integral part of the financial statements.

Income statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Revenues					
Sales	32, 33	19,282,520,274	20,384,421,819	8,768,172,468	9,246,883,112
Dividend income	13	1,991,642	66,375	536,071,957	176,066,360
Gain on exchange		141,282,600	-	62,134,934	27,873,159
Gain on derivatives		-	347,751,621	-	-
Other income	27	388,166,068	347,883,131	46,637,564	35,429,412
Total revenues		19,813,960,584	21,080,122,946	9,413,016,923	9,486,252,043
Expenses	29				
Cost of sales		16,734,326,257	18,193,459,625	7,415,150,815	8,327,385,792
Selling and distribution expenses		185,455,427	145,183,198	61,830,694	42,077,230
Administrative expenses		1,025,767,120	985,540,278	275,070,666	252,148,554
Loss on exchange		-	13,413,316	-	-
Loss on derivatives		5,576,813	-	-	-
Impairment loss on financial assets	12	25,510,503	-	-	-
Total expenses		17,976,636,120	19,337,596,417	7,752,052,175	8,621,611,576
Operating profit		1,837,324,464	1,742,526,529	1,660,964,748	864,640,467
Finance income	28	139,610,372	183,557,023	1,207,651	1,008,285
Finance cost		(9,066,211)	(13,234,384)	(4,610,247)	(9,521,264)
Profit before income tax expenses		1,967,868,625	1,912,849,168	1,657,562,152	856,127,488
Income tax expenses	30	(60,127,306)	(108,264,709)	(8,644,302)	(9,820,826)
Profit for the year		1,907,741,319	1,804,584,459	1,648,917,850	846,306,662
Profit attributable to:					
Equity holders of the Company		1,907,741,319	1,804,584,459	1,648,917,850	846,306,662
Earnings per share	31				
Basic earnings per share					
Profit attributable to equity holders of the Company		2.37	2.24	2.05	1.05
Number of weighted average ordinary shares (shares)		804,878,860	804,878,860	804,878,860	804,878,860

The accompanying notes are an integral part of the financial statements.

Statements of comprehensive income

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Profit for the year		1,907,741,319	1,804,584,459	1,648,917,850	846,306,662
Other comprehensive income:					
Other comprehensive income to be reclassified to profit or loss in subsequent periods:					
Gain on changes in value of available-for-sale investments - net of income tax	9.2	-	140,226,245	-	-
Gain on changes in value of debt instruments designated at fair value through other comprehensive income - net of income tax		74,831,556	-	-	-
Exchange differences on translation of financial statements in foreign currency - net of income tax	30	195,408,630	(881,613,527)	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods - net of income tax		270,240,186	(741,387,282)	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods					
Actuarial gain (loss) - net of income tax	25, 30	11,450,616	(272,661,394)	11,211,287	(171,735,928)
Loss on changes in value of equity investments designated at fair value through other comprehensive income - net of income tax		(75,092,840)	-	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		(63,642,224)	(272,661,394)	11,211,287	(171,735,928)
Other comprehensive income for the year		206,597,962	(1,014,048,676)	11,211,287	(171,735,928)
Total comprehensive income for the year		2,114,339,281	790,535,783	1,660,129,137	674,570,734
Total comprehensive income attributable to:					
Equity holders of the Company		2,114,339,281	790,535,783	1,660,129,137	674,570,734

The accompanying notes are an integral part of the financial statements.

Statements of changes in shareholders' equity

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

		Consolidated financial statements								
		Other components of shareholders' equity						Total shareholders' equity		
Note	Issued and paid up share capital	Share premium	Retained earnings		Other comprehensive income					
					Surplus (deficit) on changes in value of available-for-sale investments	Fair value reserve of financial assets at FVOCI	Exchange differences on translation of financial statements in foreign currency	Total other components of shareholders' equity		
			Appropriated - Statutory reserve	Unappropriated						
Balance as at 1 January 2019	804,878,860	1,723,218,982	456,462,666	18,237,930,334	68,641,527	-	(208,002,312)	(139,360,785)	21,083,130,057	
	-	-	-	1,804,584,459	-	-	-	-	1,804,584,459	
	-	-	-	(272,661,394)	140,226,245	-	(881,613,527)	(741,387,282)	(1,014,048,676)	
	-	-	-	1,531,923,065	140,226,245	-	(881,613,527)	(741,387,282)	790,535,783	
	-	-	-	(1,328,050,119)	-	-	-	-	(1,328,050,119)	
Balance as at 31 December 2019	804,878,860	1,723,218,982	456,462,666	18,441,803,280	208,867,772	-	(1,089,615,839)	(880,748,067)	20,545,615,721	
	804,878,860	1,723,218,982	456,462,666	18,441,803,280	208,867,772	-	(1,089,615,839)	(880,748,067)	20,545,615,721	
	-	-	-	-	(208,867,772)	208,867,772	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
Balance as at 1 January 2020 - as restated	804,878,860	1,723,218,982	456,462,666	18,441,803,280	-	208,867,772	(1,089,615,839)	(880,748,067)	20,545,615,721	
	-	-	-	1,907,741,319	-	-	-	-	1,907,741,319	
	-	-	-	(63,642,224)	-	74,831,556	195,408,630	270,240,186	206,597,962	
	-	-	-	1,844,099,095	-	74,831,556	195,408,630	270,240,186	2,114,339,281	
	-	-	-	(1,046,342,518)	-	-	-	-	(1,046,342,518)	
Balance as at 31 December 2020	804,878,860	1,723,218,982	456,462,666	19,239,559,857	-	283,699,328	(894,207,209)	(610,507,881)	21,613,612,484	

The accompanying notes are an integral part of the financial statements.

Statements of changes in shareholders' equity (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

	Note	Separate financial statements				
		Issued and paid up share capital	Share premium	Retained earnings		Total shareholders' equity
				Appropriated Statutory reserve	Unappropriated	
Balance as at 1 January 2019		804,878,860	1,723,218,982	100,000,000	6,470,616,002	9,098,713,844
Profit for the year		-	-	-	846,306,662	846,306,662
Other comprehensive income for the year		-	-	-	(171,735,928)	(171,735,928)
Total comprehensive income for the year		-	-	-	674,570,734	674,570,734
Dividend paid	35	-	-	-	(1,328,050,119)	(1,328,050,119)
Balance as at 31 December 2019		804,878,860	1,723,218,982	100,000,000	5,817,136,617	8,445,234,459
Balance as at 1 January 2020		804,878,860	1,723,218,982	100,000,000	5,817,136,617	8,445,234,459
Profit for the year		-	-	-	1,648,917,850	1,648,917,850
Other comprehensive income for the year		-	-	-	11,211,287	11,211,287
Total comprehensive income for the year		-	-	-	1,660,129,137	1,660,129,137
Dividend paid	35	-	-	-	(1,046,342,518)	(1,046,342,518)
Balance as at 31 December 2020		804,878,860	1,723,218,982	100,000,000	6,430,923,236	9,059,021,078

The accompanying notes are an integral part of the financial statements.

Statements of cash flows

Hana Microelectronics Public Company Limited and its subsidiaries

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	1,967,868,625	1,912,849,168	1,657,562,152	856,127,488
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Depreciation	1,162,234,580	1,124,916,350	406,006,714	396,275,286
Amortisation expenses	13,044,062	13,218,037	7,741,899	4,828,714
Reversal of allowance for doubtful accounts	-	(17,071,058)	-	-
Allowance for expected credit loss	1,632,987	-	2,492,191	-
Reduction of inventories to net realisable value (reversal)	61,552,195	(16,450,698)	43,023,850	(22,509,253)
Write-off obsolete and damaged inventories	6,537,812	24,939,813	6,537,812	15,560,919
Dividend income from subsidiary companies	-	-	(535,999,957)	(175,999,985)
Dividend income from other companies	(1,991,642)	(66,375)	(72,000)	(66,375)
Loss on disposals/write-off equipment and intangible assets	7,636,086	1,477,034	2,912,039	976,308
Reduction of allowance for impairment loss on assets	-	(47,022,123)	-	(4,936,485)
Provision for vacation	4,012,245	707,725	1,635,437	-
Provision for long-term employee benefits	60,001,241	89,845,003	26,792,396	37,829,082
Gain on sales/redemption of current investments	-	(20,580,472)	-	-
Gain on sales of debt instruments at fair value through other comprehensive income	(15,179,622)	-	-	-
Revaluation gain on investments in securities held for trading	-	(28,812,533)	-	-
Gain on fair value adjustments of financial instruments	(30,282,810)	-	-	-
Allowance for impairment loss on other current financial assets	25,510,466	-	-	-
Unrealised loss (gain) on exchange	4,428,278	(47,777,395)	6,749,625	(28,495,253)
Unrealised gain on derivatives assets	(8,214,839)	(45,838,544)	-	-
Finance income	(139,610,372)	(183,557,023)	(1,207,651)	(1,008,285)
Finance cost	1,593,822	6,795,479	2,206,616	7,278,767
Profit from operating activities before changes in operating assets and liabilities	3,120,773,114	2,767,572,388	1,626,381,123	1,085,860,928

The accompanying notes are an integral part of the financial statements.

Statements of cash flows (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Operating assets (increase) decrease				
Trade and other receivables	(117,080,535)	461,039,763	(96,678,342)	(19,364,093)
Inventories	(45,845,170)	695,963,166	(12,727,974)	134,147,567
Other current assets	9,935,224	58,808,752	24,715,280	(11,087,606)
Operating liabilities increase (decrease)				
Trade and other payables	(15,245,798)	(689,159,370)	(126,470,201)	112,107,256
Other current liabilities	19,562,615	(26,587,538)	1,940,227	(3,190,911)
Cash from operating activities	2,972,099,450	3,267,637,161	1,417,160,113	1,298,473,141
Cash paid for long-term employee benefits	(26,171,559)	(36,190,944)	(10,022,157)	(25,551,704)
Cash paid for income tax	(40,701,027)	(110,394,684)	(10,117,132)	(4,877,107)
Net cash from operating activities	2,905,226,864	3,121,051,533	1,397,020,824	1,268,044,330
Cash flows from investing activities				
Decrease in fixed deposits with financial institutions	-	29,892,784	-	-
Decrease in short-term investments	-	736,028,095	-	-
Increase in other current financial assets	(718,002,835)	-	-	-
Interest received	138,699,534	198,862,215	1,198,369	989,870
Proceeds from sales/redemption of short-term investments	-	306,338,819	-	-
Proceeds from sales of financial instruments	182,704,562	-	-	-
Decrease in investments in subsidiary companies	-	-	-	74
Dividend income from subsidiary companies	-	-	535,999,957	175,999,985
Dividend income from other company	1,991,642	66,375	72,000	66,375
Acquisitions of property, plant and equipment and intangible assets	(1,200,505,167)	(1,407,023,401)	(131,086,587)	(482,980,248)
Proceeds from disposals of equipment	33,546,491	73,693,502	22,418,607	1,121,931
Decrease in other long-term investments	-	10,331,010	-	-
Proceeds from redemption of debt instruments at amortised costs	62,669,933	-	-	-
Increase in other non-current assets	(61,780,594)	(1,337,630)	-	-
Net cash from (used in) investing activities	(1,560,676,434)	(53,148,231)	428,602,346	(304,802,013)

The accompanying notes are an integral part of the financial statements.

Statements of cash flows (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cash flows from financing activities				
Increase (decrease) in short-term loans from financial institutions	(500,000,000)	500,000,000	(500,000,000)	500,000,000
Increase (decrease) in short-term loan from related party	-	-	(210,000,000)	210,000,000
Payment of principal portion of lease liabilities	(22,822,212)	-	-	-
Interest paid	(2,038,185)	(5,884,904)	(3,608,870)	(5,884,904)
Dividend paid	(1,046,342,518)	(1,328,050,119)	(1,046,342,518)	(1,328,050,119)
Net cash used in financing activities	(1,571,202,915)	(833,935,023)	(1,759,951,388)	(623,935,023)
Increase (decrease) in cash and cash equivalents	(226,652,485)	2,233,968,279	65,671,782	339,307,294
Translation adjustment	191,933,980	(880,325,432)	-	-
Net increase (decrease) in cash and cash equivalents	(34,718,505)	1,353,642,847	65,671,782	339,307,294
Cash and cash equivalents at beginning of year	5,434,979,009	4,081,336,162	577,211,336	237,904,042
Cash and cash equivalents at end of year (Note 7)	5,400,260,504	5,434,979,009	642,883,118	577,211,336
Supplemental cash flow information				
Non-cash related transactions from investing activities				
Net increase (decrease) in accounts payable				
for purchases of plant and equipment	95,339,008	(420,313,686)	5,019,088	1,088,712
Revaluation gain on changes in fair value of				
available-for-sale investments	-	140,226,245	-	-
Revaluation gain on changes in fair value of				
debt instruments at FVOCI	74,831,556	-	-	-
Transfer equipment to intangible assets	35,126,287	-	35,126,287	-
Increase in right-of-use assets from lease agreement	42,836,396	-	-	-

The accompanying notes are an integral part of the financial statements.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

1. General information

1.1 General information of the Company

Hana Microelectronics Public Company Limited ("the Company") was incorporated as a limited company under Thai law and transformed to be a public limited company under the Public Limited Companies Act on 27 January 1993. The Company operates its business in Thailand and is principally engaged in the manufacture and trading of electronic components. The registered office of the Company is at 65/98, Soi Vibhavadi-Rangsit 64, Junction 2, Kwang Talad Bangkhen, Khet Laksi, Bangkok.

1.2 Coronavirus disease 2019 Pandemic

The Coronavirus disease 2019 pandemic is adversely impacting most businesses and industries. This situation may bring uncertainties and have an impact on the environment in which the Group operates. The Group's management has continuously monitored ongoing developments and assessed the financial impact in respect of the valuation of assets, provisions and contingent liabilities, and has used estimates and judgement in respect of various issues as the situation has evolved.

2. Basis of preparation

- 2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions 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 Hana Microelectronics Public Company Limited ("the Company") and the following subsidiary companies ("the subsidiaries") (collectively as "the Group"):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2020	2019
			Percent	Percent
<u>Held by the Company</u>				
Hana Semiconductor (BKK) Company Limited	Holding company	Thailand	100	100
Omac Sales Limited	Purchasing of electronic components and equipment	Hong Kong	100	100
Hana Microelectronics International Company Limited	Holding company	British Virgin Islands	100	100
Hana Microelectronics Investments Company Limited	Holding company	British Virgin Islands	100	100
Hana Microelectronics (Cambodia) Company Limited	Manufacture and trading of electronic components	Cambodia	100	100
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	58	58
<u>Held through the subsidiary companies</u>				
Hana Semiconductor International Limited	Trading of electronic components	British Virgin Islands	100	100
Hana Technologies, Inc.	Manufacture and trading of electronic components	USA	100	100
Hana Microelectronics, Inc.	Agent and customer services	USA	100	100
Hana Microelectronics Enterprises Company Limited	Holding company	British Virgin Islands	100	100
Hana Macao Commercial Offshore Limited	Customer services	Macao	100	100
Hana Microelectronics (Jiaxing) Company Limited	Manufacture and trading of electronic components	China	100	100
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	42	42
Power Master Semiconductor Company Limited	Manufacture and trading of electronic components	South Korea	100	100

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 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) The assets and liabilities in the financial statements of overseas subsidiary companies are translated into Thai Baht using the exchange rate prevailing on the end of reporting period, and revenues and expenses translated using monthly average exchange rates. The resulting differences are shown under the caption of "Exchange differences on translation of financial statements in foreign currency" in the statements of changes in shareholders' equity.
- f) Material balances and transactions between the Company and its subsidiary companies have been eliminated from the consolidated financial statements.

2.3 The separate financial statements present investments in subsidiaries 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 standards involve changes to key principles, which are summarised below.

Financial reporting standards related to financial instruments

A 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. These include stipulations regarding the presentation and disclosure of financial instruments.

The impact of the adoption of these standards on the Group's financial statements is as follows.

- Classification and measurement of investments in equity instruments of non-listed companies - The Group has decided to measure these investments at fair value and classify them as financial assets at fair value through other comprehensive income.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

- Recognition of expected credit losses - The Group recognises an allowance for expected credit losses on its debt instruments measured at amortised cost or fair value through other comprehensive income, and it is no longer necessary for a credit-impaired event to have occurred.

The Group adopted these financial reporting standards which the cumulative effect is recognised as an adjustment to the 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.

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.

This standard does not have any significant impact on the Group's 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 Treatment Guidance on Temporary Relief Measures on Accounting Alternatives in Response to the Impact of the COVID-19 Pandemic. Its objectives are to alleviate some of the impact 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.

During the period from the first quarter to the third quarter of 2020, the Group elected to apply the temporary relief measures on accounting alternatives relating to measurement of expected credit losses using a simplified approach, fair value measurement of investments in unquoted equity instruments, and impairment of assets.

In the fourth quarter of 2020, the Group assessed the financial impacts of the uncertainties of the COVID-19 Pandemic on the valuation of assets. As a result, in preparing the financial statements for the year ended 31 December 2020, the Group decided to discontinue application of all temporary relief measures on accounting alternatives and recognised resulting losses, totaling Baht 75.09 million, in other comprehensive income in the statement of comprehensive income for the year ended 31 December 2020. These pertain to a decrease in the fair value of investments in unquoted equity instruments held by the subsidiary.

- (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 financial reporting standards related to financial instruments and TFRS 16. The cumulative effect of initially applying these standards is recognised as an adjustment to retained earnings as at 1 January 2020. Therefore, the comparative information was not restated.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

The impacts of changes in accounting policies on the beginning balance of retained earnings of 2020 due to the adoption of these standards are presented as follows:

(Unit: Thousand Baht)

	Consolidated financial statements			
	The impacts of			
	31 December 2019	Financial reporting standards related to financial instruments	IFRS 16	1 January 2020
Statement of financial position				
Assets				
Current assets				
Current investments	3,132,586	(3,132,586)	-	-
Current portion of long-term fixed deposits with financial institution	450,180	(450,180)	-	-
Other current financial assets	-	3,628,605	-	3,628,605
Other current assets	137,874	(45,839)	-	92,035
Non-current assets				
Other non-current financial assets	-	135,790	-	135,790
Other long-term investments	135,790	(135,790)	-	-
Property, plant and equipment	6,901,862	-	115,504	7,017,366
Land leasehold rights	115,504	-	(115,504)	-

(Unit: Thousand Baht)

	Separate financial statements		
	The impacts of		
	31 December 2019	Financial reporting standards related to financial instruments	1 January 2020
Statement of financial position			
Assets			
Non-current assets			
Other long-term investments	97	(97)	-
Other non-current financial assets	-	97	97

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4.1 Financial instruments

As at 1 January 2020, the classifications and measurement of financial assets required by TFRS 9 in comparison with the former carrying amount, are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements				
	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	5,434,979	-	-	5,434,979	5,434,979
Other current financial assets	3,628,605	1,216,608	1,760,565	651,432	3,628,605
Trade and other receivables	3,340,723	-	-	3,340,723	3,340,723
Other non-current financial assets	135,790	-	75,482	60,308	135,790
Total financial assets	12,540,097	1,216,608	1,836,047	9,487,442	12,540,097

(Unit: Thousand Baht)

	Separate financial statements				
	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	577,211	-	-	577,211	577,211
Trade and other receivables	1,508,441	-	-	1,508,441	1,508,441
Other non-current financial assets	97	-	97	-	97
Total financial assets	2,085,749	-	97	2,085,652	2,085,749

As at 1 January 2020, the Group has not designated any financial liabilities at fair value through profit or loss.

4.2 Leases

The adjustments of right-of-use assets due to TFRS 16 adoption as at 1 January 2020 are summarised below.

(Unit: Thousand Baht)

Consolidated financial statements	
Land	115,504
Buildings	45,578
Total right-of-use assets	161,082

Notes to consolidated financial statements

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5. Significant accounting policies

5.1 Revenue and expense recognition

Sales of goods

Revenue from sales of goods is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods. Revenue is measured at the amount of the consideration received or receivable, excluding value added tax, of goods supplied after deducting returns, discounts, allowances.

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).

Dividends

Dividends are recognised when the right to receive the dividends is established.

Finance cost

Interest expense from financial liabilities at amortised cost is calculated using the effective interest method and recognised on an accrual basis.

5.2 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

5.3 Inventories

Raw materials, work in process, and finished goods are valued at the lower of cost (under weighted average method) and net realisable value. The cost of inventories is measured using the standard cost method, which approximates actual cost. Cost of finished goods and work in process include direct materials, direct labour, and factory overheads.

Allowance for diminution in inventory value is set up for obsolete, slow-moving or deteriorated inventories.

5.4 Investments in subsidiaries

Investments in subsidiaries are accounted for in the separate financial statements using the cost method.

5.5 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 is provided on investment property in land.

5.6 Property, plant and equipment and depreciation

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

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Depreciation of plant and equipment is calculated by reference to their costs on a straight-line basis over the following estimated useful lives:

Leasehold improvements	Period of lease
Buildings	20 - 50 years
Fixtures	3 - 10 years
Other assets	3 - 20 years

Depreciation is included in determining income.

No depreciation is provided on land, construction in progress and machinery under installation.

An item of property, plant 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 the income statement when the asset is derecognised.

5.7 Intangible assets

Intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses (if any).

Intangible assets with finite 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 expense is charged to the income statement.

The useful lives of the intangible assets, which are computer software, are 5 - 10 years.

5.8 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.

The Group as a lessee

Accounting policies adopted since 1 January 2020

The Group 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.

Land	50	years
Buildings	2 - 28	years
Machine and equipment	3	years

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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.

Right-of-use assets are presented as property, plant and equipment in the statement of financial position.

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, variable lease payments that depend on an index or a rate, 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. Variable lease payments that do not depend on an index or a rate are recognised as expenses in the period in which the event or condition that triggers the payment occurs.

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 property, plant or 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 and 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 shorter of the useful life of the asset and the lease period.

Leases of property, plant or 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.

5.9 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, the Company, whether directly or indirectly, or which are under common control with the Company.

They also include individuals or enterprises which directly or indirectly own a voting interest in the Company that gives them significant influence over the Company, key management personnel, directors, and officers with authority in the planning and direction of the Company's operations.

5.10 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also the Company's functional currency. Items of each entity included in the consolidated financial statements are measured using the functional currency of that entity.

Notes to consolidated financial statements

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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.

5.11 Impairment of non-financial assets

At the end of each reporting period, the Group perform impairment reviews in respect of the property, plant 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. 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 the income statement.

In the assessment of asset impairment if there is any indication that previously recognised impairment losses may no longer exist or may have decreased, the Group estimates the asset's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the income statement.

5.12 Employee benefits

Short-term employee benefits

Salaries, wages, bonuses and contributions to the social security fund are recognised as expenses when incurred.

Post-employment benefits

Defined contribution plans

The Group and their employees have jointly established a provident fund. The fund is monthly contributed to by the employees and the Group. The fund's assets are held in a separate trust fund and the Group's contributions are 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 based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from defined benefits plans are recognised immediately in other comprehensive income.

Past service costs are recognised in the income statement on the earlier of the date of the plan amendment or curtailment and the date that the restructuring-related costs are recognised.

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Provision for vacation

The Group has set up provision for vacation which is calculated in accordance with the Group's policy and formula, taking into consideration the employee's salary, the number of service years and the unused vacation days.

5.13 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.

Provision for product warranty

The subsidiaries record provision for product warranty, which is estimated by reference to obligation for product warranty under manufacturing contract.

5.14 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.

5.15 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.

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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 the income statement when the asset is derecognised, modified or impaired.

Financial assets at FVOCI (debt instruments)

The Group measures financial assets at FVOCI if the financial asset is held to collect contractual cash flows and selling 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.

Interest income, foreign exchange revaluation and impairment losses or reversals are recognised in the income statement and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in other comprehensive income. Upon derecognition, the cumulative fair value change recognised in other comprehensive income is recycled to the income statement.

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 the income statement.

Dividends are recognised as other income in the income statement, 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 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 the income statement.

These financial assets include derivatives, security investments held for trading, equity investments which the Group has not irrevocably elected to classify at FVOCI and financial assets with cash flows that are not solely payments of principal and interest.

Dividends on listed equity investments are recognised as other income in the income statement.

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 the income statement when the liabilities are derecognised as well as through the EIR amortisation process. In determining amortised cost, the Group takes into account any discounts or premiums on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in the income statement.

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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 the income statement.

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.

Investments

- a) Investments in securities held for trading are stated at fair value. Changes in the fair value of these securities are recorded in the income statement.

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- 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 the income statement 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 or yield rate of government bond adjusted by an appropriate risk factor, as the case may be. 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 the income statement 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 the income statement.

5.16 Derivatives

The Group has no policy to speculate in or engage in the trading of any financial derivative instruments, other than for managing the foreign currency risk by entering into forward exchange contracts to mitigate such exposure.

Such derivative financial instruments are initially recognised at fair value on the date on which a derivative contract is entered into and subsequently remeasured at fair value, which is determined by reliable financial institutions. Gains on losses arising from changes in the fair value of the contracts are recognised in the income statement.

5.17 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 techniques 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 categories of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an 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.

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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:

6.1 Allowance for diminution in inventory value

In determining an allowance for diminution in inventory value, the management needs to make judgement in estimating loss from obsolescence and slow moving, and the reduction of net realisable value of inventories.

6.2 Property plant and equipment and depreciation

In determining depreciation of plant and equipment, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant 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 cost. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

6.3 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.

6.4 Fair value of financial instruments

In determining the fair value of financial instruments recognised in the statement of financial position that are not actively traded and for which quoted market prices are not readily available, the management exercises judgement, using a variety of valuation techniques and models. The input to these models is taken from observable markets, and includes consideration of credit risk (bank and counterparty, both) liquidity, correlation and longer-term volatility of financial instruments. Change in assumptions about these factors could affect the fair value recognised in the statement of financial position and disclosures of fair value hierarchy.

7. Cash and cash equivalents

Cash and cash equivalents as at 31 December 2020 and 2019 as reflected in the statements of financial position and cash flows consist of the following:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cash	615,372	1,260	214	258
Bank deposits	3,426,752	4,111,374	642,669	576,953
Fixed deposits with maturity not over 3 months	1,358,137	1,322,345	-	-
Total cash and cash equivalents	5,400,261	5,434,979	642,883	577,211

As at 31 December 2020, bank deposits in savings accounts and fixed deposits carried interests between 0.001 and 0.900 percent per annum (2019: 0.001 and 2.250 percent per annum).

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8. Related party transactions

During the years, the Company had significant business transactions with related parties. Such transactions, which are summarised below, arose in the ordinary course of business and were concluded on commercial terms and bases agreed upon between the Company and those related parties.

(Unit: Million Baht)

	Separate financial statements		Transfer pricing policy
	2020	2019	
Transactions with subsidiary companies			
(eliminated from the consolidated financial statements)			
Sales of goods	151	153	Prices agreed between the parties due to the uniqueness of products sold to each customer
Dividend income	536	176	Declared rate
Purchase of materials	318	423	Cost plus mark up
Management fee	9	8	Rates stipulated in the agreement
Purchase of assets	1	27	Cost plus mark up

As at 31 December 2020 and 2019, the balances of the accounts between the Company and those related parties are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Trade receivables (Note 10)				
Trade receivables - related parties				
Subsidiary companies	-	-	10,800	21,259
Total trade receivables - related parties	-	-	10,800	21,259
Trade and other payables (Note 22)				
Trade payables - related parties				
Subsidiary companies	-	-	623,083	709,103
Total trade payables - related parties	-	-	623,083	709,103
Other payables - related parties				
Subsidiary companies	-	-	-	483
Total other payables - related parties	-	-	-	483
Total trade and other payables	-	-	623,083	709,586

Short-term loan from related party

As at 31 December 2019, the Company had short-term loan from the subsidiary in form of unsecured promissory note of Baht 210 million, carrying interest at 1.50 percent per annum. Movements in short-term loan from related party during the year ended 31 December 2020 are summarised below.

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(Unit: Thousand Baht)

	Balance as at 31 December 2019	During the year		Balance as at 31 December 2020
		Increase	Decrease	
Short-term loan from related party				
Hana Semiconductor (BKK) Company Limited	210,000	-	(210,000)	-
Total short-term loan from related party	210,000	-	(210,000)	-

Directors and management's benefits

During the years ended 31 December 2020 and 2019, the Group had employee benefit expenses payable to its directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Short-term employee benefits	90.7	98.0	16.2	16.1
Post-employment benefits	2.0	1.6	0.7	0.7
Total	92.7	99.6	16.9	16.8

9. Current investments

(Unit: Thousand Baht)

	Consolidated financial statements 31 December 2019	
	Cost/ Carrying value	Fair value
Securities held for trading (Note 9.1)		
Overseas marketable equity securities	1,115,698	1,170,769
Total	1,115,698	1,170,769
Add: Gain on changes in fair value of investments	55,071	
Investments in securities held for trading	1,170,769	
Available-for-sale securities (Note 9.2)		
Overseas marketable corporate bonds	861,671	1,010,220
Overseas quoted bonds	690,026	750,345
Total	1,551,697	1,760,565
Add: Gain on changes in fair value of investments	208,868	
Investments in available-for-sale securities	1,760,565	
Fixed deposits with financial institutions		
Fixed deposits within 1 year	201,252	201,252
Fixed deposits with financial institutions	201,252	201,252
Total short-term investments	3,132,586	3,132,586

As at 31 December 2019, fixed deposits with financial institutions carried interest between 1.65 and 2.10 percent per annum.

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9.1 Securities held for trading

Movements of investments in securities held for trading for the years ended 31 December 2019 are summarised below.

	As at 31 December 2019							(Unit: Thousand Baht)
	Consolidated financial statements							
	Cost as at 31 December 2018	Purchase	Proceeds from sales of investments	Gain on sales of investments	Translation adjustment	Cost as at 31 December 2019	Revaluation gain	
Overseas marketable equity securities								
Mutual funds	97,350	-	(99,630)	2,566	(286)	-	-	-
Investment trusts	64,900	-	-	-	(4,592)	60,308	13,014	73,322
Supply chain finance funds	811,245	10,000	-	-	234,145	1,055,390	42,057	1,097,447
Total investments in securities held for trading	973,495	10,000	(99,630)	2,566	229,267	1,115,698	55,071	1,170,769

As at 31 December 2019, the subsidiary assessed the fair value of the above securities held for trading by referring to the value quoted by the banks which are comparable to quoted prices, the result of which was a revaluation surplus on the fair value of USD 1.83 million or equivalent to approximately Baht 55.07. The gain on change in the fair value of approximately Baht 28.81 million was recognised in the income statements.

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9.2 Available-for-sale securities

Movements of investments in available-for-sale securities for the years ended 31 December 2019 are summarised below.

(Unit: Thousand Baht)									
		As at 31 December 2019							
		Consolidated financial statements							
		Cost as at 31 December 2018	Purchase	Proceeds from sales/ redemp- tion of invest- ments	Gain on sales/ redemp- tion of invest- ments	Translation adjustment	Cost as at 31 December 2019	Revalua- tion gain	Fair value as at 31 Decem- ber 2019
Overseas marketable corporate bonds		1,123,441	61,222	(203,818)	18,014	(137,188)	861,671	148,549	1,010,220
Overseas quoted bonds		678,792	38,191	(2,891)	-	(24,066)	690,026	60,319	750,345
Total investments in available-for-sale securities		1,802,233	99,413	(206,709)	18,014	(161,254)	1,551,697	208,868	1,760,565

As at 31 December 2019, the subsidiary assessed the fair value of the bonds by referring to the values quoted by the five overseas banks which are comparable to quoted prices, the result of which was a revaluation surplus on the fair value of USD 6.93 million or equivalent to approximately Baht 208.87 million. The gain on change in the fair value of approximately Baht 140.23 million was recognised in other comprehensive income in the statements of comprehensive income.

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Hana Microelectronics Public Company Limited and its subsidiaries

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10. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Age of receivable				
Trade receivables - subsidiary companies				
Not yet due	-	-	6,077	535
Past due				
Up to 3 months	-	-	459	14,301
3 - 6 months	-	-	2,650	885
6 - 12 months	-	-	1,612	3,412
Over 12 months	-	-	82	2,126
Total trade receivables - subsidiary companies (Note 8)	-	-	10,880	21,259
Trade receivables - unrelated parties				
Not yet due	2,833,017	2,560,541	1,375,442	1,132,621
Past due				
Up to 3 months	485,573	651,968	187,186	337,359
3 - 6 months	18,861	9,054	962	4,685
6 - 12 months	3,203	3,579	2,876	2,195
Over 12 months	2,418	3,626	-	1,490
Total trade receivables - unrelated parties	3,343,072	3,228,768	1,566,466	1,478,350
Less: Allowance for expected credit losses (2019: Allowance for doubtful accounts)	(6,117)	(4,485)	(2,492)	-
Total trade receivables - unrelated parties - net	3,336,955	3,224,283	1,563,974	1,478,350
Total trade receivables - net	3,336,955	3,224,283	1,574,854	1,499,609
Receivables from the Revenue Department	52,293	43,740	3,110	3,826
Other receivables - unrelated parties	71,672	72,700	15,971	5,006
Total other receivables	123,965	116,440	19,081	8,832
Trade and other receivables - net	3,460,920	3,340,723	1,593,935	1,508,441

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Hana Microelectronics Public Company Limited and its subsidiaries

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11. Inventories

(Unit: Thousand Baht)

	Consolidated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2020	2019	2020	2019	2020	2019
Finished goods	747,733	667,383	(28,078)	(12,839)	719,655	654,544
Work in process	629,167	593,193	(4,708)	-	624,459	593,193
Raw materials	3,254,033	3,317,790	(183,732)	(142,127)	3,070,301	3,175,663
Goods in transit	81,727	94,987	-	-	81,727	94,987
Total	4,712,660	4,673,353	(216,518)	(154,966)	4,496,142	4,518,387

(Unit: Thousand Baht)

	Separate financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2020	2019	2020	2019	2020	2019
Finished goods	561,235	432,631	(24,697)	(4,785)	536,538	427,846
Work in process	223,946	259,717	-	-	223,946	259,717
Raw materials	1,601,283	1,694,036	(84,850)	(61,739)	1,516,433	1,632,297
Goods in transit	18,328	12,219	-	-	18,328	12,219
Total	2,404,792	2,398,603	(109,547)	(66,524)	2,295,245	2,332,079

Detailed movements of the reduction of cost to net realisable value are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Balance at the beginning of the year	(154,966)	(171,417)	(66,524)	(89,033)
Add: Increase during the year	(158,168)	(102,231)	(88,217)	(41,891)
Less: Reversal during the year	96,691	117,120	45,194	64,400
Add: Translation adjustment	(75)	1,562	-	-
Balance at the ending of the year	(216,518)	(154,966)	(109,547)	(66,524)

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Hana Microelectronics Public Company Limited and its subsidiaries

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12. Other current financial assets

(Unit: Thousand Baht)

	31 December 2020 Consolidated financial statements
<u>Debt instruments at amortised cost</u>	
Fixed deposits	1,283,941
Total debt instruments at amortised cost	1,283,941
<u>Debt instruments at FVOCI</u>	
Overseas marketable corporate bonds	1,059,877
Overseas quoted bonds	697,813
Total	
Less: Allowance for expected credit losses	(25,510)
Total debt instruments at FVOCI - net	1,732,180
<u>Financial assets at FVTPL</u>	
Overseas marketable equity securities	1,196,726
Derivative assets (Note 38)	54,053
Total financial assets at FVTPL	1,250,779
Total other current financial assets - net	4,266,900

As at 31 December 2020, fixed deposits with financial institutions carried interests between 0.300 and 1.950 percent per annum.

In 2020, the Group recognised provision of Baht 25.51 million for expected credit losses on its debt instruments at FVOCI.

13. Investments in subsidiaries

Details of investments in subsidiaries as presented in the separate financial statements are as follows:

(Unit: Thousand Baht)

Company's name	Paid up capital		Shareholding percentage		Cost		Dividend received during the year	
	2020	2019	2020 Percent	2019 Percent	2020	2019	2020	2019
Hana Semiconductor (Ayutthaya) Company Limited	1,200,000	1,200,000	58	58	2,142,910	2,142,910	266,000	112,000
Hana Semiconductor (BKK) Company Limited	1,000,000	1,000,000	100	100	1,011,100	1,011,100	270,000	64,000
Omac Sales Limited	325	325	100	100	273,492	273,492	-	-
Hana Microelectronics (Cambodia) Company Limited	155,947	155,947	100	100	155,947	155,947	-	-
Hana Microelectronics International Company Limited	-	-	100	100	-	-	-	-
Hana Microelectronics Investment Company Limited	-	-	100	100	-	-	-	-
Total investments in subsidiary companies					3,583,449	3,583,449	536,000	176,000

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Hana Microelectronics Public Company Limited and its subsidiaries

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In June 2019, Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, additionally invested in 5,910,000 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 2.5 million or equivalent to Baht 76.86 million. In September 2019, it additionally invested in 5,922,600 ordinary shares, amounting to USD 2.5 million or equivalent to Baht 76.48 million. In December 2019, It additionally invested in 5,781,500 ordinary shares, amounting to USD 2.5 million or equivalent to Baht 75.39 million.

In June 2020, such overseas subsidiary company additionally invested in 14,526,840 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 6 million or equivalent to Baht 191.07 million.

In October 2020, such overseas subsidiary company additionally invested in 6,783,900 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 3 million or equivalent to Baht 93.58 million.

As at 31 December 2020, the overseas subsidiary company has invested in 45,468,997 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 19.49 million or equivalent to Baht 610.95 million, representing 100% of the issued and paid-up share capital of that company.

14. Long-term fixed deposits with financial institution

As at 31 December 2019, an overseas subsidiary had long-term fixed deposits with financial institution of China Yuan 104.3 million or equivalent to Baht 450.2 million, which are portion due within one year between January to April 2020, carrying interest between 2.25 and 2.33 percent per annum.

15. Other long-term investments

(Unit: Thousand Baht)

	31 December 2019	
	Consolidated financial statements	Separate financial statements
	Cost/Amortised cost	Cost/Amortised cost
Other long-term investments		
Available-for-sale securities		
Local marketable equity securities	97	97
	97	97
Held-to-maturity debt securities		
Overseas debt securities	60,308	-
	60,308	-
Other investments		
Preferred shares issued by an overseas company	78,080	-
Overseas equity securities	9,046	-
Total	87,126	-
Less: Allowance for impairment loss	(9,046)	-
Translation adjustment	(2,695)	-
	75,385	-
Total other long-term investments - net	135,790	97

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During the third quarter of 2017, Hana Microelectronics International Company Limited, an overseas subsidiary company, has invested in a 3-year fund linked capital return note issued by an overseas bank amounting to USD 2 million, with maturity date on 14 July 2020. The parties mutually agreed that the subsidiary will receive the principal amount of USD 2 million at the maturity date and gain from rise of fund price, between the reference price at initial valuation date and the final closing index of the fund upon maturity date at the agreed rate in a case that the closing index of the fund upon maturity date is higher than the initial reference price. This investment is classified as investment in held-to-maturity debt securities.

During the first quarter of 2018, Hana Microelectronics Investment Company Limited, an overseas subsidiary company, has invested in 1,250,000 preferred shares of MAPS, Inc., a company incorporated in South Korea and principally engaged in semiconductor business, amounting to USD 2.5 million, representing 8.7% of issued and paid-up capital of that company.

16. Investment property

The net book value of investment property, representing land, as at 31 December 2020 and 2019 is presented below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cost	72,304	72,304	72,304	72,304
Net book value	72,304	72,304	72,304	72,304

As at 31 December 2020, the fair value of the investment property based on market price amounted to approximately Baht 96 million (2019: Baht 96 million).

17. Property, plant and equipment

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Net book value				
Property, plant and equipment	6,764,483	6,901,862	2,392,024	2,727,807
Right-of-use assets (Note 24)	173,773	-	-	-
Total	6,938,256	6,901,862	2,392,024	2,727,807

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Hana Microelectronics Public Company Limited and its subsidiaries

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Movement of property, plant and equipment for the years ended 31 December 2020 and 2019 are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements								
	Land	Buildings	Leasehold improvement	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation	Total
Cost									
As at 1 January 2019	356,248	3,641,536	124,305	992,681	14,440,269	665,071	59,965	371,152	20,651,227
Additions	-	18,455	767	32,433	204,356	29,054	2,222	789,720	1,077,007
Disposals	-	-	-	(2,445)	(348,004)	(6,321)	(3,814)	(2,640)	(363,224)
Transfer in (out)	-	193,139	-	38,619	295,196	15,068	-	(542,022)	-
Translation adjustment	-	(85,697)	(10,227)	(53)	(245,737)	(5,928)	(1,143)	(19,025)	(367,810)
As at 31 December 2019	356,248	3,767,433	114,845	1,061,235	14,346,080	696,944	57,230	597,185	20,997,200
Effect of change in accounting policies (Note 4)	131,444	-	-	-	-	-	-	-	131,444
Additions	-	23,714	5,251	22,314	272,248	23,917	3,476	704,882	1,055,802
Disposals	-	-	-	(96)	(309,713)	(8,818)	(2,096)	-	(320,723)
Transfer in (out)	-	118,698	280	(2,440)	832,157	13,333	-	(1,007,805)	(45,777)
Translation adjustment	(509)	45,240	5,608	136	178,514	3,492	609	11,274	244,364
As at 31 December 2020	487,183	3,955,085	125,984	1,081,149	15,319,286	728,868	59,219	305,536	22,062,310
Accumulated depreciation									
As at 1 January 2019	-	1,701,495	92,075	731,757	10,270,052	564,963	37,428	-	13,397,770
Depreciation for the year	-	164,180	9,347	55,088	843,306	44,993	8,002	-	1,124,916
Accumulated depreciation for disposed assets	-	-	-	(1,710)	(230,148)	(5,545)	(3,629)	-	(241,032)
Translation adjustment	-	(36,635)	(7,814)	(1)	(161,287)	(4,800)	(818)	-	(211,355)
As at 31 December 2019	-	1,829,040	93,608	785,134	10,721,923	599,611	40,983	-	14,070,299
Effect of change in accounting policies (Note 4)	15,940	-	-	-	-	-	-	-	15,940
Depreciation for the year	2,747	195,162	8,837	58,397	849,706	40,502	6,883	-	1,162,234
Accumulated depreciation for disposed assets	-	-	-	(96)	(268,966)	(8,517)	(1,961)	-	(279,540)
Transfer in (out)	-	-	-	(10,651)	(2,320)	2,320	-	-	(10,651)
Translation adjustment	(176)	24,867	4,381	4	108,565	2,621	504	-	140,766
As at 31 December 2020	18,511	2,049,069	106,826	832,788	11,408,908	636,537	46,409	-	15,099,048
Allowance for impairment loss									
As at 1 January 2019	-	-	-	763	73,439	17	-	-	74,219
Decrease during the year	-	-	-	(613)	(46,409)	-	-	-	(47,022)
Translation adjustment	-	-	-	-	(2,158)	-	-	-	(2,158)
As at 31 December 2019	-	-	-	150	24,872	17	-	-	25,039
Decrease during the year	-	-	-	-	(25)	(1)	-	-	(26)
Translation adjustment	-	-	-	-	(7)	-	-	-	(7)
As at 31 December 2020	-	-	-	150	24,840	16	-	-	25,006
Net book value									
As at 31 December 2019	356,248	1,938,393	21,237	275,951	3,599,285	97,316	16,247	597,185	6,901,862
As at 31 December 2020	468,672	1,906,016	19,158	248,211	3,885,538	92,315	12,810	305,536	6,938,256

Depreciation for the year

2019 (Baht 1,019 million included in manufacturing cost, and the balance in administrative expenses)

2020 (Baht 992 million included in manufacturing cost, and the balance in administrative expenses)

1,124,916
1,162,234

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(Unit: Thousand Baht)							
	Separate financial statements						
	Land	Buildings	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation
Cost							
As at 1 January 2019	249,865	1,818,967	429,485	3,448,132	219,761	18,070	200,110
Additions	-	11,418	25,632	66,549	18,349	1,237	365,503
Disposals	-	-	(2,445)	(59,654)	(1,542)	(1,432)	-
Transfer in (out)	-	184,439	20,459	228,974	10,190	-	(444,062)
As at 31 December 2019	249,865	2,014,824	473,131	3,684,001	246,758	17,875	121,551
Additions	-	-	22,071	16,826	17,152	-	74,632
Disposals	-	-	(96)	(180,718)	(1,810)	(1,359)	-
Transfer in (out)	-	-	(2,440)	104,927	4,466	-	(152,730)
As at 31 December 2020	249,865	2,014,824	492,666	3,625,036	266,566	16,516	43,453
Accumulated depreciation							
As at 1 January 2019	-	796,302	262,271	2,484,849	184,265	14,274	-
Depreciation for the year	-	92,235	32,183	253,242	16,712	1,903	-
Accumulated depreciation for disposed assets	-	-	(1,710)	(53,723)	(1,173)	(1,432)	-
As at 31 December 2019	-	888,537	292,744	2,684,368	199,804	14,745	-
Depreciation for the year	-	95,428	34,960	258,419	15,634	1,566	-
Accumulated depreciation for disposed assets	-	-	(96)	(155,427)	(1,771)	(1,358)	-
Transfer in (out)	-	-	(10,651)	(2,320)	2,320	-	-
As at 31 December 2020	-	983,965	316,957	2,785,040	215,987	14,953	-
Allowance for impairment loss							
As at 1 January 2019	-	-	613	4,324	-	-	-
Decrease during the year	-	-	(613)	(4,324)	-	-	-
As at 31 December 2019	-	-	-	-	-	-	-
As at 31 December 2020	-	-	-	-	-	-	-
Net book value							
As at 31 December 2019	249,865	1,126,287	180,387	999,633	46,954	3,130	121,551
As at 31 December 2020	249,865	1,030,859	175,709	839,996	50,579	1,563	43,453
Depreciation for the year							
2019 (Baht 376 million included in manufacturing cost, and the balance in administrative expenses)							396,275
2020 (Baht 382 million included in manufacturing cost, and the balance in administrative expenses)							406,007

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As at 31 December 2020, certain plant and equipment items have been fully depreciated but are still in use. The gross carrying amount, before deducting accumulated depreciation and allowance for impairment loss, of those assets amounted to approximately Baht 10,947 million (2019: Baht 10,512 million) and for the Company amounted to approximately Baht 2,394 million (2019: Baht 2,255 million).

18. Land leasehold rights

During the year 2013, an overseas subsidiary entered into land leasehold agreements for building of factory and dormitory for its employees for the period of 50 years.

(Unit: Thousand Baht)

	31 December 2019
	Consolidated financial statements
Cost	153,418
Less: Accumulated amortisation	(17,509)
Translation adjustment	(20,405)
Net book value	115,504
Amortisation for the year	2,700

19. Intangible assets

Details of intangible assets which are computer software are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements	Separate financial statements
Cost		
As at 1 January 2019	113,481	52,401
Additions	120,807	317
Translation adjustment	(2,500)	-
As at 31 December 2019	231,788	52,718
Additions	171,372	5,425
Transfer in	45,777	45,777
Translation adjustment	9,267	-
As at 31 December 2020	458,204	103,920
Accumulated amortisation		
As at 1 January 2019	61,973	17,735
Amortisation for the year	10,518	4,828
Translation adjustment	(1,637)	-
As at 31 December 2019	70,854	22,563
Amortisation for the year	13,044	7,742
Transfer in	10,651	10,651
Translation adjustment	1,391	-
As at 31 December 2020	95,940	40,956
Net book value		
As at 31 December 2019	160,934	30,155
As at 31 December 2020	362,264	62,964
Amortisation for the year		
2019	10,518	4,828
2020	13,044	7,742

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20. Other non-current financial assets

(Unit: Thousand Baht)

	31 December 2020	
	Consolidated financial statements	Separate financial statements
Equity instruments designated at FVOCI		
Local marketable equity securities	97	97
Total equity instruments designated at FVOCI	97	97
Total other non-current financial assets	97	97

21. Short-term loans from financial institutions

As at 31 December 2019, the Company had short-term loans in form of unsecured promissory notes of Baht 500 million, carrying interests between 1.90 and 2.00 percent per annum.

The Company made repayment of the loans during 2020.

22. Trade and other payables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Trade payables - subsidiary companies (Note 8)	-	-	623,083	709,103
Trade payables - unrelated parties	1,644,679	1,703,256	551,357	597,884
Other payables - subsidiary companies (Note 8)	-	-	-	483
Advance received from customers	213,311	177,899	26,725	17,236
Other payables for purchase of machinery	171,648	75,965	33,938	28,919
Accrued expenses	325,109	294,934	32,804	27,692
Total trade and other payables	2,354,747	2,252,054	1,267,907	1,381,317

23. Short-term provisions

(Unit: Thousand Baht)

	Consolidated financial statements Provision for product warranty
As at 1 January 2019	324,498
Translation adjustment	(22,958)
As at 31 December 2019	301,540
Translation adjustment	(1,169)
As at 31 December 2020	300,371

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24. Leases

The Group has lease contracts for various items of property, plant, and equipment used in its operations. Leases generally have lease terms between 1 - 28 years.

a) Right-of-use assets (Note 17)

Movement of right-of-use assets for the year ended 31 December 2020 are summarised below:

(Unit: Thousand Baht)

	Consolidated financial statements			
	Land	Buildings	Machinery and equipment	Total
1 January 2020 (Note 4)	115,504	45,578	-	161,082
Additions	-	23,714	19,123	42,837
Depreciation for the year	(2,747)	(20,902)	(5,799)	(29,448)
Translation adjustment	(333)	189	(554)	(698)
31 December 2020	112,424	48,579	12,770	173,773

b) Lease liabilities

(Unit: Thousand Baht)

	31 December 2020
	Consolidated financial statements
Lease payments	18,744
Less: Deferred interest expenses	(105)
Total	18,639
Less: Portion due within one year	(10,728)
Lease liabilities - net of current portion	7,911

A maturity of lease payments is as follows:

(Unit: Thousand Baht)

	31 December 2020
	Consolidated financial statements
Within 1 year	10,797
Over 1 and up to 5 years	7,947
Total	18,744

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Hana Microelectronics Public Company Limited and its subsidiaries

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c) Expenses relating to leases that are recognised in income statements

(Unit: Thousand Baht)

	For the year ended 31 December 2020	
	Consolidated financial statements	Separate financial statements
Depreciation expense of right-of-use assets	29,448	-
Interest expense on lease liabilities	458	-
Expense relating to short-term leases	9,629	341
Expense relating to leases of low-value assets	158	158

d) Others

The Group had total cash outflows for leases for the year ended 31 December 2020 of Baht 34 million, including the cash outflow related to short-term lease, leases of low-value assets. Moreover, the Group had non-cash additions to right-of-use assets and lease liabilities of 43 million.

25. Provision for long-term employee benefits

Provision for long-term employee benefits, which represents compensation payable to employees after they retire, was as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Provision for long-term employee benefits at beginning of year	698,864	371,590	327,677	142,705
Included in the income statement:				
Current service cost	49,307	48,905	21,877	22,963
Interest cost	10,734	9,474	4,915	3,272
Past service cost	-	31,466	-	11,594
Included in other comprehensive income:				
Actuarial (gain) loss arising from				
Demographic assumptions changes	(47,618)	148,770	(24,810)	105,290
Financial assumptions changes	25,991	59,833	14,598	26,178
Experience adjustments	10,137	65,017	(1,039)	41,227
Benefits paid during the year	(26,172)	(36,191)	(10,022)	(25,552)
Provision for long-term employee benefits at end of year	721,243	698,864	333,196	327,677

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Line items in the income statements under which long-term employee benefit expenses are recognised are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Cost of sales	12,069	15,905	5,897	8,529
Selling and administrative expenses	47,972	73,940	20,895	29,300
Total expenses recognised in the income statements	60,041	89,845	26,792	37,829

The Group expects to pay Baht 48 million of long-term employee benefits during the next year (the Company only: Baht 31 million) (2019: Baht 43.6 million, the Company only: Baht 27.3 million).

As at 31 December 2020, the weighted average duration of the liabilities for long-term employee benefit is 13 years (the Company only: 15 years) (2019: 14 years, the Company only: 15 years).

Significant actuarial assumptions are summarised below.

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
	(% per annum)	(% per annum)	(% per annum)	(% per annum)
Discount rate	1.4	1.7	1.4	1.7
Future salary increase rate (depending on age)	4.0	5.0	4.0	5.0
Staff turnover rate	6.1 - 35.8	7.2 - 38.4	6.1 - 22.8	7.2 - 25.4

The results of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at 31 December 2020 and 2019 are summarised below.

(Unit: Million Baht)

	31 December 2020			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(86)	105	(43)	53
Salary increase rate	102	(86)	52	(43)
	Increase 5%	Decrease 5%	Increase 5%	Decrease 5%
Staff turnover rate	(90)	132	(72)	105

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(Unit: Million Baht)

	31 December 2019			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(89)	108	(44)	55
Salary increase rate	63	(115)	12	(72)
	Increase 5%	Decrease 5%	Increase 5%	Decrease 5%
Staff turnover rate	(126)	173	(81)	117

On 5 April 2019, The Labor Protection Act (No. 7) B.E. 2562 was announced in the Royal Gazette. This stipulates additional legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more, with such employees entitled to receive not less than 400 days' compensation at the latest wage rate. The law was effective from 5 May 2019. This change is considered a post-employment benefits plan amendment and the Group had additional long-term employee benefit liabilities of Baht 66.4 million (the Company only: Baht 25.8 million) as a result.

In addition, during 2019, the Group made amendment to their post-employment benefit plan, resulting in a decrease in long-term employee benefit liabilities of the Group of Baht 34.9 million (the Company only: Baht 14.2 million).

As a result of the above change in the law and the post-employment benefits plan amendment, the Group had net additional long-term employee benefit liabilities of Baht 31.5 million (the Company only: Baht 11.6 million). The Group reflected the effect of the changes by recognising past service costs as expenses in the income statements for the year 2019.

26. Statutory reserve

Pursuant to Section 116 of the Public Limited Companies Act B.E. 2535, the Company is required to set aside to a statutory reserve at least 5 percent of its net income 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.

At present, the statutory reserve has fully been set aside.

27. Other income

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Gain arising on FVTPL debt/equity instruments (2019: held for trading investments)	31,770	40,793	-	-
Gain on sales of FVOCI debt instruments (2019: available-for-sale investments)	15,306	18,081	-	-
Other income	341,090	289,009	46,638	35,429
Total	388,166	347,883	46,638	35,429

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28. Finance income

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Interest income on bank deposits	51,617	90,729	1,208	1,008
Interest income on debt instruments measured at FVOCI	87,993	92,828	-	-
Total	139,610	183,557	1,208	1,008

29. Expenses by nature

Significant expenses classified by nature are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Raw materials and consumables used	12,037,726	12,848,600	5,692,848	6,231,878
Changes in inventories of finished goods and work in process	(98,823)	138,079	(77,056)	50,406
Salaries and wages and other employee benefits	3,425,090	3,668,562	1,172,042	1,346,568
Management benefit expenses	95,192	99,570	18,353	16,825
Depreciation and amortisation expenses	1,175,279	1,138,134	413,749	401,103

30. Income tax

Income tax expenses for the years ended 31 December 2020 and 2019 are made up as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Current income tax:				
Current income tax charge	28,830	98,447	9,256	9,502
Adjustment in respect of income tax of previous year	454	(1,750)	(1,234)	(430)
Deferred tax:				
Relating to origination and reversal of temporary differences	30,843	11,568	622	749
Income tax expense reported in the income statements	60,127	108,265	8,644	9,821

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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	
	2020	2019	2020	2019
Deferred tax relating to actuarial gain (loss)	40	(959)	40	(959)
Deferred tax relating to exchange differences on translation of financial statements in foreign currency	(70)	1,288	-	-
	(30)	329	40	(959)

The reconciliation between accounting profit and income tax expenses is shown below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Accounting profit before tax	1,967,869	1,912,849	1,657,562	856,127
Applicable tax rate	0 - 30%	0 - 30%	20%	20%
Accounting profit before tax multiplied by income tax rate	374,726	259,886	331,512	171,225
Adjustment in respect of income tax of previous year	454	(1,750)	(1,234)	(430)
Effects of:				
Promotional privileges (Note 32)	(295,443)	(159,132)	(217,150)	(127,786)
Dividend income not subject to tax	(14)	(13)	(107,214)	(35,213)
Income not subject to tax	(316)	(828)	-	-
Unused temporary differences and tax losses	2,970	5,885	-	-
Non-deductible expenses	859	1,073	127	13
Additional expense deductions allowed	(5,930)	(8,081)	-	(512)
Others	(17,179)	11,225	2,603	2,524
Total	(315,053)	(149,871)	(321,634)	(160,974)
Income tax expenses reported in the income statements	60,127	108,265	8,644	9,821

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The components of deferred tax assets and deferred tax liabilities are as follows:

(Unit: Thousand Baht)

	Statements of financial position as at 31 December			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Deferred tax assets				
Allowance for expected credit losses	9	-	9	-
Allowance for diminution in value of inventories	1,779	1,319	392	370
Provision for long-term employee benefits	1,151	1,820	1,151	1,820
Provision for vacation	404	352	62	86
Accrued expenses	19,149	16,060	-	-
Total	22,492	19,551	1,614	2,276
Deferred tax liabilities				
Accumulated depreciation - plant and equipment	(52,131)	(18,377)	-	-
Total	(52,131)	(18,377)	-	-
Deferred tax assets (liabilities) - net	(29,639)	1,174	1,614	2,276
Statements of financial position				
Deferred tax assets	1,614	1,174	1,614	2,276
Deferred tax liabilities	(31,253)	-	-	-
Deferred tax assets (liabilities) - net	(29,639)	1,174	1,614	2,276

As at 31 December 2020, the subsidiaries had deductible temporary differences and unused tax losses totaling Baht 401 million (2019: Baht 339 million), on which deferred tax assets have not been recognised as the subsidiaries believe future taxable profits may not be sufficient to allow utilisation of the temporary differences and unused tax losses. The unused tax losses will expire by the year 2024.

31. 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.

32. Promotional privileges

The Group has received promotional privileges under the Investment Promotion Act B.E. 2520 as approved by the Board of Investment. Subject to certain imposed conditions, significant promotional privileges received with respect to tax are as follows:

Particulars	The Company								
1. Certificate No.	1328(2)/2548	2138(2)/2550	1887(1)/2552	1234(1)/2555	2620(1)/2555	2199(2)/2557	59-0178-0-00-1-0	60-1432-1-00-1-0	63-1072-1-00-1-0
2.. Promotional privileges for	Production of PCBA, RFID, TAG reader	Production of PCBA	Production of Semiconductor i.e. Wireless Sensor	Production of Integrated Circuit (IC) and Die Testing	Production of Electronic Control Unit	Production of PCBA	Production of PCBA	Production of Telecommunication and Wafer Die Test	Production of Semiconductor i.e. Integrated Circuit
3. The significant privileges are									
3.1 Exemption from corporate income tax on net income derived from the promoted operation and exemption from income tax on dividends paid from the promoted operations which are tax exempted throughout the period in which the corporate income tax is exempted.	8 years (expired) (tax exempted according with investment)	8 years (expired) (tax exempted according with investment)	8 years (expired) (tax exempted according with investment)	8 years	8 years	8 years (tax exempted according with investment)	8 years (tax exempted according with investment)	6 years (tax exempted according with investment)	6 years (tax exempted according with investment)
3.2 50 % reduction of the normal corporate income tax rate for net income derived after the expiry date in 3.1	5 years	5 years	5 years	5 years	5 years	5 years	5 years	-	-
3.3 Exemption from import duty on machinery as approved by the Board.	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted
3.4 2 times deduction of transportation, electricity and water expenses from the first earning operating income	10 years	10 years	10 years	10 years	10 years	10 years	10 years	-	-
4. Date of first earning operating income	24 March 2006	3 December 2007	2 December 2009	26 February 2016	3 January 2014	3 April 2015	4 February 2020	1 January 2018	Had not yet started utilising the privileges

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Particulars	Subsidiary					
	Hana Semiconductor (Ayuthaya) Company Limited					
1. Certificate No.	1034(2)/2552	2371(1)/2553	2687(1)/2556	59-1374-1-00-1-0	60-0686-1-00-1-0	61-1275-1-00-1-0
2. Promotional privileges for	Production of Wafer Saw, Integrated Circuit (IC) and Integrated Circuit Tested (IC Tested)	Production of Integrated Circuit (IC)	Production of Semiconductor	Production of Integrated Circuit (IC)	Production of Integrated Circuit (IC), Wafer sawing, Wafer Grinding and Wafer Testing	Production of Integrated Circuit (IC)
3. The significant tax privileges are						
3.1) Exemption from corporate income tax on net profit from promoted operations and exemption from income tax on dividends paid from the promoted operations which are tax exempted throughout the period in which the corporate income tax is exempted	8 years (Until 1 January 2021)	8 years (Until 27 November 2022)	8 years (Until 2 January 2026)	6 years	6 years	6 years
3.2) 50 % reduction of the normal corporate income tax rate for net income derived after the expiry date in 3.1	5 years	5 years	5 years	-	-	-
3.3) Exemption from import duty on machinery as approved by the Board.	Granted	Granted	Granted	Granted	Granted	Granted
3.4) 2 times deduction of transportation, electricity and water expenses from the first earning operating income	10 years	10 years	10 years	-	-	-
4. Date of first earning operating income	2 January 2013	28 November 2014	3 January 2018	Has not yet started utilising the privileges	Has not yet started utilising the privileges	Has not yet started utilising the privileges

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The Group's operating revenues for the years ended 31 December 2020 and 2019, divided between promoted and non-promoted operations, are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements					
	Promoted operations		Non-promoted operations		Total	
	2020	2019	2020	2019	2020	2019
Sales						
Domestic sales	6,673,121	245,726	9,469	692	6,682,590	246,418
Export sales	8,633,190	15,645,108	3,966,740	4,492,896	12,599,930	20,138,004
Total sales	15,306,311	15,890,834	3,976,209	4,493,588	19,282,520	20,384,422

(Unit: Thousand Baht)

	Separate financial statements					
	Promoted operations		Non-promoted operations		Total	
	2020	2019	2020	2019	2020	2019
Sales						
Domestic sales	191,945	128,327	790	692	192,735	129,019
Export sales	8,564,877	9,097,166	10,560	20,698	8,575,437	9,117,864
Total sales	8,756,822	9,225,493	11,350	21,390	8,768,172	9,246,883

33. Operating segments

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 their products and have two reportable segments as follows:

1. The Printed Circuit Board Assembly (PCBA) Segment, which produces and sells Printed Circuit Board Assembly (PCBA).
2. The Integrated Circuit (IC) Segment, which produces and sells Integrated Circuit (IC).

No operating segments have been aggregated to form the above reportable operating segments.

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.

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The following tables present revenue, profit and total assets information regarding the Group's operating segments for the years ended 31 December 2020 and 2019.

(Unit: Million Baht)

	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Other	Total reportable segments	Eliminations	Total
For the year ended 31 December 2020						
Revenue from external customers	11,306	7,290	687	19,283	-	19,283
Inter-segment revenue	2,623	529	663	3,815	(3,815)	-
Total revenue	13,929	7,819	1,350	23,098	(3,815)	19,283
Segment profit	1,849	535	156	2,540	8	2,548
Dividend income						2
Gain on exchange rate						141
Other income						388
Selling and distribution expenses						(185)
Administrative expenses						(1,026)
Loss on derivatives						(6)
Impairment loss on financial assets						(25)
Finance income						140
Finance cost						(9)
Income tax expenses						(60)
Profit for the year						1,908
Segment total assets						
Additions to property, plant and equipment	277	266	513	1,056	-	1,056

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(Unit: Million Baht)

	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Other	Total reportable segments	Eliminations	Total
For the year ended 31 December 2019						
Revenue from external customers	11,965	7,581	838	20,384	-	20,384
Inter-segment revenue	3,030	715	981	4,726	(4,726)	-
Total revenue	14,995	8,296	1,819	25,110	(4,726)	20,384
Segment profit	1,392	516	279	2,187	4	2,191
Gain on derivatives						348
Other income						348
Selling and distribution expenses						(145)
Administrative expenses						(986)
Loss on exchange rate						(13)
Finance income						183
Finance cost						(13)
Income tax expenses						(108)
Profit for the year						1,805
Segment total assets						
Additions to property, plant and equipment	552	171	354	1,077	-	1,077

Geographic information

Revenue from external customers is based on locations of the customers.

(Unit: Million Baht)

	2020	2019
Revenue from external customers		
Malaysia	3,850	3,829
United States of America	4,410	3,370
Singapore	3,067	2,944
China	2,268	2,256
Hong Kong	691	1,589
Others	4,997	6,396
Total	19,283	20,384

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(Unit: Million Baht)

	2020	2019
Non-current assets (other than deferred tax assets)		
Thailand	4,643	5,164
China	1,061	953
Korea	1,159	597
Cambodia	398	434
United States of America	140	66
Hong Kong	55	118
Others	3	78
Total	7,459	7,410

Major customers

For the year 2020, the Group has revenue from 5 major customers in amount of Baht 8,576 million, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment, (2019: Baht 9,360 million, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment).

34. Provident fund

The Group and its employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. Both employees and the Group contribute to the fund monthly at the rates of 3.0 - 7.5 percent of basic salary. The fund, which is managed by SCB Asset Management Company Limited, will be paid to employees upon terminating in accordance with the fund rules. The contributions for the year 2020 amounting to approximately Baht 88 million (2019: Baht 85 million) and for the Company amounting to approximately Baht 44 million (2019: Baht 43 million) were recognised as expenses.

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35. Dividend paid

During the years 2020 and 2019, the Group had dividend payments as follows:

	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)
The Company			
<u>For the year 2020</u>			
Dividends on 2019 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 30 April 2020	523	0.65
Interim dividends in respect of the income for the period from 1 January 2020 to 30 June 2020	Board of Directors' Meeting on 9 October 2020	523	0.65
Total for the year 2020		1,046	1.30
<u>For the year 2019</u>			
Dividends on 2018 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 30 April 2019	805	1.00
Interim dividends in respect of the income for the period from 1 January 2019 to 30 June 2019	Board of Directors' Meeting on 10 October 2019	523	0.65
Total for the year 2019		1,328	1.65
<u>Subsidiary companies</u>			
Hana Semiconductor (Ayutthaya) Company Limited			
<u>For the year 2020</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 7 April 2020	456	3.8
Total for the year 2020		456	3.8
<u>For the year 2019</u>			
Interim dividends in respect of the income for the period from 1 January 2019 to 30 September 2019 and unappropriated retained earnings	Board of Directors' Meeting on 29 October 2019	192	1.60
Total for the year 2019		192	1.60

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		Approved by	Total dividends	Dividend per share
			(Million Baht)	(Baht)
<u>Subsidiary companies</u>				
Hana Semiconductor (BKK) Company Limited				
<u>For the year 2020</u>				
Interim dividends in respect of the income for period from 1 January 2020 to 30 April 2020	Board of Directors' Meeting on 29 April 2020	270	2.7	
Total for the year 2020		270	2.7	
<u>For the year 2019</u>				
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 29 April 2019	64	0.64	
Total for the year 2019		64	0.64	

36. Commitments and contingent liabilities

36.1 Capital commitments

As at 31 December 2020, the Group had capital commitments relating to acquisitions of machinery totaling USD 9.8 million or equivalent to Baht 354 million (2019: USD 4.3 million or equivalent to Baht 138 million) and the Company only of approximately Baht 29 million (2019: Baht 48 million).

36.2 Commitments under service agreements

The Group has future payments required under these non-cancellable service contracts as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Payable:				
In up to 1 year	100.8	89.8	35.7	29.2
In over 1 year and up to 5 years	11.6	55.5	1.5	0.2

36.3 Marketing supportive service agreement

Since the year 2001, the Company and three subsidiary companies entered into marketing supportive service agreement with an overseas subsidiary company. Under that agreement, the Company and the three subsidiary companies have to pay service fees to that subsidiary company at the rates stipulated in the agreement.

36.4 Sale representative agreements

Since the year 2015, an overseas subsidiary entered into sale representative agreement with an unrelated company with the annual service fees of approximately USD 0.6 million.

36.5 Guarantees

As at 31 December 2020, there were outstanding bank guarantees of approximately Baht 27 million (2019: Baht 28 million) and the Company only of approximately Baht 26 million (2019: Baht 28 million) issued by the banks on behalf of the Company and its subsidiaries in respect of certain performance bonds as required in the normal course of business of the Group to guarantee electricity uses, among others.

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37. Fair value hierarchy

As at 31 December 2020 and 2019, the Group had the assets that were measured at fair value or for which fair value was disclosed using different levels of inputs as follows:

(Unit: Thousand Baht)

	31 December 2020		
	Consolidated Financial Statements		
	Level 1	Level 2	Total
Financial assets measured at fair value			
Financial assets at FVTPL			
Overseas marketable equity securities	1,196,726	-	1,196,726
Derivatives assets	-	54,053	54,053
Debt instruments at FVOCI			
Marketable corporate bonds	1,059,877	-	1,059,877
Quoted bonds	672,303	-	672,303
Local marketable equity securities	97	-	97
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

(Unit: Thousand Baht)

	31 December 2019		
	Consolidated Financial Statements		
	Level 1	Level 2	Total
Assets measured at fair value			
Held for trade investments			
Equity instruments	1,170,769	-	1,170,769
Available-for-sale investments			
Marketable corporate bonds	1,010,220	-	1,010,220
Quoted bonds	750,345	-	750,345
Derivatives			
Forward exchange contracts	-	45,839	45,839
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

38. Financial instruments

38.1 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, trade and other receivables, investments and trade and other payables. The financial risks associated with these financial instruments and how they are managed is described below.

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Credit risk

The Group is exposed to credit risk primarily with respect to trade and other receivables deposits with banks and financial institutions and other financial instruments. The maximum exposure to credit risk is limited to the carrying amounts of receivables as stated in the statement of financial position.

Trade receivables

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 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 and rating. 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. Generally, trade receivables are written-off if past due for more than one year and not subject to enforcement activity.

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. 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.

Interest rate risk

The Group's exposure to interest rate risk relates primarily to its cash at financial institutions and investments. Most of its financial assets and liabilities bear floating interest rates, or fixed interest rates which are close to the market rate.

As at 31 December 2020 and 2019, significant financial assets and liabilities classified by type of interest rates are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity dates, or the re-pricing date if this occurs before the maturity date.

	Consolidated financial statements as at 31 December 2020					
	Fixed interest rate		Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	Within 1 year	1 - 5 years				
	(Million Baht)					
Financial assets						
Cash and cash equivalents	1,779	-	3,105	516	5,400	0.001 - 0.900
Trade and other receivables	-	-	-	3,461	3,461	-
Other current financial assets	3,667	546	-	54	4,267	0.300 - 7.720
	5,446	546	3,105	4,031	13,128	
Financial liabilities						
Trade and other payables	-	-	-	2,355	2,355	-
	-	-	-	2,355	2,355	

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	Consolidated financial statements as at 31 December 2019					
	Fixed interest rate		Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	Within 1 year	1 - 5 years				
	(Million Baht)					
Financial assets						
Cash and cash equivalents	1,437	-	3,571	427	5,435	0.001 - 2.250
Current investments	3,133	-	-	-	3,133	1.65 - 9.75
Trade and other receivables	-	-	-	3,341	3,341	-
Long-term fixed deposits with financial institution	-	450	-	-	450	2.25 - 2.33
Other long-term investments	-	-	-	136	136	-
	4,570	450	3,571	3,904	12,495	
Financial liabilities						
Short-term loans from financial institutions	500	-	-	-	500	1.90 - 2.00
Trade and other payables	-	-	-	2,252	2,252	-
	500	-	-	2,252	2,752	

	Separate financial statements as at 31 December 2020				
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	Effective interest rate
					(% p.a.)
	(Million Baht)				
Financial assets					
Cash and cash equivalents	-	633	10	643	0.05 - 0.125
Trade and other receivables	-	-	1,594	1,594	-
	-	633	1,604	2,237	
Financial liabilities					
Trade and other payables	-	-	1,268	1,268	-
	-	-	1,268	1,268	

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

	Separate financial statements as at 31 December 2020				
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	Effective interest rate
	(Million Baht)				(% p.a.)
Financial assets					
Cash and cash equivalents	-	571	6	577	0.001 - 0.375
Trade and other receivables	-	-	1,508	1,508	-
	-	571	1,514	2,085	
Financial liabilities					
Short-term loans from financial institutions	500	-	-	500	1.90 - 2.00
Short-term loan from related party	210	-	-	210	1.50
Trade and other payables	-	-	1,381	1,381	-
	710	-	1,381	2,091	

Foreign currency risk

The Group's exposure to foreign currency risk arises mainly from trading transactions that are denominated in foreign currencies. The Group seeks to reduce this risk by entering into forward exchange contracts when it considers appropriate. Generally, the forward contracts will mature within one year.

The balances of financial assets and liabilities denominated in foreign currencies as at 31 December 2020 and 2019 are summarised below.

Foreign currency	Financial assets as at 31 December		Financial liabilities as at 31 December		Average exchange rate as at 31 December	
	2020	2019	2020	2019	2020	2019
	(Million)	(Million)	(Million)	(Million)	(Baht per foreign currency unit)	
South Korean Won	4,600	6,859	181	167	0.0276	0.0260
US Dollar	332	272	73	47	30.0371	30.1540
China Yuan	188	226	105	92	4.6187	4.3147
Indian Rupee	40	40	-	-	0.4091	0.4367
Japan Yen	5	2	12	10	0.2907	0.2759
Hong Kong Dollar	2	2	-	-	3.8753	3.8732
Singapore Dollar	2	2	5	-	22.6632	22.3245
Macau Pataca	1	1	-	-	3.7495	3.7037
Euro	-	1	2	-	36.8764	33.7311

As at 31 December 2020 and 2019, the two overseas subsidiary companies had outstanding forward exchange contracts, of which details are presented below.

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As at 31 December 2020		
Sold amount	Contractual maturity date	Contractual exchange rate for amount sold
(Million USD)		(Baht per USD)
120	25 January 2021 - 22 June 2021	29.720 - 31.284

As at 31 December 2019		
Sold amount	Contractual maturity date	Contractual exchange rate for amount sold
(Million USD)		(Baht per USD)
120	21 January 2020 - 31 March 2020	30.120 - 30.560

Foreign currency sensitivity

The following tables demonstrate the sensitivity of the Group's profit before tax to a reasonably possible change in US dollar exchange rates, with all other variables held constant. The impact on the Group's profit before tax is due to changes in the fair value of monetary assets and liabilities including non-designated foreign currency derivatives as at 31 December 2020. The Group's exposure to foreign currency changes for all other currencies is not material.

Currency	Change in FX rate	Effect on profit before tax Increase (decrease)
	(%)	(Million Baht)
US dollar	+1	17
	- 1	(17)

Liquidity risk

The Group manages liquidity risk to meet its obligations and maintain cash balances to cover the liquidity needs. The Group has assessed that it has sufficient working capital to settle financial liabilities and concluded the risk to be low.

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: Thousand Baht)

	Consolidated financial statements		
	Less than 1 year	1 to 5 years	Total
Non-derivatives			
Trade and other payables	2,354,747	-	2,354,747
Lease liabilities	10,797	7,947	18,744
Total non-derivatives	2,365,544	7,947	2,373,491

38.2 Fair value of financial instruments

Since the majority of the Group's financial instruments 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 statement of financial position.

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Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2020

The estimated fair value of the derivatives is as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	As at 31 December 2020 Fair value gain	As at 31 December 2019 Fair value gain
Derivatives		
Forward exchange contracts	54.1	45.8

The methods and assumptions used by the Group in estimating the fair value of financial instruments are as follows:

- For financial assets and liabilities which have short-term maturity, including cash and cash equivalents, accounts receivable and accounts payable, their carrying amounts in the statement of financial position approximate their fair value.
- For debts and equity securities, their fair value is generally derived from quoted market prices, or based on generally accepted pricing models when no market price is available.
- For fixed deposits with financial institution carrying interest approximate to the market rate, their carrying amounts in the statement of financial position approximate their fair value.
- For derivatives, their fair value has been determined by 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 spot rates of foreign currencies, yield curves of the respective currencies and interest rate yield curves. The subsidiaries have considered the counterparty credit risk when determining the fair value of derivatives

During the current year, there were no transfers within the fair value hierarchy.

39. Capital management

The primary objective of the Group's capital management is to ensure that it has appropriate capital structure in order to support its business and maximise shareholder value. As at 31 December 2020, the Group's debt-to-equity ratio was 0.16:1 (2019: 0.19:1) and the Company's was 0.18:1 (2019: 0.29:1).

40. Reclassification

The Group has reclassified the following items in the income statements for the year ended 31 December 2019 to conform to the current year's classification.

(Unit: Thousand Baht)

	For the year ended 31 December 2019			
	Consolidated financial statements		Separate financial statements	
	As reclassified	As previously reported	As reclassified	As previously reported
Cost of sales	18,193,460	18,070,411	8,327,386	8,204,337
Administrative expenses	985,540	1,108,589	252,148	375,197

The reclassifications had no effect to previously reported profit and or shareholders' equity.

41. Event after the reporting period

On 25 February 2021, the meeting of the Board of Directors of the Company No. 1/2021 passed the resolution approving the final dividend payment for the year 2020 to the Company's shareholders at Baht 0.75 per share. Thus, including the interim dividend of Baht 0.65 per share, the total dividend payment for the year 2020 will be Baht 1.40 per share. The dividend payment will later be proposed for approval in the Annual General Meeting of the Company's shareholders.

42. Approval of financial statements

These financial statements were authorised for issue by the Company's Board of Directors on 25 February 2021.



HANA

Microelectronics Public Company Limited
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