



รายงานประจำปี 2560
ANNUAL
REPORT
2017



THAI STORAGE BATTERY PLC.



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Summary of Financial Data

	Baht				
	2 017	2016	2015	Growrh Rate	
Total Assets	3,446,630,983.00	3,759,252,675.00	3,549,149,221.00	(8.32)	5.92
Total Liabilities	1,874,846,622.00	1,753,353,454.00	1,640,984,904.00	6.93	6.85
Shareholder's Equity attributable to owners of parent	1,569,203,796.00	1,958,478,196.00	1,861,528,838.00	(19.88)	5.21
Sales Revenue	5,282,806,012.00	5,311,578,585.00	5,056,859,390.00	(0.54)	5.04
Total Revenue	5,325,234,497.00	5,355,818,312.00	5,128,511,642.00	(0.57)	4.43
Cost of Sales	4,495,114,794.00	4,022,228,676.00	3,784,365,095.00	11.76	6.29
Selling and Administrative expenses	1,177,356,296.00	1,106,858,099.00	1,028,147,438.00	6.37	7.66
Gross Profit	787,691,218.00	1,289,349,909.00	1,272,494,295.00	(38.91)	1.32
Net Profit	(348,726,881.00)	156,512,330.00	219,908,929.00	(322.81)	(28.83)
Paid-up Capital	200,000,000.00	200,000,000.00	200,000,000.00		
Net Profit Margin (%)	(6.55)	2.92	4.29		
Return on Equity (%)	(19.77)	8.19	12.29		
Return on Assets (%)	(9.68)	4.28	5.93		
Earning Per Share (Baht)	(17.44)	7.83	11.00		
Book Value (Baht)	78.46	97.92	93.08		

Message from Chief Executive Officer

The year 2017 was historic one for Thai Storage Battery Public Company Limited and its group companies. We became a member of Hitachi Group through the acquisition by Hitachi Chemical on 20 July 2017. We are expecting to grow substantially with access to a wide variety of resources.

With the “3K” brand and strong distribution channel we have been expanding in ASEAN and EMEA countries and rank the 2nd in the automotive battery market in Thailand. We plan to further develop our automotive, motorcycle and forklift battery businesses by capitalizing on Hitachi Chemical's broad network. On a technical side, we will proactively introduce Hitachi manufacturing culture with a view to advancing high and stable quality products.

Finally, I would like to thank all shareholders, customers, suppliers, financial institutions and employees along with all stakeholders for your confidence and trust. I am sincerely hoping that we will grow together by contributing to the realization of prosperous and sustainable future.

Toshinori Osumi
CEO



SEALED MAINTENANCE FREE



MAINTENANCE FREE



GOLF



DEEPCYCLE



LOW MAINTENANCE



MOTORCYCLE



TRACTION

Board of Director

Mr. Yoshihiro Nomura

Position The Chairman of the Board of Directors

Age 61 Working Years 1

Education

- Graduated School of Engineering, The University of Tokyo, Tokyo, Japan

Working Experience

- 2017 - Present - Chairman of Board of Directors, Thai Storage Battery PLC.
- 2015 - Present - Representative Executive Officer and Executive Vice President, Hitachi Chemical Co., Ltd.
- 2013 - Present - Director, Hitachi Chemical Co., Ltd.
- 2013 - 2015 - Representative Executive Officer and Senior Vice President Hitachi, Chemical Co., Ltd.
- 2011 - 2013 - Chairman and President, Hitachi Chemical (China) Co., Ltd.
- 2010 - 2013 - Vice President & Executive Officer, Hitachi Chemical Co., Ltd.
- 2008 - 2010 - Executive Officer, Hitachi Chemical Co., Ltd.
- 2006 - 2008 - General Manager of Shimodate Works, Hitachi Chemical Co., Ltd.
- 2005 - 2006 - General Manager of Goi Works, Hitachi Chemical Co., Ltd.
- 1980 - Joined Hitachi Chemical Co., Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Toshinori Osumi

Position Vice Chairman of Board of Directors and Chief Executive Officer

Age 59 Working Years 1

Education

- Graduated Faculty of Business Administration, Kwansei Gakuin University Hyogo, Japan
- Advanced Management Program of The Wharton School, University Pennsylvania, United States of America

Working Experience

- 2017 - Present - Vice Chairman of Board of Directors and Chief Executive Officer, Thai Storage Battery PCL.
- 2015 - 2017 - Executive Vice President, Hitachi Chemical Asia (Thailand) Co., Ltd.
- 2010 - 2015 - Managing Director, Hitachi Chemical Thailand Co., Ltd.
- 1990 - Joined Hitachi Chemical Co., Ltd.
- 1981 - 1990 - Joined Nippon Chemical Trading Co., Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Shohei Yasuda

Position Directors and Director of Finance and Administration

Age 48 Working Years 1

Education

- Graduated Tokyo University of Foreign Studies, Faculty of Foreign Studies, Italian Language

Working Experience

- 2017 - Present
 - Director of Finance and Administration, Thai Storage Battery PLC.
- 2014
 - Joined Hitachi Chemical Co., Ltd.
- 2012 - 2014
 - Deputy Managing Director, Eurus Energy UK Ltd.
- 2003 - 2014
 - Transferred to Eurus Energy Holdings Corporation
- 1992 - 2003
 - Joined Tomen Corporation (Now merged into Toyota-Tsusho Corporation)

% of Share : None

Family relationship between executives : No family relationship

Mr. Hiroaki Yamaguchi

Position Directors

Age 50 Working Years 1

Education

- Graduated School of Engineering, Nagoya Institute of Technology, in Nagoya, Japan.

Working Experience

- 2017 - Present - Director, Thai Storage Battery PLC.
- 2017 - Present - General Manager of Automotive Battery Business Sector, Energy Storage Business Headquarters, Hitachi Chemical Co., Ltd.
- 2016 - Transferred to Hitachi Chemical Co.,Ltd. by way of Merger
- 2015 - 2016 - General Manager of Saitama Works, Shin-Kobe Electric Machinery Co., Ltd.
- 1992 - 2015 - Joined Shin-Kobe Electric Machinery Co., Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Naoto Okada

Position Directors

Age 57 Working Years 1

Education

- Musashi Institute of Technology, Tokyo City University, Japan

Working Experience

- 2017 - Present
 - Directors, Thai Storage Battery PCL.
- 2017 - Present
 - President, Hitachi Chemical Asia (Thailand) Co., Ltd.
- 2017 - 2015
 - General Manager, Global Production Operational Headquarters, Hitachi Chemical Co., Ltd.
- 2010 - 2011
 - Deputy Managing Director, Hitachi Chemical Singapore Co., Ltd.
- 2008 - 2010
 - General Manager of Ishioka Works, Hitachi AIC Co., Ltd.
- 1983
 - Joined Hitachi Chemical Co, Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Nontaphon Nimsomboon

Position Independent Director and Chairman of the Audit Committee

Age 74 With the Company: 21 Years

Education

- B.A in Accountancy, B.Com.(Hons.) - Thammasat University
- M.B.A. University of Iowa, U.S.A.(Under Royal Thai Government Scholarship)
- Doctorate Degree in Accountancy (Honorary) Thammasat University
- National Defense College Degree, Class 35
- C.P.A (Thailand)
- Fellow of The Canadian Comprehensive Auditing Foundation
- Director Capacity Building Programs with IOD
- Director Accreditation Program (DAP) Class 4/2003
- Director Certification Program (DCP), Class 89/2007
- Monitoring Fraud Risk Management (MFM) Class 1/2009
- Monitoring The System of Internal Control and Risk Management (MIR), Class 8/2010
- Monitoring The Internal Audit Function (MIA), Class 7/2010
- Monitoring The Quality of Financial Reporting (MFR), Class 11/2010

Working Experience :

- 2005 - 2014 - Member of The Court of Directors, Audit Committee Chairman, The Bank of Thailand
- 2006 - 2014 - Member of the Audit Committee, Commission, Securities and Exchange Commission, Thailand
- 1999 - 2013 - Independent Director, CG Committee Chairman, Big C Super Center PCL.
- 2006 - 2008 - Independent Director, Audit Committee Chairman, Airports of Thailand PCL.
- 2002 - 2005 - Director, Vice Executive Chairman, Saha-Union PCL.
- 1997 - 2001 - Auditor General, Office of the Auditor General of Thailand
- 1997 - 2001 - President, The Institute of Certified Accountants and Auditors of Thailand

Other Current Positions :

- 2005 - Present - Chairman, AMC International Consulting
- 2008 - Present - Member of the Board of Trustees, Risk Oversight Committee Chairman, Audit Committee Chairman, Walailak University
- 2005 - Present - Member of the Audit Committee, Suranaree University of Technology
- 2008 - Present - Member of the Audit Committee, Mae Fah Luang University
- 2010 - Present - Finance and Property Management Committee, Mahachulalongkornrajavidyalaya University.
- 2010 - Present - Audit Committee Chairman, Bangkok University

% of Shareholding: None

Family relationship between executives : No family relationship

Mr. Suchat Chanlawong

Position Independent Director and Audit Committee

Age 71 Working Years 21

Education

- Bachelor of Civil Engineering, Kasetsart University
- Master of Science in Civil Engineer University Of Missouri, U.S.A.
- Director Accreditation Program. Class 19/2004, (IOD)

Working Experience

- | | |
|------------------|---|
| • 1997 - Present | - Independent Director and Audit Committee, Thai Storage Battery PCL. |
| • 1997 - 2017 | - Director, 3K Products Co., Ltd. |
| • 1997 - 2017 | - Director, Thai Nonferrous Metal Co., Ltd. |
| • 2004 - 2008 | - Inspector General, Ministry of Energy |
| • 2003 - 2004 | - Deputy Director General Department of Mineral Fuels |
| • 2001 - 2003 | - Deputy Director General Department of Industrial Works. |
| | - Deputy Director General Department of Mineral Resources |

% of Share : None

Family relationship between executives : No family relationship

Mr. Veerachai Srikajon

Position Independent Director, Audit Committee

Age 65 Working Years 22

Education

- M.B.A. Business South Eastern University Washington D.C. U.S.A.
- Bachelor of Mechanical Engineering, Kasetsart University
- Director Accreditation Program (DAP) 102/2009
- Capital Market Academy (CMA) 4/2551

Working Experience

- | | |
|------------------|--|
| • 2008 - Present | - Independent Director and Audit Committee Thai Storage Battery PCL. |
| • 2001 - Present | - Director, Thai Storage Battery PCL. |
| • 2012 - Present | - Director, Thai Non Ferrous Metal Co., Ltd. |
| • 1993 - Present | - Director 3K Products Co., Ltd. |
| • 2004 - 2010 | - Managing Director, TKS Technologies PCL. |

% of Share 0.10

Family relationship between executives : No family relationship

Mr. Apichai Chvajarernpun

Position Independent Director

Age 68 Working Years 9

Education

- Bachelor of Engineering (Industrial Chemical) , Chulalongkorn University
- Master of Engineering (Nuclear Technology) , Chulalongkorn University
- Graduate Diploma in Mini MBA Class 5 , University of the Thai Chamber of Commerce
- Graduate Diploma in Senior Executive Class 26, Office of The Civil Service Commission
- Graduate Diploma in Information Technology Management, Office of The Civil Service Commission
- Certified of National Defence College Class 13
- Graduate Diploma in Government in democratic for Senior Executive Class 9, King Prajadhipok's Institute
- Graduate Diploma in Directors Certification Program (DCP) Class 91/2007 (IOD)

Working Experience

- | | |
|------------------|--|
| • 2009 - Present | - Independent Director, Thai Storage Battery PCL. |
| • 2010 - 2017 | - Director, Thai Non Ferrous Metal Co., Ltd. |
| • 2009 - 2017 | - Director 3K Products Co., Ltd. |
| • 2008 - 2009 | - Deputy Permanent , Ministry of Natural Resources and Environment |
| • 2006 - 2008 | - Director General, Department of Mineral Resources |
| • 2003 - 2006 | - Director General, Pollution Control Department |

% of Share : None

Family relationship between executives : No family relationship

MANAGEMENT TEAM

Mr. Toshinori Osumi

Position Vice Chairman of Board of Directors and Chief Executive Officer

Age 59 Working Years 1

Education

- Graduated Faculty of Business Administration, Kwansei Gakuin University Hyogo, Japan
- Advanced Management Program of The Wharton School, University Pennsylvania, United States of America

Working Experience

- 2017 - Present - Vice Chairman of Board of Directors and Chief Executive Officer, Thai Storage Battery PCL.
- 2015 - 2017 - Executive Vice President, Hitachi Chemical Asia (Thailand) Co., Ltd.
- 2010 - 2015 - Managing Director, Hitachi Chemical Thailand Co., Ltd.
- 1990 - Joined Hitachi Chemical Co., Ltd.
- 1981 - 1990 - Joined Nippon Chemical Trading Co., Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Shohei Yasuda

Position Directors and Director of Finance and Administrative

Age 48 Working Years 1

Education

- Graduated Tokyo University of Foreign Studies, Faculty of Foreign Studies, Italian Language

Working Experience

- 2017 - Present
 - Director of Finance and Administration, Thai Storage Battery PLC.
- 2014
 - Joined Hitachi Chemical Co., Ltd.
- 2012 - 2014
 - Deputy Managing Director, Eurus Energy UK Ltd.
- 2003 - 2014
 - Transferred to Eurus Energy Holdings Corporation
- 1992 - 2003
 - Joined Tomen Corporation (Now merged into Toyota-Tsusho Corporation)

% of Share : None

Family relationship between executives : No family relationship

Mr. Chakkapan Sangkaew

Position General Manager- Operation

Age 45 Working Years 23

Education

- Bachelor of Science in Electrical Engineering, Kasem Bundit University
- Master of Business Administration Courses (MBA), Bangkok University

Working Experience

- | | |
|------------------|---|
| • 2014 - Present | - General Manager- Operation, Thai Storage Battery PCL. |
| • 2009 - 2014 | - Manufacturing Factory Manager , Thai Storage Battery PCL. |
| • 2008 - 2008 | - Assistant Production Factory Manager, Thai Storage Battery PCL. |
| • 2007 - 2007 | - Senior Formation Production Manager, Thai Storage Battery PCL. |
| • 2000 - 2006 | - Battery Plate Production Manager, Thai Storage Battery PCL. |
| • 1998 - 1999 | - Assistant Battery Plate Production Manager, Thai Storage Battery PCL. |

% of Share : None

Family relationship with the Company's executives : No family relationship

Mr. Wirachai Bunchuchuen

Position General Manager-Accounting and Finance

Age 48 Working Years 17

Education

- B.Acc : Faculty of Economics and Business Administration, Kasetsart University
- Master of Accountancy, Faculty of Management and Tourism Burapha University

Working Experience

- 2015 - Present - General Manager-Accounting and Finance
- 2006 - 2015 - Senior Accounting Manager, Thai Storage Battery PCL.
- 2003 - 2005 - Accounting Manager, Thai Storage Battery PCL.
- 2000 - 2002 - Assistant Accounting Manager, Thai Storage Battery PCL.

% of Share : None

Family relationship with the Company's executives : No family relationship

Mr. Suwittawat Kaewwichian

Position General Manager-Marketing and Sales

Age 49 Working Years 16

Education

- Bachelor of Science, Khonkaen University
- Master of Business Administration, Ramkhamhaeng University

Working Experience

- | | |
|------------------|---|
| • 2015 - Present | - General Manager-Marketing and Sales, Thai Storage Battery PCL. |
| • 2010 - 2015 | - Business Development Division Senior Manager, Thai Storage Battery PCL. |
| • 2009 - 2009 | - Business Development Manager, Thai Storage Battery PCL. |
| • 2008 -2008 | - Domestic Sales Manager (SLI), Thai Storage Battery PCL. |
| • 2006 -2007 | - Assistant Manager of Domestic Sales, Department Thai Storage Battery PCL. |
| • 2001- 2005 | - Chief Domestic Sales Department, Thai Storage Battery PCL. |

% of Share : None

Family relationship between executives : No family relationship

Mr. Chayaphol Asavavallop

Position General Manager-Quality Assurance and Product Development

Age 49 Working Years 7

Education

- Bachelor Degree of Science in Mechanical Engineer from Boston University, USA.

Working Experience

- 2015 - Present
 - General Manager-Quality Assurance and Product Development, Thai Storage Battery PCL
- 2011 - 2015
 - Assistant Factory Manager of Dry Charge Battery Assembly, Thai Storage Battery PCL
- 2006 - 2011
 - Factory Manager of Thai Dai-ichi Co., Ltd.
- 2004 - 2006
 - Factory Manager of Mik Denshi Kogyo Co., Ltd.
- 2002 - 2004
 - Factory Manager of Marubeni Co., Ltd.
- 1997 - 2002
 - Engineer Manager of Sony Mobile Electronics Thailand Co., Ltd.
- 1995 - 1997
 - Quality Assurance Manager of Mitsui Siam Components Co., Ltd.
- 1991 - 1994
 - Supervisor of Product development of Bridgestone Japan Co., Ltd.

% of Share : None

Family relationship between executives : No family relationship

Mr. Takahiro Tomiyama

Position General Manager- Technical integration

Age 46 Working Years 1

Education

- Graduated Department of Electrical Engineering National Institute of Technology, Nara College

Working Experience

- 2017 - Present
 - General Manager-Technical integration, Thai Storage Battery PCL.
- 2016 - 2017
 - Senior Engineer, Core Technology Center, Battery Technology Group, Production Innovation Headquarters, Production Integration Division., Hitachi Chemical Co., Ltd.
- 2003 - 2005
 - Joined Shin Kobe Electric Machinery Co., Ltd.

% of Share : None

Family relationship with the Company's executives : No family relationship

The Audit Committee Report

The Audit Committee of Thai Storage Battery Public Company Limited, in this report hereinafter referred to “The Committee”, has been appointed by the Board of Directors of the company on 25 February, 2016 with 2 years term of duty. The current term of duty will end on April 30, 2018.

The Committee consists of three non-executive directors of the company, one of whom is knowledgeable and experienced in accounting and finance. The company has assigned the Internal Audit Manager to act as secretary of the Committee.

The Committee performs its duties in accordance with the Charter of the Audit Committee, which has been approved by the Board of Directors.

In the past year, the Board of Directors held 6 meetings. Executives of the company were invited to attend the meetings as necessary and appropriate. The external auditors attended all meetings. One meeting was held between the Committee and the auditors without the company’s executives.

In the past year, Chairman of the Audit Committee and all members attended all 6 meetings.

The Committee has acknowledged the auditor’s remarks from revisions of quarterly financial statements and the financial statements of the year 2017. In this regard, the Committee has inquired auditors to recommend ways to improve the internal control system or to reduce costs and had followed up the discussions and probed enquiries with auditors for clarity in every meeting. The Committee emphasized the important of supporting auditors and internal auditors to perform their duties independently.

To perform various duties as prescribed by the charter, The Committee would listen to comments from senior executives and relevant personnel at all levels.

For the year 2017, major activities undertaken by the Committee were classified into the following activities:

Preparation of Financial Statements

1. Reviewed the company’s audited financial statements and 2017 quarterly and consolidated financial statements; including seeking additional explanations from the auditors as well as seeking further clarifications from staff and management of the company. In this regard, the Committee has provided comments to support the revision of the company’s and its subsidiaries’ financial reports and have made significant recommendations in accordance with the applicable accounting standards and TAS in Thailand, including adequate disclosure of information to stakeholders.
2. The revision of disclosure of financial statements included the audit committee’s report, both verbally and in writing, regarding the related transactions between the company, its subsidiaries and its executives to measure the potential for material misconduct to reassurance that the auditors had performed their duties appropriately.

Internal Control and Internal Audit

3. Reviewed the internal audit system of the company to ensure its efficiency and reviewed the independence of the internal audit unit. In this regard, the internal auditor was assigned to review the internal control of various systems and to report regularly to the Committee.
4. Reviewed the audit plan and internal audit report of the Internal Audit Department, as well as, supervised the internal audit including giving feedback to ensure that the internal audit functions were as efficient and effective as possible from the internal audit resources availed for the benefit of the company and its shareholders by reviewing the missions, plans, scopes of work and responsibilities of the Internal Audit Department.
5. Reviewed important issues related to the internal control of the company and recommended ways to improve the internal control systems as necessary to the Board of Directors and the management of the company.
6. Supervised the internal auditors to coordinate with the company's auditors at an appropriate level.
7. At one time, the internal auditor position of the company was vacant for a period of time, the Committee had always recommended the company to accelerate the recruitment of this position to replace and replenish the vacancy as soon as possible because the capacity of the internal audit unit was not sufficient or appropriate for the workload, provided that the company would like the internal audit to be more beneficial than the past.

Related Transactions

8. Reviewed the related transactions which may cause conflicts of interest with the company and reviewed whether related transactions were in compliance with normal business conditions, records or disclosed information in accordance with the criteria specified by the Accounting Standards and requirements of the regulators by reviewing with the auditors, referred to the audit reports, as well as raised detailed inquiries and discussed with auditors. Moreover, information was requested from managements and key staff of the company. Consequently, the revision did not find any significant items that could be considered as related transactions, which had conflicts of interest.

Selection of Auditors

9. The Committee has selected and proposed appropriate persons to be the company's and its subsidiaries' auditors including Miss Wilailuck Laohsasakul with Certified Public Accountant (Thailand) No. 6140 or Miss Vissuta Jariyathanakorn with CPA Registration No. 3853 or Miss Maneeratan Bannakit with Certified Public Accountant (Thailand) No. 5313 of the EY Company Limited, who are independent and with sufficient knowledge and experience to perform duties as auditors. Furthermore, the proposed professional audit fees were appropriate for the responsibilities. The Committee has resolved to propose to the Board of Directors to consider, then, to propose for approval at the Annual General Meeting of Shareholders for the appointment of the company's auditors for the year 2018. In addition, the Committee agreed and recommended that the professional audit fee for the company's 2018 financial statements should be no more than 1,850,000 baht (One Million Eight Hundred and Fifty Thousand Baht).

Compliance with Relevant Laws and Regulations

10. Reviewed audit results were compliance with the Securities and Exchange Act, the regulations of the SET and the Securities and Exchange Commission, as well as other laws related to the company's businesses. The conducts had been complied with relevant laws and regulations.

Summary of Comments

The auditor of the company could perform duties independently. The company adhered to the Good Corporate Governance Policy by the Board of Directors and the managements of the company. As a result, the internal control system was effective enough to help prevent significant errors or if they occur, they could be identified quickly and to be corrected in a timely manner. Internal auditors were independent as they should be, despite the lack of capacity, but they had tried to improve the effectiveness and had shown some progress of improvements in internal controls and the managements should accelerate the replacement process. For related transactions that may cause conflicts of interest, the transactions were normal business transactions that were conducted in reasonable manners and provided reasonable benefits to the company. No significant transaction was found. Compliance with the laws and regulations of the relevant government was correct. For the financial statements and the consolidated financial statements of the company of the accounting period ending December 31, 2017, the auditor reported that all reports had been prepared in accordance with the generally accepted accounting principles by disclosing of sufficient significant financial information. There were no events or transactions that significantly affect the financial statements.



(Mr. Nontaphon Nimsomboon)

Chairman of the Audit Committee



(Mr. Suchat Chanlawong)

Audit Committee

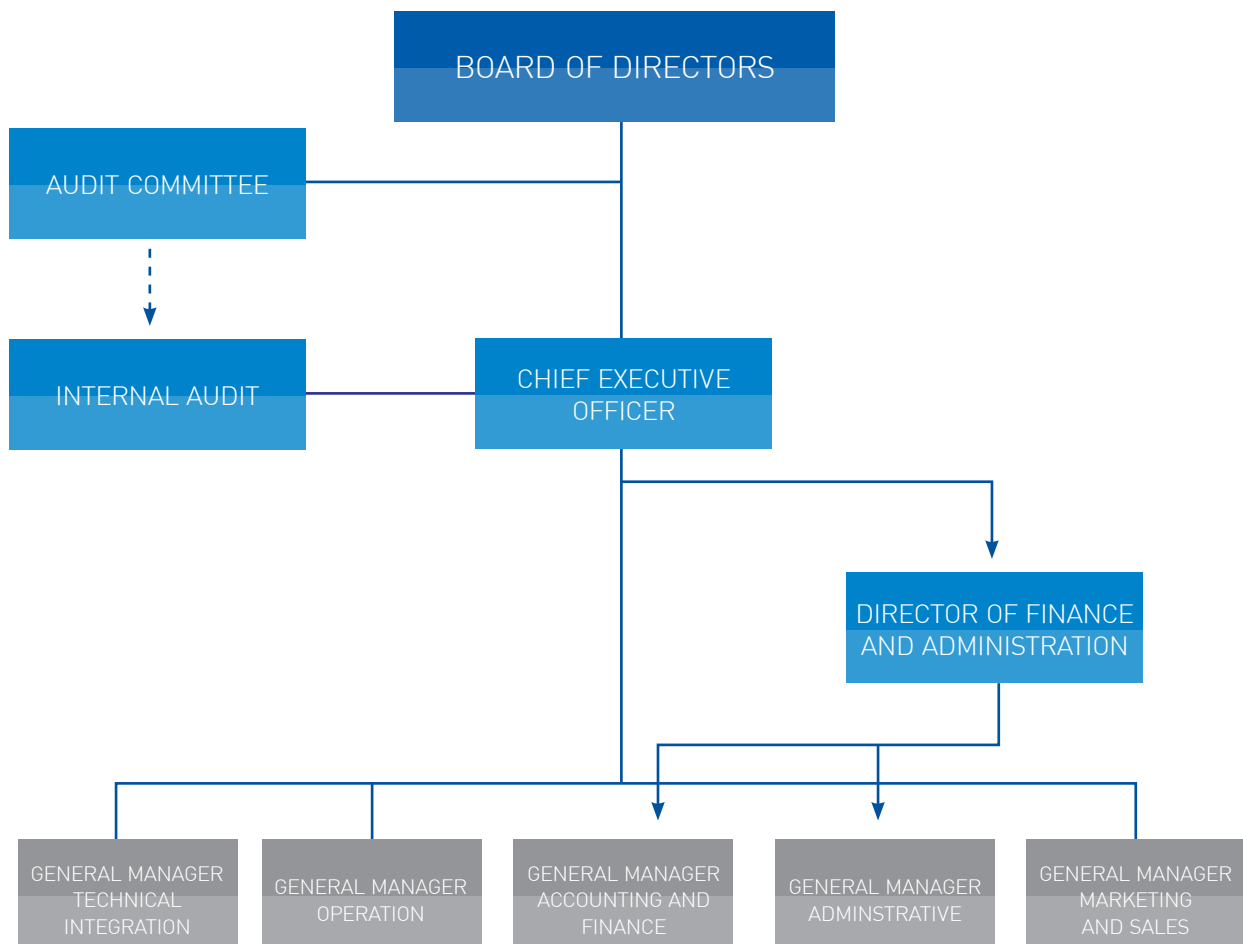


(Mr. Veerachai Srikajon)

Audit Committee

20 February, 2018

Organization Chart



Policy and Business Overview

Goal and Mission

The goal is to maintain the leadership in the battery market of Thailand and the Company is committed to develop products and services of battery to the world market.

Mission 3K Battery will be dedicated to the development of products and services to be valuable both domestically and internationally and for the best satisfaction of dealers and customers.

- Managing business efficiently and transparently with integrity and satisfactory operating results for the best benefits of shareholders.
- Treating good working environment and providing knowledge for developing capabilities and appropriate benefits to employees so that employees are able to learn and work with their full competencies and feel proud of being a part of the Company's achievement.
- Being responsible for environment and communities, and regularly organizing activities for the society.

Thai Storage Battery Public Company Limited was founded in 1986 and became a public company in 1994 under company registration certificate no. 0107537002141. The company's main business objective is the manufacture and distribution of automotive and motorcycle batteries with domestic distributions under the "3K" brand and export distributions to over 50 countries on every continent worldwide under the "3K" and "KV" brands.

The company features the following eight product groups:

- | | |
|-------------------------|-------------------------|
| 1. Automotive Batteries | 2. Motorcycle Batteries |
| 3. Lighting Batteries | 4. Golf Cart Batteries |
| 5. EB Batteries | 6. Traction Batteries |
| 7. EV Batteries | 8. Stationary Batteries |

The company's offices and factories are located at 387 Moo 4, SoiPatthana 3, Bangpoo Industrial Estate, Sukhumvit Road, Praeksa, Muang District, Samutprakarn 10280, Tel. 0 - 2709 - 3535 (16 automatic lines), Home Page: www.tsbbattery.com. At present, the company has 20,000,000 common shares of paid-up and issued registered capital valued at ten baht per share. The company's average production capacity for all types of batteries is 420,000 batteries per month.

General Information

The subsidiary and affiliated companies which the company holds their shares more than 10% are as follows:

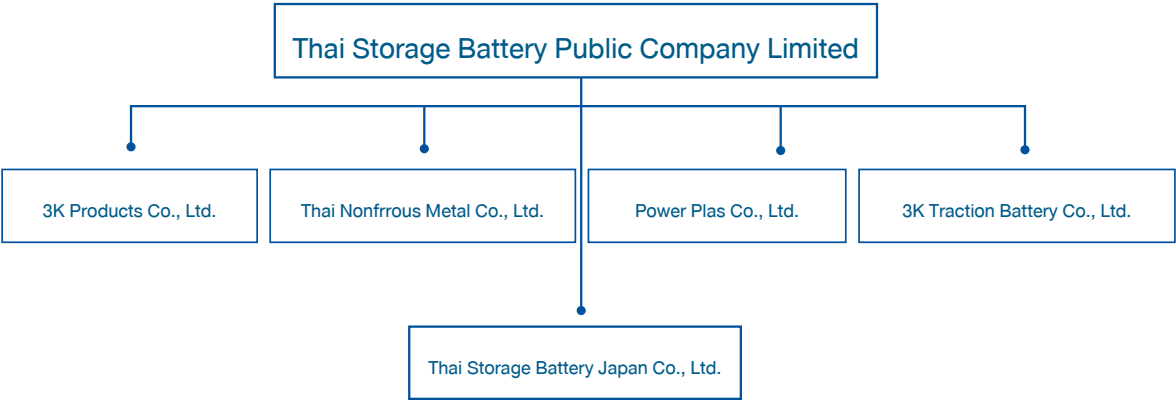


Figure 1. Structure of share holdings.

The Company has divided its operation in the Group as follows:

Upstream Business

The Company holds a total of 2,425,000 shares, equivalent to 97.00% of Thai Nonferrous Metal Company Limited. It is the factory of recycled lead smelting plant by using used batteries with paid excise tax as the raw materials of the production. Most produced leads will be distributed to the Company in order to reduce the impacts of price fluctuation and shortage of raw materials from lead import.

The Company holds a total of 9,999,996 shares, equivalent to 100.00% of Power Plas Company Limited. It is the company for manufacturing and distributing plastic earnings for batteries and providing OEM service or processing or molding all kinds of plastic product.

Intermediate Business is Thai Storage Battery Public Company Limited.

Downstream Business

The Company holds a total of 79,994 shares, equivalent to 99.99% of 3K Products Company Limited. It is responsible for being a distributor and planning marketing strategies for the replacement-equipment market (REM) by distributing products through over 200 dealers of the Company in all regions over the country and more than 3,000 stores.

The Company holds a total of 1,999,993 shares, equivalent to 99.99% of 3K Traction Company Limited. It is responsible for manufacturing metal earing for battery for forklift, leasing, maintaining, and providing maintenance service for batteries, forklifts, including after-sales service to other companies



The Company holds a total of 10 shares, equivalent to 16.67% of Thai Storage Battery Japan Company. It is the joint venture company with a Japanese company in order to be responsible for selling batteries of automobiles and batteries for electric forklifts, including providing after-sales service and other sale promotions in Japan.

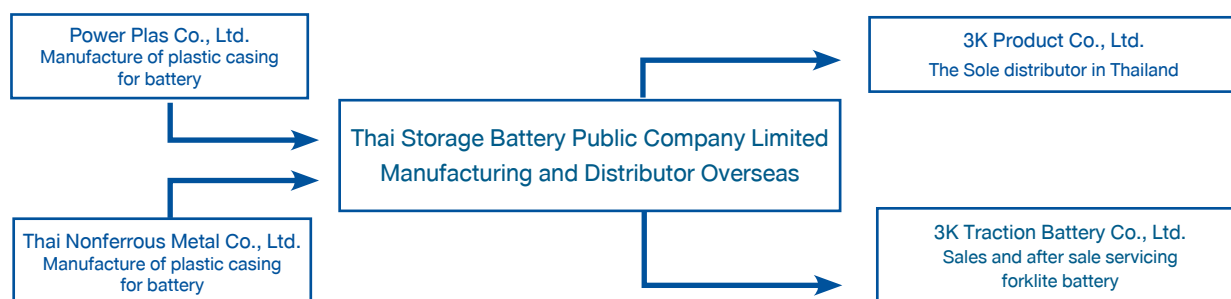


Figure 2. The company's operation in the group

Subsidiaries

3K Products Company Limited

Company Profile

Company Name	3K Products Company Limited	
Head Office	159/10 - 14, Moo 12, Sukhumvit Road, Soi 103 Bang Na, Bangkok 10260	
Telephone	0-2393-3333 Facsimile 0-2749-4153	
Registration	As a limited company on September 10, 1987	
Corporate Registration	No. 0105530046044	
Type of Business	Distribution of batteries for automobiles, golf cars and general lighting	
Distribution of Dividend	According to the annual general meeting of shareholders	
Fiscal Year	1 January - 31 December	
Auditor	Mr. Atipong Atipongsakul	Certified Public Account No. 3500
	Mr. Sathien Wongsanan	Certified Public Account No. 3495
	Mr. Yuthapong Chanmuangphan	Certified Public Account No. 9445
	Mr. Vichai Rujitanon	Certified Public Account No. 4054
	Ms. Kulathida Pasurakul	Certified Public Account No. 5946

As of 31 December 2017

Registered Capital of Ordinary Shares	80,000 shares at the par value of 100 baht per share
Issued and Paid-up Capital	80,000 shares at the par value of 100 baht per share
Number of Shareholders	3 shareholders

Board of Directors as of 31 December 2017

1. Mr. Toshinori Osumi

Thai Nonferrous Metal Company Limited

Company Name	Thai Nonferrous Metal Company Limited	
Factory	192, Moo 7, Gateway City Industrial Estate, HuaSamrongSubdistrict Plaengyao District, Chachoengsao Province 24190	
Telephone	0-3857-5368-9, 0-3857-5381-6	
Facsimile	0-3857-5373	
Registration	As a limited company on March 28, 1997	
Corporate Registration	No. 0105540032437	
Type of Business	Lead Alloy and Pure Lead	
Distribution of Dividend	According to the annual general meeting of shareholders	
Fiscal	Year 1 January - 31 December	
Auditor	Mr. Atipong Atipongsakul	Certified Public Account No. 3500
	Mr. Sathien Wongsanan	Certified Public Account No. 3495
	Mr. Yuthapong Chanmuangphan	Certified Public Account No. 9445
	Mr. Vichai Rujitanon	Certified Public Account No. 4054
	Ms. Kulathida Pasurakul	Certified Public Account No. 5946

As of 31 December 2017

Registered Capital of Ordinary Shares	2,500,000 shares at the par value of 100 baht per share
Issued and Paid-up Capital	2,500,000 shares at the par value of 100 baht per share
Number of Shareholders	3 shareholders

Board of Directors as of 31 December 2017

1. Mr. Toshinori Osumi

2. Mr. Tetsuro Okoshi

Power Plas Company Limited

Company Name Power	Plas Company Limited	
Head Office	298, Moo 4, Soi 5, Sukhumvit Road, PraeksaSubdistrict, Muang District, Samutprakarn Province 10280	
Telephone	0-2709-4095	
Facsimile	0-2709-4093	
Registration	As a limited company on August 26, 2010	
Corporate Registration	No. 0105538086410	
Type of Business	Manufacture and distribution of plastic casing for batteries	
Distribution of Dividend	According to annual general meetings of shareholders	
Fiscal	Year 1 January - 31 December	
Auditor	Mr. Atipong Atipongsakul	Certified Public Account No. 3500
	Mr. Sathien Wongsanan	Certified Public Account No. 3495

Mr. Yuthapong Chanmuangphan	Certified Public Account No. 9445
Mr. Vichai Rujitanon	Certified Public Account No. 4054
Ms. Kulathida Pasurakul	Certified Public Account No. 5946

As of 31 December 2017

Registered Capital of Ordinary Shares	5,000,000 shares at the par value of 10 baht per share
Issued and Paid-up Capital	5,000,000 shares at the par value of 10 baht per share
Number of Shareholders	3 shareholders

Board of Directors as of 31 December 2017

1. **Mr. Toshinori Osumi**
2. **Mr. Tetsuro Okoshi**

3K Traction Battery Company Limited

Company Name	3K Traction Battery Company Limited	
Head Office	298, Moo 4, Soi 5, Sukhumvit Road, PraeksaSubdistrict, Muang District, Samutprakarn Province 10280	
Telephone	0-2709-4088	
Facsimile	0-2709-4087	
Registration	As a limited company on July 21, 1995	
Corporate Registration	No. 0105538086410	
Type of Business	Manufacturing forklift battery steel casing, forklift batteries leasing, after sale servicing	
Distribution of Dividend	According to annual general meetings of shareholders	
Fiscal	Year 1 January - 31 December	
Auditor	Mr. Atipong Atipongsakul	Certified Public Account No. 3500
	Mr. Sathien Wongsanan	Certified Public Account No. 3495
	Mr. Yuthapong Chanmuangphan	Certified Public Account No. 9445
	Mr. Vichai Rujitanon	Certified Public Account No. 4054
	Ms. Kulathida Pasurakul	Certified Public Account No. 5946

As of 31 December 2017

Registered Capital of Ordinary Shares	500,000 shares at the par value of 10 baht per share
Issued and Paid-up Capital	500,000 shares at the par value of 10 baht per share
Number of Shareholders	3 shareholders

Board of Directors as of 31 December 2017

Mr. Toshinori Osumi

Joint Ventures

Thai Storage Battery Japan Company Limited

Company Name	Thai Storage Battery Japan Corporation
Head Office	1 - 3 - 10, Kuzuhanakanoshiba, Hirakata-shi, Osaka-fu, Japan
Telephone/Facsimile	81 - 72 - 850 - 72 - 2267
Type of Business	Importer and distributor of battery
Registration	As a limited company on July 7, 2000
Fiscal Year	1 April - 31 March

As of 31 December 2017

Registered Capital of Ordinary Shares	60 shares at the par value of 50,000 yen per share
Issued and Paid-up Capital	60 shares at the par value of 50,000 yen per share
Number of Shareholders	5 shareholders

Other reference persons

Share Registrar Thailand Securities Depository Co., Ltd.

62, The Stock Exchange of Thailand Building, 4th Floor,
6 - 7 Ratchadaphisek Road, Klong Toei, Bangkok 10110
Telephone 0 - 2229 - 2800

Auditor	Mr. Atipong Atipongsakul	Certified Public Account No. 3500
	Mr. Sathien Wongsanan	Certified Public Account No. 3495
	Mr. Yuthapong Chanmuangphan	Certified Public Account No. 9445
	Mr. Vichai Rujitanon	Certified Public Account No. 4054
	Ms. Kulathida Pasurakul	Certified Public Account No. 5946

ANS Audit Co., Ltd.

100/72, 22nd Floor, Vongvanij Building B, Rama 9 Road, Huaykwang,
Bangkok, 10320 Thailand
Telephone 0 - 2645 - 0109
Fax 0-2645-0110

Legal Advisor	Bunchong and Vidhaya Law office Co., Ltd.
	33/35, Wall Street Tower Building, 9th Floor, Surawongse Road, Bang Rak, Bangkok 10500
	Telephone 0 - 2236 - 2334

Type of Business Operations

History & Background

Thai Storage Battery Public Company Limited was established on 10 June, 1986 with an initial registered capital investment of 8 million baht for the manufacturing and distribution of automotive and motorcycle batteries under the “3K” trademark.

On 10 June 1994, the company registered its transformation to a public company after receiving approval from the Stock Exchange of Thailand. The company's shares were first traded on 10 February 1995.

As of December 31, 2016, the company has registered capital of 200 million baht and 1,572 million baht equity shares, worth 5,283 million baht, the proportion of domestic sales and exports at a rate of 53 : 48.

2017 was the year of major change as the company became a member of “Hitachi” Group through the acquisition by Hitachi Chemical Group in July 2017.

The Company's batteries production, research & development have been accredited by the following international standards;

1. Thai Industrial Standards and received TISI 6 - 1981 logo on 15 May 1989
2. ISO 14001:2004 Quality management certification received on 24 May 2017
3. ISO 9001:2008 Quality management certification received on 26 November 2017
4. ISO 9001:2008 NAC Quality management certification received on 26 November 2017
5. ISO/TS 16949:2009 Quality management certification received on 26 November 2017
6. JIS-Japanese Industrial Standard
7. DIN - Detaches Institute Fur Norm
8. SAE - Society of Automotive Engineers
9. International Electro Technical Commission (IEC)

The Company's products can be classified into five categories as following;

1. Conventional Type Battery: is a lead antimony alloy battery. Because of the use of antimony for grid structure, the battery has high rate of water loss during usage. Hence, users need to fill the battery with distilled water regularly.
2. Maintenance Free Battery (MF): is an alloy battery which uses lead, calcium and tin for grid structure. As a result of using calcium and tin components, the battery has low water loss rate. This allows users to use the battery conveniently as they do not need to fill in distilled water during usage (under specified working conditions).

3. Sealed Maintenance Free Battery (SMF): is an alloy battery which uses lead, calcium, tin and silver for grid structure. As a result using calcium, tin and silver components, the battery has low water loss rate. In addition, the battery also has Polyethylene (PE) separator which increase power when start the engine and prolong the usage life. The battery is designed to have covers by CAD / CAM / CAE program which allows the reduction of rate of water loss.
4. Valve Regulated Lead Acid Battery (VRLA): is an alloy battery which uses lead, calcium and tin for grid structure. As a result, using calcium and tin components, the battery has low rate of water loss. The battery also has Absorptive Glass Mat (AGM) separator which prevents acid from spilling outside. The battery is designed to have secured pressure plates which increase the battery's lifetime and usage hour.
5. Deep Cycle Battery: is an alloy battery with grid structure with high antimony contents.
 - a. Golf: battery for golf cart.
 - b. EB: battery for uninterruptible power supply.
 - c. EV: battery for electric vehicle.
 - d. Traction: battery for electric forklift, with Tubular plate, the battery has high durability.

Product Types

The Company's batteries are suitable for all types of vehicles manufactured under European, Japanese and US standard and different weather conditions whether in cold or hot climate. The company's products can be classified into the following eight groups:

1. Automotive Batteries
 - 1.1 Low Maintenance Batteries
 - 1.2 Maintenance-Free Batteries
2. Motorcycle Batteries
 - 2.1 Low Maintenance Batteries
 - 2.2 Valve-Regulated Lead-Acid Batteries (VRLA)
3. Lighting Batteries
4. Golf Cart Batteries - Deep cycle type; capable of supplying steady power for long periods of time. Suitable for all types of golf carts.
5. EB Battery - Deep cycle, easy to maintain, long life, capable of supplying power for long periods of time and rechargeable with a low current with environmentally friendly alternative power. There are several types and most are costly, depending upon production technology and maintenance, e.g. Ni-cd, Lead Acid Battery, and NiH. At present, Deep Cycle Lead Acid Batteries are the most popular and less expensive than other types.
6. Traction Batteries
7. Batteries (EV) - Suitable for electric vehicles, tour vehicles, electric wheelchairs; capable of supplying steady power for long periods of time.
8. Stationary Batteries - suitable for standby application in large power plants, telephone exchanges and other types of standby power systems.

Overview of the Company's Business Operations

The company is one of the largest battery manufacturers in Thailand and possesses its own production technology. Battery production in Thailand is mainly used for batteries for automotive and motorcycle (Conventional Type).

In order to reduce imports and expand domestic market, the Company has pioneered and developed other types of batteries including batteries for electric forklift (Traction Battery), batteries for golf cart batteries and solar cells power panel (Deep Cycle Battery).

Industrial Conditions and Domestic Competition

Status of Manufacturers

There are eight major manufacturers in the Thai battery manufacturing industry:

Manufacturers	Brand
Thai Storage Battery Public Company Limited	3K
Siam GS Battery Company Limited	GS
Furukawa Battery Company Limited	FB
Yuasa Battery Public Company Limited, Thailand	YUASA
Panasonic Battery Company Limited, Thailand	PANASONIC
Siam Battery Industry Company Limited	BOLIDEN
Thai Petrochemical Company Limited	TPS
Hitachi Storage Battery (Thailand) Company Limited	Hitachi

Most of battery manufacturers in Thailand are joint ventures between Thai and foreign companies, especially from Japan. These companies use technology that has been transferred from parent companies in Japan. Only Thai Storage Battery Public Co., Ltd., which was run by Thais until the acquisition of Hitachi Chemical, possesses its own advanced production technology that is competitive in the battery manufacturing industry. Although the production technology has been developed for sometimes, lead is still remained as main raw material for battery because of its competitive price when compare to other materials such as lithium.

Table of car assembly statistics in Thailand (Car)

Year	Passenger Car	Pick up 1 Ton	Commercial Vehicles	Total	Growth Rate	Motorcycle	Growth Rate
2007	315,444	948,388	23,514	1,287,346	8.36%	1,646,853	-20.66%
2008	401,309	974,642	17,791	1,393,742	8.26%	1,906,760	15.78%
2009	313,442	670,737	15,199	999,378	-28.30%	1,634,113	-14.30%
2010	554,387	1,066,759	24,158	1,645,304	64.63%	2,024,599	23.90%
2011	537,987	899,200	20,608	1,457,795	-11.40%	2,043,039	0.91%
2012	957,622	1,451,843	44,252	2,453,717	68.32%	2,606,161	27.56%
2013	1,071,076	1,332,913	53,068	2,457,057	0.14%	2,218,625	-14.87%

2014	742,678	1,114,778	22,551	1,880,007	-23.49%	1,842,708	-16.94%
2015	760,688	1,115,818	36,496	1,913,002	1.76%	1,807,325	-1.92%
2016	805,033	1,102,816	36,568	1,944,417	1.64%	1,820,358	0.72%
2017	818,440	1,130,058	40,325	1,988,823	2.28%	2,055,193	12.90%

Source: The Thai Automotive Industry Association

Domestic Market

The marketing strategies employed by the company include increasing the number of agencies, providing discounts to agencies and establishing new distribution channels, such as car care centers and modern trade service centers, building brand awareness to consumers via advertisements through media, organizing marketing activities and promotion events.

Original Equipment Market (OEM) is a stable market with operational standard and clear production target and delivery date. Car assembly plants are the main customers of battery manufacturers because most consumers choose to replace old batteries with the same type and brand of battery that originally came with the vehicle. However, most of the car assembly plants in Thailand belonged or co-owned by Japanese firms. Most of these plants would mainly purchase batteries from their joint ventures in Thailand. As a result, manufacturers would have more difficulties when dealing with Japanese assembly plants than the Europe and U.S. assembly plants. This is opportunity for operators to expand their customer bases.

Replacement Equipment Market (REM) - This market has large product varieties in order to meet the diversified needs of consumers in the market and replace the original batteries that are damaged or deteriorated. Presently, the REM is very competitive in terms of price, quality and product diversification offered from both domestic and overseas manufacturers.

The Company gives primary importance to the REM market, and the strategy employed is cutting costs while maintaining product quality. This strategy is implemented by increasing production in order to reduce the cost per unit and other costs by employing modern production technology, thus enabling minimization of raw material used while maintaining product quality and efficiency.

Table -Total Production and Domestic Automotive & Motorcycle Battery Sales (Units)

		2017	2016	2015
Total Production	(Pcs.)	18,251,501	18,309,224	17,118,881
Domestic Sales	(Pcs.)	12,410,360	12,529,450	11,411,624
International distribution	(Pcs.)	5,863,377	5,406,858	5,552,926
Total value of sales	(MB)	22,023	20,868	20,092

Source: Office of Industrial Economics

Export Market

The production efficiency of the Thai battery manufacturing industry continues to improve due to the implementation of highly efficient technologies and machinery in the production process to increase battery quality and standards in order to be widely accepted in the international arena.

Currently, the Company's target exports approximately 50 percent of the total revenue. The company emphasizes on export market because of steady growth of global economy which impose positive impact on the automobile industry. The Company focuses on expanding export market into Asia Pacific, Middle East, Africa and South America. In addition, our company has set survey and field work strategy supporting upcoming AEC market.

Pricing Strategy

Most of the operators are using advertisement and promotions, especially rebates, to compete with one another in battery market. The Company has policy to maintain selling prices of products which are similar or equivalent to other brands.

Distribution and Sales Channels

The Company sells its products to both domestic and overseas markets. Domestic sales accounted for approximately [53] percent of the total revenue. Regarding this, [45] percent are car batteries, [3] percent are motorcycle batteries and [5] percent are other sales. The company also sells products solely through "3K Products Co., Ltd." which is both distributor and subsidiary of the Company. 3K Products Co., Ltd. Is distributing products directly and through more than 200 retail stores and distributing agents. Regarding this, the company has a policy to increase more distributing agents by turning our major customers to become our agents. This strategy will stimulate the Company's sales further.

The Company's export constitutes approximately [47] percent of the total sales. Regarding this, [43] percent are car batteries, 4 percent is motorcycle batteries. The Company is selling products directly to end users or through distribution agents to more than 50 countries around the world in Indochina region, East Asia, Southeast Asia, South Asia, South America, Middle East and Africa. Furthermore, the Company plans to stimulate its sales through increasing number of distributing agents in both domestic and overseas markets. In addition, the Company also has a policy to penetrate the U.S., Japan and Europe markets with its new products including Maintenance Free Battery and Traction Battery which are popular in those countries.

The company focuses on the export market because steady global upward growth trends have been experienced by this market. Another reason for this emphasis is to reduce the impact of the aggressive price competition in the domestic market. Accordingly, the company's exports account for approximately 47 percent of the company's sales revenue. At present, the company exports products to over 50 countries in Indo-China, East Asia, South-East Asia, South Asia, South America, Middle East, and Africa.

Characteristics and Relationship between Customers and the Company or Subsidiaries

For Replacement Equipment Market, 43 percent of the Company's total sales are distributed through 3K Products Co., Ltd. The Company is selling another 10 percent of the sales to auto manufacturers and other customers. The Company will consider new customers based on their past business operational history. Moreover, customers must have their own shops.

- 1.) 3K Product Company Limited. The company holds a total of 79,994 shares amounting to 99.99% of the total shares.

This subsidiary is a product distributor and planner of strategic marketing plans for the Replacement Equipment Market (REM). It distributes products through more than 200 representatives covering all regions of Thailand with over 3,000 retail shops.

- 2.) Thai Non-Ferrous Metal Company Limited. The company holds a total of 2,425,000 shares amounting to 97% of the total shares.

This subsidiary consists of a plant that recycles lead from used batteries. Most of the lead produced is sold to Thai Storage Battery Public Company Limited to minimize the effects of price volatility and raw material scarcity.

- 3.) Power Plas Company Limited. The Company holds a total of 9,999,996 shares amounting to 100% of the total shares.

The company produces plastic casing for batteries.

- 4.) 3K Traction Battery Company Limited. Thai Storage Battery Public Company Limited holds a total of 1,999,993 shares amounting to 99.99% of the total shares.

3K Traction Battery Company Limited manufactures forklift battery metal cases for the company and offers to lease, supervise and maintain forklift batteries in addition of providing services after sale to other companies in general.

- 5.) Thai Storage Battery (Japan) Company Limited. The company holds a total of 10 shares which amounts to 16.67 percent of the total shares.

A joint venture in Japan, Thai Storage Battery (Japan) Company Limited distributes automotive and electric forklift batteries with services after sale and other sales promotions in Japan.

Sales by Products of Thai Storage Battery Public Company Limited

	2017		2016		2015	
	Thousand Baht	%	Thousand Baht	%	Thousand Baht	%
Domestic Sales						
Automotive and Other Batteries	2,352,722	44.54	2,714,347	51.10	2,643,182	52.27
Motorcycle and Lighting Batteries	184,326	3.49	179,095	3.37	154,855	3.06
Other	286,630	5.43	430,340	8.10	136,303	2.70
Total Domestic Sales	2,823,678	53.45	3,323,782	62.58	2,934,340	55.24

	2017		2016		2015	
	Thousand Baht	%	Thousand Baht	%	Thousand Baht	%
Export Sales						
Automotive and Other Batteries	2,257,265	42.73	1,718,827	32.36	1,795,624	35.51
Motorcycle and Lighting Batteries	201,863	3.82	267,991	5.05	326,896	6.46
Other	-	-	979	0.02	-	-
Total Export Sales	2,459,128	46.55	1,987,797	37.42	2,122,520	39.96
Export and Domestic Sales						
Automotive and Other Batteries	4,609,987	87.26	4,433,174	83.46	4,438,806	87.78
Motorcycle and Lighting Batteries	386,189	7.31	447,086	8.42	481,751	9.53
Other	286,630	5.43	431,319	8.12	136,303	2.70
Total Export and Domestic Sales	5,282,806	100.00	5,311,579	100.00	5,056,859	100.00
Sales Growth (%)	(0.54)		5.04		(2.28)	

Production Capacity of Thai Storage Battery Public Company Limited

	2017	2016	2015
Full Production Capacity (unit : batteries)			
Automotive and Other Batteries	4,200,000	4,200,000	4,200,000
Motorcycle and Lighting Batteries	1,800,000	1,800,000	1,800,000
Total	6,840,000	6,840,000	6,840,000

Risk Factors

Raw Material Risk Factors

Over 60% of the raw materials used in the manufacture of Lead Acid Batteries are pure lead and lead alloy. Therefore, the fluctuations (increases or decreases) in lead prices will directly affect the operating profit. The degree of the impact depends upon the company's ability to manage costs. In order to manage this risk factor, the company has divided the raw material risk into two main factors:

1. Raw Material Procurement Risk Factors

Lead

Domestic production remains insufficient and the quality is not as required by the current demands of the battery industry. Thus, there is a need to import pure lead, especially, from exporters such as China and Australia, etc.

- For pure lead, the company manages risks by seeking raw materials from foreign distributors. When raw materials have passed tests and meet the company's production standards criteria, an agreement is drafted for the purchase of pure lead to ensure sufficient supply to meet the company's demands for the whole year.
- For lead alloy, the company has managed risk by establishing Thai Nonferrous Metal Co., Ltd., a smelting plant that produces lead alloy from old batteries. The company hopes to reduce the impacts of supply fluctuation with this risk prevention measure. The company can also purchase lead alloy, which is equivalent in quality, from other suppliers.

Plastic

Domestic battery markets in Thailand have been growing continuously every year, resulting in the growing demand for parts used in producing batteries. The battery plastic casing considered as a crucial part of the production and if the production cannot meet the demand due to the expanded battery markets, the company, therefore, decides to prevent the risk from shortage by establishing the "Power Plas Company Limited" to manufacture and supply the battery plastic casing to the company.

2. Raw Material Price Fluctuation Risks

Lead prices fluctuate depending upon supply and demand of the world market. The company and its suppliers confirm prices one month preceding delivery by referring to the market price of the London Metal Exchange. Another company's main materials is battery casing which is made from polypropylene (PP), another raw material with prices tied to the price of crude oil and fluctuate according to world market prices. The company purchases the polypropylene (PP) directly from the manufacturers and delivers it to the battery casing manufacturers. This measure enables the company to negotiate for proper raw material prices and ensures sufficient raw material supplies to meet demands.

Marketing Risk Factors

The company's goal is becoming a leader in all types of lead-acid batteries. The company's ratio for domestic sales and export is approximately 50:50 as a means of dispersing the impact of marketing risks.

1. Domestic Market Risk Factors

- 1.1 The domestic automotive battery market can be classified into the following two types of market: Original Equipment Market (OEM) is a stable market with operational standard and clear production target and delivery date. Car assembly plants are the main customers of battery manufacturers because most consumers choose to replace old batteries with the same type and brand of battery that originally came with the vehicle. However, most of the car assembly plants in Thailand belonged or co-owned by Japanese firms. Most of these plants would mainly purchase batteries from their joint ventures in Thailand. As a result, manufacturers would have more difficulties when dealing with Japanese assembly plants than the Europe and U.S. assembly plants. This is the opportunity for operators to expand their customer bases.
- 1.2 Replacement Equipment Market (REM) – This market has large product varieties in order to meet the diversified needs of consumers in the market and to replace the original batteries that are damaged or deteriorated. Presently, the REM is very competitive in terms of price, quality and product diversification offered from both domestic and overseas manufacturers.

In order to manage the REM risks and increase the Company's competitiveness, the Company has a policy to enhance sales potential by developing new products, improving packages' appearances and design to be more modern and attractive. The Company also plans to publicize its brand by giving official support to sport activities such as Thai Boxing competition, being a sponsor of Football club, 3K / ISUZU One Make Race, etc. Furthermore, the Company also emphasizes on enhancing after-sales service through distribution channels under the name "3K Shop" and hotline for emergency assistance for our customers.

2. Export Market Risk

Automotive industry has been experiencing constant growth in the global market. This leads in increasing demand for batteries, particularly in the Asia-Pacific, Middle East and Africa region, as well as higher competition in the market. Our main competitors, in terms of price, quality, product varieties marketing strategies are manufacturers from Korea, China, India and Indonesia.

In managing export market risks, the company has diversified its products, placed more suitable and tangible product positioning in each market, selected and recruited potential new dealers in the market in order to add distribution channels, adjusted strategic plan for market expansion, prepared market surveys and research to analyze and determined more effective and competitive marketing plan.

Technological Risks

Despite rapid technological advances in battery manufacturing, the company faces no risks due to technological changes in production because the primary raw material remains lead, which is more commercially suitable than other more costly materials, such as silver or cadmium. Hence, developing technology for production procedures for lower production costs per unit is essential to the company's competitive edge in the battery manufacturing industry. For this reason, the company maintains policy for investments in modern machinery to minimize waste and improve production efficiency.

Exchange Rate Risk Factors

At present, the company imports pure lead from overseas by paying in US dollars and thereby creating potential risks due to currency fluctuations.

Hence, the company manages the aforementioned risk by exporting its products and receives payments in foreign currency such as US dollars and pays for imported raw materials with the same currency. In addition, the company protects itself against risk due to exchange rate fluctuations by making future currency purchase/sale contracts in relation to the period of payment to be received. This helps the company minimize the exchange rate fluctuation risks to some extents.

Risk from Interest Rate

The Company and its subsidiaries have the risk from significant interest rate related to the bank deposit, bank overdraft, short-term loan, and long-term loan with interests and liabilities according to the financial lease. Most financial assets and liabilities carry the interest rate which is changed in accordance with the market rate or carry the fixed interest rate similar to the current market rate. Significant financial assets and liabilities can be categorized based on the types of interest. For the assets and financial liabilities with fixed interest rate can be classified based on the maturity date or the repricing date (if this occurs before the maturity date) as follows;

Doubtful Debt Risk Factors

The company is at risk in offering credit involving accounts receivable and trade debtors. However, the risk level is not high while the risk is manageable and the debts remain collectable. The company has a wide customer base, so a Credit Committee has been established to approve credit and collect debts from each customer. For these reasons, the company does not anticipate any significant losses due to the aforementioned debts. For existing agencies, the company has shared good trade relationships for over 20 years, so existing agencies are unlikely to suspend/miss their payments to the company.

Environmental Cost Management Risk Factors

Because lead is the main raw material in battery manufacturing industry, and lead is hazardous to health and environment, the company must implement controls to prevent lead from contaminating the environment and establish measure to protect employees from exposure to the hazards of lead poisoning. In addition, the company must operate under the supervision of various government agencies in compliance with regulations or laws enforced by these agencies. As a result, the company will inevitably incur additional costs for environmental management aimed at meeting government regulations. The aforementioned costs are incomparable to the costs for curing the environment in the event of any environmental impact for which the company is liable.

Shareholder Structure and Management

A list of the top ten shareholders containing share holdings and percentage of total shares at the most recent closing of the share register book on 21 September 2017.

Name	Number of Shares	Percent of Shares (%)
SIAM MAGI COMPANY LIMITED	10,200,000	51.00%
HITACHI CHEMICAL CO., LTD.	7,170,346	35.85%
Mr. SOMI JOHNY ISSA MASSOUD	1,405,000	7.03%
Mrs. KATIA ABOUD ABD ELMASIH	600,000	3.00%
Ramkhamhaeng Hospital Public Company Limited	60,300	0.30%
Mrs. SIRINEE RANGSIYAPORNRAI	55,000	0.28%
Thai NVDR Company Limited	40,800	0.20%
Mr. BOONKIET OUASUDKIT	28,000	0.14%
Mr. SOMCHAD PONGPANAKRAI	25,600	0.13%
Mr. JANE WIPAWAPANICH	23,000	0.12%
	19,608,046	98.04%

Management and Control

The company's board of directors values the Code of Best Practices and Corporate Governance according to the guidelines set forth by the Stock Exchange of Thailand.

Management and Control Policy

The company's board of directors is well aware of its roles and responsibilities as the directors of a registered company and promotes activities leading to excellent corporate governance in order to raise the company's competitive advantage and build confidence in shareholders, investors and all parties concerned with efficient and transparent Management. The company board's policy is for the company to disclose all important and relevant information in an accurate, complete and timely manner in compliance with the regulations of the Stock Exchange of Thailand and the Security Exchange Commission. Moreover, the company encourages its directors to adhere to "Code of Best Practice for Directors of Listed "Companies" and "Best Practice Guidelines for Audit Committees" provided by the Stock Exchange of Thailand.

Shareholder Rights

The company's board of directors gives equal value and supervision to the rights that shareholders have or should have, which not only includes legal rights, but also the rights to attend and vote in the shareholder's general meeting in order to decide upon major changes in management policies and to exercise their rights to remove directors and the rights to receive the profit. The Chairperson of the sub-committee is always present at the shareholders' general meeting to provide the shareholders an opportunity to ask questions regarding relevant matters. In addition, the company also offers its shareholders the choice of appointing an Audit Committee Director, by proxy, when the shareholder is unable to attend the meeting.

Shareholders' Meeting

The company holds an annual common shareholders' meeting within four months of the end of each fiscal year whereby the company sends documents containing the date, time, venue and agenda concerning discussions and voting activities to its shareholders seven days before the meeting. In the meeting, the company allows shareholders to freely inquire, comment and suggest issues concerned with the company's business operations. Furthermore, all key inquiries, comments and suggestions are accurately recorded in the minutes to the meeting for future reference and examination by shareholders.

The company arranged for the board of directors, managing directors, audit committee directors, executives, auditors and legal consultants to attend the meeting and answer questions from shareholders.

The Board of Directors has complied with good corporate governance as the followings:

- Record Date used as a criteria to set shareholder list, the Annual General Meeting (AGM) of Shareholders to allow shareholders to have more time to consider the invitation.
- Notification of the meeting date is announced to shareholders 1 month in advance of the meeting date so that shareholders can plan and schedule their attendance.
- Provide opinions of the Board of Directors on each agenda with annual report and proxy form, which contains a detailed statement of evidence required for the proxy, enclosed together with the invitation letter.
- Before the meeting the chairman of the meeting explained how to vote and count the votes for each agenda item.
- During the meeting, shareholders were given the equal opportunity to express their views and make inquiries and record important issues in the minutes of the meeting. After the meeting the minutes are published through the channels of The Stock Exchange of Thailand and the company's website.

Equal treatment of shareholders

The Board of Directors has complied with good corporate governance as the followings:

- Publish the meeting document 30 days prior to the meeting date.
- Open opportunities for shareholders to propose agenda items for the AGM Annual General Meeting (AGM) and to nominate a person to be the director in advance from January 1 until February 15 by informing the shareholders through the channel of The Stock Exchange of Thailand (SET). The Board of Directors holds the policy not to add unnecessary agenda without prior notice. Especially the important agenda that shareholders need to take time to study the information before making a decision.
- Encourages shareholders to use proxy forms that can determine voting direction (Form B) as well as to nominate two independent directors as an option for shareholders to appoint to attend the shareholders' meetings.
- Use voting cards on every agenda. Especially in the election of directors, the shareholders can vote individually, in which each person's votes equal to the number of shares he/she holds for one director election.

- Clearly state that the directors who have interest in the consideration have no right to vote and not to present at the meeting on such agenda.
- Establish an employee adherence to the company's confidential information retention and not to exploit such information for himself/ herself or others from the company's confidential information.

Stakeholder Rights

The company values the following important and related stakeholder rights:

Employees The Company deals with all employees equally and provides them with fair and suitable returns.

Suppliers and Creditors The Company deals with all of its trade partners and creditors fairly and in compliance with agreements.

Customers The Company shows responsibility for its customers by manufacturing quality products that meet international standards and selling them at suitable prices.

Shareholders The Company operated at maximum capability to achieve good performance so shareholders receive appropriate returns.

Competitors The Company adheres to legal regulations and good competition practices to uphold the competition norm.

Community and Society The Company meets international standards for pollution treatment systems, while operating responsibly and ensuring that there are no impacts on the community or social environments.

The company is highly conscious of manufacturing processes involving the use of lead as a raw material. Hence, the company has carefully chosen to situate its plant inside an industrial estate regulated by the Industrial Estate Authority of Thailand and established strict preventive rules and regulations related to industrial operations for employees in addition to arranging for semi-annual physical check-ups.

Leadership and Vision

The company's board of directors is composed of individuals with ability, knowledge and experience in the company's business field to perform the duty of setting company policy and direction in addition to overseeing the management team in operating the business by established policies with responsibility, integrity and corporate governance in the interests of the company and its shareholders.

The company also places importance on efficient internal control and audit and review systems to ensure that the company operates under legal regulations and good control. The company has also established employment rules and regulations for compliance with employee guidelines to follow.

Board of Directors

The board of directors is not only required to comply with the law, objectives, regulations and shareholder's resolutions, but also has the following responsibilities:

- Determining the issuance of interim dividends to shareholders.
- Determining the issuance of awards, bonuses or other benefits to part-time and fulltime employees, except for the board of directors themselves

- In performing work in line with its responsibilities, the board of directors may appoint one or many directors or other individuals to act on a director's behalf.
- The board of directors holds at least one meeting every quarter.
- The company's board of directors appoints a number of directors to be managing directors as deemed fitting with supervisory responsibilities as set forth by the board.
- The Board is authorized to invite any individual to offer consultation involving the company's operations to the Board.

Director and Executive Recruitment

The company's board of directors consists of at least five directors, and more than half of the total number of directors must be Thai residents.

Nominations of directors have not been done by nominating committee because the company has not established nominating committee and appointments to the company's directors are carried out by the shareholders' general meeting under the following criteria:

1. Each shareholder is entitled to one vote per share held.
2. Directors can be elected individually or as a group, depending upon the shareholders' preference. During the election, each shareholder must cast all of his/her votes for only one person. Shareholders are not permitted to divide votes between two or more nominees.

The nominees with the most votes are elected as directors in a descending order according to the quota for each election. If remaining directors have equal amounts of votes, the Chairman of the meeting shall make the final decision.

Dismissal of Directors

The meeting of common shareholders can dismiss a director or directors before the end of their term. This can be done in the shareholders' meeting with no less than 75 percent of the total votes, and the total shares must be no less than half of the shares present at the meeting with rights to vote.

No ratios have been set for directors representing each group of shareholders and rights of minor shareholders in the appointment of directors.

Balance of Power for Non-Executive Directors

The company's current organizational structure contains one board of directors made up of 9 directors:

1. Executive Directors 2
2. Non-Executive Directors 3
3. Independent Directors 4

As a result, there are 4 independent directors, which accounts for 44.44% of the total member of the board. Three Executive Directors consisted of:

Name list	Scope of duties
1.Mr. Toshinori Osumi	Chief Executive Officer
2.Mr. Shohei Yasuda	Director of Finance and Administration

Four Independent Directors consisted of:

Name list	Independent Director
1. Mr. Nontaphon Nimsomboon	Chairman of the Audit Committee
2. Mr. Veerachai Srikajon	Audit Committee
3. Mr. Suchat Chanlawong	Audit Committee
4. Mr. Apichai Chawacharoenpun	Independent Director

Definition “Independent Committee”

The company defines the “Independent Committee” in accordance with the Principle of the Good Corporate Governance and the SEC Rule of Practices to assure the investors and to maintain the equilibrium of effective management. Therefore, the company defines “Independent Committee” as a committee, who does not take accountability in managing the company, or subsidiaries, or joint ventures, and be independent out of Management and potential shareholders, and has not engaged with the business of company in the way that may restrict their expression of the independent opinion. “Independent Committee” shall be qualified as follows.

1. Being a person holding not more than 1% of the total number of shares with voting rights in the company, affiliates or associated companies.
2. Have no participation in management or not an employee or consultant with salary. Not being a professional service provider, an auditor, an attorney or a professional who has limited opinion on performance of company, affiliates or associated companies. Not the controlling person of the company, affiliated company or associated company who may have a conflict of interest and must be vacated from the position or position that may arise at least for 2 years.
3. Have no business relationship in a manner that limits the independence of practice. No directorship duties which have a significant amount or value in proportion to the company’s income in accordance with the criteria and have no interest or interest, either directly or indirectly, in finance and administration of the company, affiliates or associated companies. Not persons who may have conflicts of interest in a manner that would render the company incapable of being independent.
4. Not close relatives of senior executives, major shareholders of the company, affiliates associates or persons who may have conflict of interest and are not appointed as agents who maintain benefit of directors or major shareholder.
5. Not appointed to represent the interests of the company’s directors, major shareholders or shareholders who are related to the major shareholders of the company.

6. Can perform duties and express opinions or report performance according to assigned duties by the Board of Directors independently without the control of managements or major shareholders of the company, including those related or who are close relatives of such person.

These definitions are equivalent to the requirements set by the Securities and Exchange Commission and the Stock Exchange of Thailand.

Corporate Governance of Subsidiary and Joint Venture Company

Nomination and casting votes for appointing directors in the subsidiaries will be implemented by the Management. The nomination and exercising of such right must be approved by the Board of Directors as well. Any persons appointed to be a director in the subsidiaries will be responsible for implementing the best performance for that subsidiary. In addition, the Company has established that such appointed person must be approved by the Board of Directors before resolving a resolution or exercising the right to cast a vote on significant matters at the same level being approved by the Board of Directors in case of the operation of that company.

Additionally, in case of subsidiaries, any persons appointed by that company will be responsible for establishing the subsidiary's regulations on transactions with related companies, collecting data and recording accounts so that the company is able to audit and collect for providing consolidated financial statements in time.

Director and Executive Remuneration

During 2017, director remuneration comprised of the following meeting allowances and individual director bonuses (baht).

No.	Director's Name	Position	Remuneration		
			Board of Directors	Audit Committee	Total
1	Mr. Kavie Korphaibool	Chairman of Board of Directors	350,000.00	-	350,000.00
2	Mr. Siritas Prasertmanukitch	Vice-president	325,000.00	28,000.00	353,000.00
3	Mr. Veerawat Korphaibool	Vice-president	335,000.00	-	335,000.00
4	Miss Veerawan Korphaibool	Vice-president	310,000.00	-	310,000.00
5	Mr. Veerawin Korphaibool	Vice-president	335,000.00	-	335,000.00
6	Mrs. Srisuvarn Korphaibool	Director	310,000.00	14,000.00	324,000.00
7	Mr. Adisak Tongkhaimook	Director	285,000.00	-	285,000.00
8	Mr. Nontaphon Nimsomboon	Chairman of the Audit Committee, Independent Director	360,000.00	120,000.00	480,000.00
9	Mr. Suchat Chanlawong	Audit Committee, Independent Director	360,000.00	72,000.00	432,000.00
10	Mr. Veerachai Srikajon	Audit Committee, Independent Director	360,000.00	72,000.00	432,000.00
11	Mr. Apichai Chawacharoenpun	Independent Director	360,000.00	-	360,000.00
12	Mrs. Sirinuj Thavadh	Independent Director	285,000.00	-	285,000.00

No.	Director's Name	Position	Remuneration		
			Board of Directors	Audit Committee	Total
	Total		3,975,000.00	167,000.00	4,281,000.00

In the first annual common shareholders' meeting of 1/2017, a resolution was passed to approve remuneration for directors within a limit of no more than 5 million baht. This resolution will be effective until the shareholders make changes for other arrangements. At present, the company has no subcommittee to set remuneration rates. However, there are proper consideration processes by using information from other companies in the same industry and of comparable size. Company performance is also used in the process of consideration.

For directors who are employees of Hitachi Chemical do not receive allowances and bonus. Directors whose names are as follows;

1. Mr. Yoshihiro Nomura As director on 25 July 2017
2. Mr. Toshinori Osumi As director on 25 July 2017
3. Mr. Shohei Yasuda As director on 27 September 2017
4. Mr. Hiroaki Yamaguchi As director on 27 September 2017
5. Mr. Naoto Okada As director on 27 September 2017

Furthermore, consideration of executive remuneration, which includes salary, bonuses and other benefits (fuel expenses, telephone allowances, food expenses, etc.), is based mainly upon company performance, including evaluations of individual management performance. In 2017, the total compensation for 9 executives is at amount of 68.44 million baht, the average person per year was 7.605 million baht.

For both non-monetary and non-monetary remuneration.

Director's remuneration the past 3 years are as follows:

No.	Name and Surname	Amount (Baht)					
		2017 Allowances	2016 Bonus	2015 Allowances	2015 Bonus	2015 Allowances	2015 Bonus
1	Mr. Kavie Korphaibool	150,000	200,000	150,000	200,000	150,000	200,000
2	Mr. Siritas Prasertmanukitch	153,000	200,000	138,000	200,000	138,000	200,000
3	Mrs. Srisuvarn Korphaibool	124,000	200,000	131,000	200,000	117,000	200,000
4	Mr. Veerawat Korphaibool	110,000	200,000	117,000	200,000	117,000	200,000
5	Miss Veerawan Korphaibool	135,000	200,000	117,000	200,000	117,000	200,000
6	Mr. Veerawin Korphaibool	135,000	200,000	85,000	200,000	138,000	200,000
7	Mr. Nontaphon Nimsomboon	280,000	200,000	210,000	200,000	110,000	200,000
8	Mr. Veerachai Srikajon	232,000	200,000	145,000	200,000	210,000	200,000
9	Mr. Suchat Chanlawong	232,000	200,000	170,000	200,000	160,000	200,000
10	Mr. Apichai Chawacharoenpun	160,000	200,000	110,000	200,000	170,000	200,000
11	Mrs. Sirinuj Thaivadh	85,000	200,000	110,000	200,000	110,000	200,000

No.	Name and Surname	Amount (Baht)					
		2017 Allowances	2016 Bonus	2015 Allowances	2015 Bonus	2015 Allowances	2015 Bonus
12	Mr. Adisak Tongkhaimook	85,000	200,000	110,000	200,000	110,000	200,000
	Total	1,881,000	2,400,000	1,647,000	2,400,000	1,638,000	2,400,000

Board of Directors Meetings

With highly proficiency of management experience, now the company Has 9 sophisticated board of directors, which one is enable to take three-year-period position with unrestricted period frequency. All detail of each delegated person are as followings;

No.	Name and Surname	Position	Accreditation Year	Latest Accreditation Year	Next Accreditation Year	Been Appointed/ Nominated as One of Board Members for Year 2018
1	Mr. Yoshihiro Nomura	Chairman of Board of Directors	2017	-	2019	No
2	Mr. Toshinori Osumi	Vice-president	2017	-	2019	No
3	Mr. Shohei Yasuda	Director	2017	-	-	Yes
4	Mr. Hiroaki Yamaguchi	Director	2017	-	2019	No
5	Mr. Naoto Okada	Director	2017		2020	No
6	Mr. Nontaphon Nimsomboon	Chairman of the Audit Committee, Independent Director	1998	2016	2019	No
7	Mr. Suchat Chanlawong	Audit Committee, Independent Director	1997	2015	-	Yes
8	Mr. Veerachai Srikajon	Audit Committee, Independent Director	1995	2015	2018	No
9	Mr. Apichai Chawacharoenpun	Independent Director	2009	2017	2020	No

The company will send invitations for every board of directors meeting along with the meeting agenda and accompanying documents at least seven days before the meeting so the company's directors will have sufficient time to prepare for the meeting. Furthermore, the minutes to the meeting will be recorded in writing with copies for each director and one copy of the minutes will be kept at the company's offices for the inspection of related individuals. Mr.Wirachai Bunchuchen is corporate secretary of the meetings.

Secretary of the Company The Board of Directors passed the resolution of appointing Mr.Wirachai Bunchuchen to be the secretary of the Company on February 26, 2008.

The Biography of Company Secretary

- Mr. Wirachai Bunchuchen
- B.Acc : Faculty of Economics and Business Administration, Kasetsart University
- Master of Accountancy, Faculty of Management and Tourism Burapha University

In the past year, the Board of Directors held 6 meetings. The boards of directors have and each director attended the meetings as follows:

No.	Director's Name	Position	Board of Directors	Meeting		Proportion Holding Company
				Audit Committee	Shareholder's Meeting	
1	Mr. Yoshihiro Nomura	Chairman of Board of Directors	1/2	-	-	-
2	Mr. Toshinori Osumi	Vice-president	2/2	1/1	-	-
3	Mr. Shohei Yasuda	Director	1/1	1/1	-	-
4	Mr. Hiroaki Yamaguchi	Director	1/1	-	-	-
5	Mr. Naoto Okada	Director	1/1	-	-	-
6	Mr. Nontaphon Nimsomboon	Chairman of the Audit Committee, Independent Director	6/6	6/6	1/1	-
7	Mr. Suchat Chanlawong	Audit Committee, Independent Director	6/6	6/6	1/1	-
8	Mr. Veerachai Srikajon	Audit Committee, Independent Director	6/6	6/6	1/1	0.10%
9	Mr. Apichai Chawacharoenpun	Independent Director	6/6	-	1/1	-

Directors who resigned during the year attended the Board of Directors' Meeting as follows:

No.	Director's Name	Position	Board of Directors	Meeting		Proportion Holding Company
				Audit Committee	Shareholder's Meeting	
1	Mr. Kavie Korphaibool	Chairman of Board of Directors	4/5	-	1/1	7.48%
2	Mr. Siritas Prasertmanukitch	Vice-president	5/5	4/4	0/1	1.74%
3	Mr. Veerawat Korphaibool	Vice-president	5/5	-	1/1	9.85%
4	Miss Veerawan Korphaibool	Vice-president	4/5	-	1/1	10.53%
5	Mr. Veerawin Korphaibool	Vice-president	5/5	-	1/1	10.99%
6	Mrs. Srisuvarn Korphaibool	Director	4/5	2/4	1/1	5.05%
7	Mr. Adisak Tongkhaimook	Director	3/3	-	1/1	-
8	Mrs. Sirinuj Thairadh	Independent Director	3/3	-	1/1	-

Subcommittees

At present, the company has only one subcommittee consisting of the Audit Committee which was established on 14 December 1999 with a committee term of two years. Currently, there are three directors on the Audit Committee.

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Mr. Nontaphon Nimsomboon	Chairman of the Audit committee
Mr. Suchat Chanlawong	Audit Committee
Mr. Veerachai Srikajon	Audit Committee

Mr. Nontaphon Nimsomboon as the chairman of the Audit committee who has knowledge and experiences in reviewing the financial statements of the company. The chief of executive officer of the audit department was appointed to be secretary of the audit committee.

The Audit Committee has established the scope of authorization, duty, and responsibility of the Audit Committee of Thai Storage Battery Public Company Limited. It focuses on the efficient mechanism of the Board of Thai Storage Battery Public Company Limited for supervising the operations of departments of Thai Storage Battery Public Company Limited and other sections in the group to ensure that they are in compliance with good corporate governance principles, including providing the appropriate risk management, qualified internal control system and internal audit. These will help the Company to be an efficient, well accepted, and reliable organization based on the vision of Thai Storage Battery Public Company Limited and the Charter of the Audit Committee approved by the Board of Directors on February 24, 2015.

The Audit Committee has to report relevant matters to the Board of Directors. Their primary responsibilities are:

1. Reviewing the internal performance and providing suggestions to the Board of Directors and/or the Management in case the Audit Committee is of the opinion that such suggestions are useful to the efficient governance and compliance of each department and achieve the objectives in line with the good governance principles.
2. Reviewing the internal control system, risk management, and security of the Company's information technology to be concisely and effectively in accordance with the generally accepted standards.
3. Reviewing the Company's operation to ensure that it is in compliance with policies, plans, rules, regulations, related laws, and ethical requirements.
4. Reviewing the accuracy and appropriateness of applied accounting policies and the financial reports of the Company and sections under the Group to ensure that they are accurate and reliable, and disclose sufficient information in conformity with generally accepted accounting principles.
5. Selecting and nominating an appropriate person to be the Company's auditor, and fixing the proper remuneration of the auditor so that the Board of Directors and shareholders can approve, respectively under the scope of related laws and regulations.
6. Promoting the independence of external auditors and supporting the operation of internal auditors to ensure that it is independent, accurate, and compliant with generally accepted standards, including encouraging the coordination among the Management of the Company, external auditors, and internal auditors appropriately and sufficiently.
7. Studying letters submitted by external auditors to directors of the Company, reporting observations and suggestions relating to weakness, irregular statement, or significant error detected from the audit, considering and providing opinions to the Board of Directors. In case such observations or suggestions are not considered or implemented without sufficient reasons, discussing with the Management and presenting to the Board of Directors for reconsideration.
8. Providing advices relating to appointment, withdrawal, and transfer the Chief Executive Officer of the Audit Department to the President of the Company.
9. Providing advices relating to annually considering on merits of employees in the executive level and internal auditors to the President of the Company.
10. Supervising, advising, and supporting the independent operations of internal auditors reviewing the audit report of the internal auditors.
11. Granting an approval of action plans and audit plans, manpower plan, and the plan for development of knowledge, skill, and specific characteristics of personnel in the audit department.
12. Reviewing conflict of interests between the Company and directors, executives, or employees of the Company.
13. Reviewing the summary and supporting evidence in case employees or directors possibly perform fraudulent act or abuse of official functions which cause damages to the Company, presenting such reviewing results to the Board of Directors for consideration immediately.

14. Auditing and revising the Company's rules, regulations, and practices regarding to authorization of internal auditors at regular intervals, at least every year, to ensure that they are appropriate and up-to-date, and provide sufficient independence to the internal auditors for the efficient operations. In this regard, the Audit Committee proposes the limitation and possibly existing weakness to the Board of Directors in order to modify and improve it.
- 15.. Other issues assigned by the Board of Directors.

Internal Audit

In 2017, the Chief Executive Officer of the Internal Audit Department is Miss. Patitta Arreesanan. The Head of the Internal Audit Department and the Audit Committee commented that auditors have performed their duties efficiently and suggested the executives of the Company to develop knowledge and skills of auditors since having good auditors will cause valuable benefits to the Company in the future.

Managing Conflicts of Interest

The board of directors will make decisions for cases involving transactions with conflicts of interests in order to maximize the company's benefits. Furthermore, if conflicts of interest arise, the Audit Committee shall be responsible for rectifying the conflict. Related financial accounts must also be fully disclosed in the addendums to financial statements. The Audit Committee is also responsible for reviewing such matters.

Business Ethics

The company strictly adheres to good business ethics in line with best practice associated with the corporate governance standards set forth by the Stock Exchange of Thailand. The board of directors, management teams and employees must follow company regulations and the Code of Best Practice for Directors of Listed Companies.

Internal Audit and Control Systems

Concerning the sufficiency and suitability of internal control, the board of directors defers to the opinions of the Audit Committee. Concerning risk management, the board of directors has not set up a specific committee for risk management. Therefore, risk management remains under the direct control and supervision of the board of directors.

Board of Directors Reports

The board of directors is well aware of its responsibilities as directors of a listed company in ensuring the accuracy and completeness of the company's financial reports in terms of accounting information, including compliance with Generally Accepted Accounting Principles (GAAP) to help shareholders understand the company's actual financial situation and performance.

The board of directors views the company's financial statement for 2016, which has been audited by certified external auditors and reviewed by the Audit Committee, as being complete, correct, reliable and compliant with Generally Accepted Accounting Principles with use and regular adherence to proper accounting policy. The information disclosed is sufficient and in accordance with relevant laws and regulations.

Investor Relationships

The board of directors places great importance in the disclosure of information with impact on the company's share price. The company's management team has ensured the disclosure of information is accurate, reliable and thorough. At the moment, the company has not set up an Investor Relations Department as the workload in this area remains limited. However, the company publicizes its information through the channels provided by the Stock Exchange of Thailand. The company has also assigned a Senior Accounting Manager to perform this duty instead. For more information, investors may call 02-709-3535, extension 1501, during office hours.

Controlling Use of Insider Information

The Company has issued policy to control the usage of insider information for personal gain. This code of conduct is as follows:

Directors, managers, spouses or children under 18 must not disclose to the public any insider information for the purpose of buying, selling, transferring or receiving transfer of shares issued by the company, which means adherence to the laws governing securities businesses. Moreover, the aforementioned must notify the company of such activities for the company's subsequent reports.

Directors, managers, spouses or children who are minors must not buy, sell, transfer or receive transfer of shares issued by the company for a period of one month before public disclosure of the company's financial statement. The company will consider penalties for individuals found in violation of the aforementioned code as deemed fitting in each case e.g. verbal or written warning, probation, suspension, decommission or dismissal, depending upon the case. In addition, the company has instructed the executives regarding their duties in reporting company shares held and set penalties according to the Security and Stock Exchange Act (1992) and the stipulations of the Stock Exchange of Thailand.

Dividend Payment Policy

The company has policy for paying "25 to 50 percent of its net profits from the consolidated income statement" as dividend to its shareholders. However, the company's dividend payments must be in accordance with the law under the Public Company Act 1992, Section 115. As for policy stipulating that subsidiaries must pay dividend to the company, According to the annual net profit ratio of each company compared to the dividend that the company is required to pay to shareholders, shall be used as a guideline.

The Sustainable Development

Sustainability

The Board of Directors has policies and operations of the Company and its subsidiaries by adhering to corporate and social sustainability as a whole, which is part of our business procedures.

To focus on the effectiveness of social responsibility through sustainability reporting according to the framework of the report, which are internationally accepted as follows:

1. Corporate governance
2. Business conduct with fairness
3. Anti-corruption
4. Respect for human rights
5. Fair labor practices
6. Consumer responsibility
7. Environmental preservation and Energy conservation
8. Social and community development
9. Innovation and Dissemination of innovation
10. Sustainability report

1. Corporate Governance

Our company shall operate the business in accordance with the laws relating to the business of the company. We must maintain the steps and procedures in conducting honest business. We are confident that conducting business under the scope of honesty, morality and ethics is a good business policy, which will result in sustainable business growth. Our company respects and adheres to local traditions

Our company will operate its business with honesty. This includes financial policy, budget scheme and evaluation of investment in various projects concisely and transparently. We aim for our directors, all executives and employees are of our company to faithfully adhere to the company's policy and accounting process and other measures. Employees are anticipated to report to the management team directly on any suspicions of organizational ethical violation which may be responsible for the offense or detrimental to the Company's reputation.

The company has prepared the Code of Business Ethics and Operation and 2017 Operation Plan in order to communicate to employees to enhance their understanding, thus, could be implemented.

2. Business conduct with fairness

Treat all business partners equitably and fairly with integrity, as well as have respect to intellectual property including:

2.1 Fair Competition : Compliance with the terms agreed with sellers or creditors strictly as according to commitments given in the joint business practices.

Guidelines for Practice

- Specify terms and conditions in the contract of sale. If any of the conditions could not be met, notifications must be given to the parties to jointly consider solutions. Provide sufficient, accurate and timely information to customers.
- Deliver products on time and meet quality agreed with customers

2.2 Promote Corporate Social Responsibility : Provide opportunities for buyers and sellers to participate in the company's social activities both directly and indirectly.

Guidelines for Practice

- Can participate in social activities with the company with the support of capital or things as per ability and desire.

2.3 Respect for property rights: Promote the use of property and strictly enforce intellectual property rights.

Guidelines for Practice

- Encourage the managements and employees to utilize the company's resources and assets effectively to enhance competitiveness. Promote the use of copyrighted products and services that are legitimate.

3. Anti-corruption : Accepting objects or benefits that influence decision-making in the performance of duties. (Anti-corruption policy)

Guidelines for Practice

- It is forbidden for employees to receive items or other benefits from persons who are related to the Company.
- In cases where partners are involved in fraudulent activity, the company reserves the right to suspend the business immediately.

The Board of Directors had and promulgated an Anti-Corruption Policy as follows:

Directors, executives and employees of the company must not accept fraud in any form, either directly or indirectly, such as offering a commission or gift in order to supply suppliers or suppliers of governmental or governmental suppliers or related persons and vice versa. However, this prohibition does not include gifts such as the appropriate festive or traditional gift that the recipient will receive is reasonable.

4. Respect for Human Rights:

The Company respects human rights and respects the human dignity of all employees, which is the foundation of the business.

Guidelines for Practice

- Manage work environment and system to ensure employees' safety of life, property and to have work condition with good hygiene.
- Provide health insurance for employees.
- Establish Provident Fund for employees.

In 2017, our company has conducted the following activities.

1. Medical and health checks up for employees and managements
2. Distribute drinking milk to all employees and management daily.

5. Fair Labor Practices:

The company treats employees fairly according to the principles of universal human rights and good ethics to lead a peaceful society.

Guidelines for Practice

- Not restricting races, colors, genders, religions and nationalities in employment considerations and following laws relating to employment of people with disabilities.
- Encourage employees to regularly develop their skills and knowledge
- Fairness in employment terms and conditions including reasonable compensations in the form of wages, salaries and bonuses based on their competency.
- Appoint and transfer the staff honestly and based on their knowledge, ability and suitability of the staff.
- Strictly follow the laws and regulations in relation with employees.

6. Consumer responsibility

Our company practices the ISO / TS 16949 quality management system with the quality policy of “Producing quality products and creating satisfaction for customers along with an ongoing quality improvement” so purchasers can be assured that in addition to receiving quality goods at fair prices, our company is also aware of the safety that may affect the environment.

Guidelines for Practice

- The Rights of Trade Confidentiality: our company has taken measures to maintain the confidentiality of our customers and will not use our customers' data for the benefit of ourselves or others.
- The Right to Express Opinions: our company has a process for customer enquiry and complaints regarding the quality, quantity and safety of the products, as well as being speedy responsive.
- The Rights to Receive Compensations: our customers receive a fair conduct in the case that our products did not meet the standards by setting the warranty under reasonable terms and periods which must comply with the Consumer Protection Act.
- The Rights to Information: our company is providing sufficiently and timely information and advice concerning products to customers.

2017 Automotive (OEM) Customers' Satisfaction Survey Results Importance placed on the followings:

Product usefulness	85.00%	Satisfaction	85.00 %
Personnel's response	90.00%	Satisfaction	90.00 %
Marketing support	90.00%	Satisfaction	90.00 %
Punctuality of product delivery	90.00 %	Satisfaction	90.00 %
Completeness of product delivered	95.00%	Satisfaction	95.00%
Error in product delivery	95.00%	Satisfaction	90.00 %
Competitive pricing	82.50%	Satisfaction	80.00 %

7. Environmental Preservation and Energy Conservation:

Our company practices the ISO 14001: 2004 Quality Management System with the policy of ongoing environmental improvement procedures and conducts, as well as to prevent pollutions caused by the products, services and activities in the production of company's batteries, in which the managements and employees are committed to the following.

Guidelines for Environmental Management Practices

- Strictly conduct all actions to comply with the laws, rules and regulations concerning the environment, which are relating to our company.
- Strive to improve, control and reduce the environmental impact of air, water and soil pollution effectively and to be higher than the standard for control and protection of environmental impact, As well as conserve energy and resources with maximum efficiency.
- Strive to improve the environmental management system by setting clear goals and objectives. And to achieve the objectives and environmental goals by reviewing the objectives and environmental goals annually.
- Promote understanding and raise awareness concerning the environments to all employees within the company by enhancing communication and environmental training.
- Disclose policies and information regarding the environmental policies to public and jointly develop the environment with the community.

Our company has been focusing on maximizing the use of resources to generate the highest effective outcome by following The Energy Promotion Conservation Act (No. 2) B.E. 2550 (2007) concrete actions. In 2016, our company conducted the following activities.

To continue with effective energy management operations and to meet the notification of the Ministry of Energy on the principles and methods of energy management in the factory and control buildings in 2009, the Energy Management Review Board has been appointed. It is responsible for monitoring and evaluating energy management within the organization; carries out document audited and evidence related to energy management whether or not it is completed; and summarize of the monitoring results of the energy management operations.

The pollution preventions and monitoring of the environmental impacts with the ongoing environmental measurements

Air Quality

Our company has been using natural gas to fuel the production process to reduce amounts of air pollutions such as Nitrogen (NOx), Sulphuroxide (Sox), etc. There is a high performance air pollution treatment system installed such as dust collectors, wet scrubbers, etc. before the air being released into the environment. There are regular maintenance performed by the experts, regular air quality testing and measurement both in the workplace and regular ventilators, as well as strictly follow the official laws and regulations.



Water Quality

Our company installed waste water control system for water released from the production process by using chemical treatment to accelerate the precipitation and precautions on the wastes water quality at risk on the daily, weekly and monthly productions. At the same time we strictly monitor waste water samples to find the parameter as implied by laws at waste water discharge points. Waste water measurement and analysis results are according to standard implied by laws. (As shown in the 2017 Environmental Monitoring Results Summary)



Industrial Wastes

Our company has a systematic industrial wastes management and has assigned specialists to manage industrial wastes, to perform the duty of controlling and eliminating industrial waste to meet the requirements as implied by laws.

Summary of 2017 Environmental Measurements

Environmental Quality	2017		Legal Criteria
	(Jan-Jun)	(Jul-Dec)	
Air Quality from the ventilators			
Amount of TSP released (mg/m3)	1.60 - 6.10	1.20 – 11.50	≤ 400
Amount of H2SO4 released (ppm)	0.017 - 0.019	0.002 – 0.008	≤ 25
Amount of Pb released (mg/m3)	0.005 - 0.319	0.006 – 0.156	≤ 30
Workplace air quality			
Amount of Total dust (mg/m3)	1.274 – 2.183		≤ 15
Amount of H2SO4 (mg/m3)	0.027 – 0.138		≤ 1
Amount of Pb (mg/m3)	0.004 – 0.029		≤ 0.2
Amount of Asbestos (Fiber/cm3)	0.003 – 0.008		≤ 5
Workplace noise quality			
Average workplace noise level in 8 hrs- Leq 8 hr (dB(A))	84.5		≤ 90
Workplace highest noise level-Lmax (dB(A))	103.3		≤ 140
Average noise level in 24 hrs. within factory premise- Leq 24hr (dB(A))	62.5		≤ 70
Highest noise level within factory Lmax (dB(A))	95		≤ 115

3. Promote the knowledge relating to environment among employees so that they have better understanding, as well as cultivate this knowledge into our corporate culture which leads to sustainable practices as follows:

1. Offered environmental training programme to all new employees
2. Offered environmental training program
3. Offered environmental taskforce training program
4. Offered Environmental manager training program
5. Offered EMR ISO 14001 program
6. Offered INTERNAL AUDIT ISO14001 program
7. Offered Electrical Safety training program
8. Offered initial firefighting training and evacuation program and fire drills
9. Offered training program for safety officers, supervisors and annual administration safety officers



8. Community or social development:

Our company committed to developing and promoting our employees together with the development of the surrounding community and society to flourish alongside with our business operation in order to grow together sustainably.

Guidelines for Practice

- Promotion of the Kathin Ceremony (Ceremony of presenting the robes to the Buddhist monks at the end of the Buddhist Lent): Our company, administrators and employees jointly hosted the Kathin Ceremony in Samutprakan every year by hosting the ceremony for 3 consecutive years to continue the development. After that, our company intends host the Kathin Ceremony at other temples who has the need for development factors in Samutprakan area.
- The opening of the factory as a learning center for various agencies to visit factory: To promote learning with the company and government agencies and various institute, our company has the policy to open the factory to interested parties to learn the production management system and quality control of our company.

In 2017, the Company has organized the following activities:

1. Performed the Khathin Ceremony (Ceremony of presenting the robes to the Buddhist monks at the end of the Buddhist Lent) on Sunday, October 8, 2017 at Khotaram Temple in Samutprkarn Province which our head office is located so that our employees and managements could help developing the community together.



2. Donate to IEAT project for helped flood victims in southern Thailand on February 7, 2017 worth 100,000 baht



3. Blood donation to make a good charity to Rama 9 on August 8, 2017.



4. Supported the battery to government agencies for the year 2017 to Bangpoo Police Station. and the government of Samutprakan.



9. Innovation and Dissemination innovation:

Innovation dissemination from responsible operations to the society, environment and the stakeholders: Our Company had the ability to design and manufacture products responsibly for the stakeholders and the society in order to lead to long-term value creation for the organization.

Guidelines for Practice

- Our company has the ability to design and manufacture environmentally friendly products which can reduce oil consumption and greenhouse gas emissions, such as
 - Batteries for electrically operated folk lift powered by battery energy
 - Battery for solar panels to support clean energy
- Our company has invested in the lead melting plant from old batteries, which is a subsidiary to help eliminating industrial waste. It is to use the right resources at the right cost and to reduce the use of limited natural resources, and compliance with the Environmental Impact Assessment (EIA) and the Environment and Health Impact Assessment (EHIA)

10. Sustainability Report:

The company has been preparing the Sustainability Report in order to gather responsibility guides, organizational directions, organizational core information, directions and scopes in term of economy, environment and security aspects.

Related Transactions

In 2017, the company had transactions with its subsidiaries and related companies, which were related through same shareholders and/or joint directors and management. The majority of the transactions were buying and selling of products, which were in accordance with conditions agreed between the company and related companies, and in-line with general business practices. The company had disclosed such transactions in the Note Number 7 of the annual financial statement, ending on December 31, 2017, which possessed the following details:

1. Measures and Procedures for Approval of Inter-Transaction

The company has regulated the measures for controlling the inter-transactions between the company, subsidiaries, joint ventures, and subsidiaries of the similar level and stakeholders or persons those who may engage of the futuristic interest conflict according to the Announcement of the Securities and the Exchange Commission. In doing so, the Audit Committee shall comment pertaining to the necessity of transactions and appropriateness of inventory prices based on conditions in normal commercial manner and compare price with that occurred with the outsiders.

In case that the Audit Committee have not specialized in contemplating the inter-transaction occurred, the company shall provide the independent specialists or internal auditor to make comments on such intertransactions so that it will be used to support the decision-making of the Board of Directors and/or Audit Committee and/or shareholders, as the case may be. Those individuals engaging with interest conflict or stakeholders in the inter-transactions shall have no right of voting for approval of such respective inter-transactions. Moreover, the company shall disclose the related transactions, acquisition, or distribution of the important assets of the company and its subsidiaries according to the Stock and Exchange Commission's requirements, as well as the accounting standard imposed by the Institute of Certificated Public Accounts and Auditors of Thailand.

2. Policy and Futuristic Tendency toward Inter-Transactions

In the future, if there will be the inter-transactions, the company shall apply the Securities and Exchange Commission Act, rules, announcement, order, or regulations required by the Stock Exchange of Thailand and the accounting standard required by Institute of Certificated Public Accounts and Auditors of Thailand. All of these, it shall not be construed of transfer or assigned the interests between company or company's shareholders, but it shall consider the highest interest of all shareholders.

In case of normal commercial transactions and continuing transactions in the future, the company shall arrange such transactions in accordance with normal commerce by referring to price and conditions for proper, fair, reasonable and identifiable normal trade, and will not cause transfer of the interest. Such arrangement shall be submitted to the Audit Committee for approval, and shall be further implemented by Management under the Securities and Exchange Commission Act, rules, announcement, order, or regulations required by the Stock Exchange of Thailand and the accounting standard required by Institute of Certificated Public Accounts and Auditors of Thailand. In some cases toned above, the Management can proceed immediately without the consent of the Audit Committee. However, to meet the Good Corporate Governance, the company requires that Internal Audit shall do auditing all such transactions on monthly basis to see if the prices refer to the market price, conditions and terms of normal trade are competitive as compared to the outsider traders. This is to maintain the highest benefits of the company. The results of auditing shall be submitted and informed to the Audit Committee

on quarterly basis. In case it is proven by Audit Committee that the execution has been inconsistent with the required policy, the Audit Committee shall notify the company's Board of Director or President for correction.

In respect of normal commercial transactions of the company, it shall be characterized of normal business. If the related transactions are not carried out, the similar transactions engaging with other persons shall be conducted wherein such respective transactions shall include the conditions and terms of ordinary trade; including price and fair conditions that might not cause the transfer of interest as well as the following conditions and prices;

1. Price and conditions accepted by company is similar to that of general people.
2. Price and conditions accepted by related persons is similar to that of general people.
3. Price and conditions manifested by the company that other operators follow it in the similar way to general people.

However, in case of the inter-transactions are characterized of different transactions, the company shall submit the Audit Committee to make comments on appropriateness of price, soundness of such respective transactions. In case that the Audit Committee has not specialized in contemplating the inter-transaction occurred, the company shall provide the independent specialists or internal auditor to make comments on such interring actions so that it will be used to support the decision making of the Board of Directors and/or Audit Committee and/or shareholders, as the case may be. This is to ensure that such transactions shall not be transferred or assigned of the interest between companies or shareholders, but the highest interest of all shareholders shall be considered.

1. 3K Products Company Limited

Descriptions of Relationship	The Company holds 99.99 percent fully paid-up and registered capital. The juristic personnel include some common directors.
Type of Business	Distributing agent of batteries for automobiles, golf carts, general lighting, and motorcycles.
Pricing Policy	The company sells its goods to 3K Products Company Limited, which is the sole distributor in Thailand. The transactions are done under regular conditions, the same as those of non-related companies, and prices are in line with market prices controlled by the Excise Department.

Type and Extend of Related transactions

Unit: Baht

Sales	Dividend income	Other income	Purchasing income	Accounts receivable	Other Account payable
2,032,209,318	22,038,347	918,478	27,600	209,256,168	155,069

2. Thai Nonferrous Metal Company Limited

Descriptions of Relationship	The Company holds 97.00 percent of fully paid-up and registered capital. The juristic personnel include some common directors and executives.
Type of Business	Lead alloy and pure lead smelting
Pricing Policy	The company purchases lead alloy and pure lead from Thai Nonferrous Metal Company Limited under regular business conditions.
Type and Extent of Related transactions	

Unit : Baht

Purchases	Other income	Account payable	Other Account receivable
895,004,796	35,390,811	82,261,658	16,476,146

3. 3K Traction Battery Company Limited

Descriptions of Relationship	The Company holds 99.99 percent of paid-up registered capital of 4.00 Baht per shares. The juristic personnel include some common directors and executives.
Type of Business	Manufacture and distribute, Forklift metal cases, Leasing, Maintenance and service of forklift batteries.
Pricing Policy	The Company purchases from 3K Traction Battery Company Limited under regular business conditions.
Type and Extent of Related transactions	None

4. Power Plas Company Limited

Descriptions of Relationship	The Company holds 100.00 percent of fully paid-up and registered capital. The juristic personnel include some common directors.
Type of Business	Manufacture and distribution of plastic casing for batteries.
Price Policy Related	The Company purchases plastics, and sale plastic casing for batteries.
Type and Extent of Related transactions	

Unit : Baht

Purchase	Sales	Other income	Account payable	Accounts receivable	Other Account receivable
131,600,843	46,209,900	7,427,629	18,577,263	5,686,836	1,135,907

5. Thai Storage Battery Japan Company Limited

Descriptions of Relationship	The Company holds 16.67 percent of paid-up registered capital .The juristic personnel include some common directors and executives.
Type of Business	Provide after sales services, technical knowledge for agents and consumers, and carries out sales promotions in the Japanese market.
Pricing Policy	The Company sets a commission for Thai Storage Battery Japan Company Limited under general business conditions, the same as those for nonrelated companies, and in-line with market prices.
Type and Extent of Related transactions	None

6. Related companies

Hitachi Chemical (Asia) Thailand Co., Ltd.

Relationship style	Related companies
Type of business	Sale and manufacturing of advance components including battery business
Price policy between companies	The Company sells batteries in normal business conditions.

Type and Extent of Related transactions

Unit : Baht

Sales	Other expenses	Accounts receivable
24,058,496	189,551	2,024,906

Hitachi Chemical Co., Ltd.

Relationship style	Related companies
Type of business	Manufacturing and sale of functional materials and advanced components and systems including battery
Price policy between companies	The Company sells batteries in normal business conditions.

Type and Extent of Related transactions

Unit : Baht

Brand Fee	Sales	Other expenses	Other Account payable	Accounts receivable
12,820,560	113,743	2,989,104	14,505,899	37,747

Analysis and Description of Managements

Overall Business Operation and Significant Change

In July 2017, the Company and its subsidiaries became a member of Hitachi Chemical Co., Ltd., a global company in Japan.

The battery industry is one of the key businesses. The company's merger with Hitachi Chemical will ensure that it will strengthen the battery business in the ASEAN region. The company can achieve its goals.

In 2017, the auto market posted positive signs, recovering in all sectors, with production growth of 2.28% and export volume as well as the number of sales in the country and the number of registered cars. Growing up in the same direction. Department of Transport The number of registered cars is over 3 million vehicles, only red car 878,067 cars, while motorcycles registered over 2 million cars again.

The Company's total revenue for the year 2017 slightly decreased by approximately 0.5% compared to 2016 due to higher raw material prices. As a result, price competition in the battery market has intensified. However, the Company The market share was maintained and resulted in a slight decrease in total revenue.

For investment in 2018, the company has expanded its investment to increase its forklift battery capacity to 800 sets per month with an investment of approximately Baht 290 million.

The price of lead in the London Metal Exchange (LME) has increased. The price closed at US \$ 1,701 per metric ton and US \$ 2,508 per metric ton as of December 2017 and 2016, respectively.

Operation Performance and the Ability to Make Profit

Our company and our subsidiaries operate mainly as stated in the report of only a single duty which is a manufacturer and distributor of batteries and operate in a single geographic area, which is in Thailand. The company evaluated performance of each segment based on profit or loss from the operations, which are measured using the same criteria used to measure the profit or loss of operations in the financial statements. Therefore, the revenues, earnings from operations and assets reflected in the financial statements are already reported as according to segment operations and geographic area.

Total Revenue

In the year 2017, the Company had sales revenue in the consolidated financial statements of Baht 5,283.81 million baht, a decrease of Baht 28.77 million baht compared to the year 2016 the Company had revenue of Baht 5,311.58 million baht or a decrease of 0.54% due to the competition higher international market.

Gross Profit Margin and Net Profit.

The company's gross margin for the years 2017 and 2016 were 14.91 and 24.80 percent respectively, and decreased by 9.89 percent. The company could reduce such cost of production as raw materials and overtime pay. Selling and administrative expenses in 2017 amounted to THB 999.37 million or 18.91 percent of the revenue from sales compared to 2016 which amounted to THB 1,124.02 million or 21.16 percent of the revenue from sales. This was a decrease from the previous year with the amount of THB 124.65 million due to the lower excise tax on the domestic sales of the Company and the reduction of promotional expenses. But the company is taxed from being assessed increased by Baht 166.99 million.

Return on equity (ROE) for the year 2017 was negative at 19.77% compared to 8.19% in 2016. The Board of Directors proposed to the shareholders meeting to waive the dividend payment for the operating results of 2017

Asset Management Capability

Liquidating Asset

The ratio of the company's current assets to total assets decreased by 50.54 percent in 2017, while the ratio in 2016 was at 51.24 percent, due to lower inventories.

On December 31, 2017 and 2016, our company has the remaining balance of THB 964 million and THB 1,024 with THB 60 million decreased. Most company's raw materials are lead and battery's sheets, shells and lids. There is no limitation on raw material life, thus, there is no raw material expiration date. From the production process to finished products, we operate raw materials on the 'First-In- First-Out' (FIFO) method and will consider the reserve for expired products as according to the life of stock inventory. Our policy is to reduce cost into the net receivable for the whole lot of remaining products with more than 1 year non-performing inventory which on December 31, 2017 and 2016 at THB 53.96 million and THB 26.96 million respectively.

In 2017, the company's fixed asset and total asset ratio was 36.73% with 37.27% reduction from that of 2014's. The total land, buildings and equipment on December 31, 2017 and 2016 was THB 1,265.89 million and THB 1,401.06 million respectively. There were also of real estate for investment and land in 2017 and 2016 worth THB 306.50 million and THB 304.21 million respectively. The company is now conducting the research on the possibility of a project which could bring the highest potential benefit to the company. If considering the current real-estate market price, this land has gained more value.

In 2017 and 2016, the company had an average collection period of 44.35 days and 47.03 days respectively, thus, an increase of 2.68 days in accordance to market conditions of higher competition.

Company's total trade receivable on December 31, 2017 and 2016 were THB 561.26 million and THB 683.14 million respectively, with the 3 months credit length and delayed payment of THB 551.06 million or 98.18% of trade receivable. however, in 2016 was THB 674.18 million or 98.68% of account receivable.

In battery distribution and export, company will consider the ability to pay of each individual customer for example setting 30 days credit term of payment before delivering to new customers after the Bill of Landing dates, etc. For within the country transaction, the company's policy is for customers to settle the invoice every 15 days. However, for selling other products, credit terms is as normal business practice of 30-60 days.

For the reserve for non-performing account receivable, we mainly consider the evaluation of life of account receivable and debtor's payment history by reserving the whole amount of more than 12 months non-performing account receivable.

In 2017, the Company has increased its provision for doubtful accounts of THB 5 million to THB 26.16 million.

Liquidity and capital adequacy of the company

In 2017 and 2016, our company has the remaining cash balance of THB 176.74 million and THB 165.36 million respectively, with THB 11.38 million increased. The Company's current ratio to current liabilities is 0.96 times. Compared to the previous year, the ratio was 1.16 times, because the Company's inventories were THB 964.58 million, a decrease of THB 1,023.88 million from the previous year, an increase of THB 59.3 million.

In conducting business, the Company will use working capital from operating activities. The cost of financing is low. The purchase of property, plant and equipment and loan repayment. The Company and its subsidiaries have various credit facilities from financial institutions amounting to Baht 4,158 million and Baht 4,326 million, respectively, as unused credit facilities as at 31 December 2017 and 2016, respectively, to support the Company's business operations.

As of December 31, 2017 and December 31, 2017, the Company had a debt to equity ratio of 1.19: 0.90, respectively.

Factors which may impact the future operations

Important risk factors which may impact company's future operations include the followings:

1. Marketing risk factor from within Thailand and export market decelerated because of the ongoing world economic down turn in 2017. Therefore, battery types of products are likely to also being affected as the supplies are greater than demands. However, the company will try to retain the market share.

2. Trend of consumers turning to the ready-to-use battery types with acid already added and power already charged from the manufacturers plants have gained popularity. This increases the convenience of not having to worry about filling water frequently. The company has production technology and production capacity sufficient enough to accommodate future growth with ready action plans and goals for the future.
 - During the year 2016-2017, the Company invested in new machinery. The efficiency in production. Less energy and can reduce the workers. To reduce production costs per unit to increase market competitiveness and compensate for future fluctuations in price of raw materials.
 - Our company focuses on supporting and developing skills for labors to be flexible in order to adjust to economic environment changes.
 - Use production resource wisely to minimize the damage from production process.
 - Designate the work group to work on preventing the risks on the current exchange and commodities.

Debt Obligations (Note for financial report no. 26).

Obligation to Capital Expenditure

As at 31 December 2017 and 2016, the Company and its subsidiaries Capital commitments related to the purchase of machinery and equipment amounted to Baht 15 million and Baht 12 million, respectively.

Obligations on Operating Leases

The company and the subsidiaries have started to oblige in operating lease related to the rental of spaces for product and transportation storage with the contract periods between one to five years.

The company and the subsidiaries have a minimum to be paid amount under non-cancellable operating leases in the future, all are as follows.

	(Million Baht)			
	Consolidated financial Statement As of December 31		Separate Financial Statement As of December 31	
	2017	2016	2017	2016
Payable				
Within 2 year	17.05	20.40	3.01	1.00
More than 2, but not more than 5 year	25.91	14.10	11.90	1.20

Guarantee

As at 31 December 2017, the Company and its subsidiaries had letters of guarantee issued by banks on behalf of the Company. The Company and its subsidiaries have outstanding commitments amounting to Baht 28 million and Baht 26 million to the Company only, which is in respect of the performance guarantee of the Company and the electricity usage of the Company and its subsidiaries.

As at December 31, 2017, the Company and its subsidiaries have received a total of Baht 4,158 million of unused credit facilities from financial institutions totaling Baht 2,569 million. These loans are guaranteed by the Company and its subsidiaries.

Tax Assessment

On January 4, 2013, the Company received 135 First Assessment Notices from the Customs Department concerning assessments of import duty, value added tax and surcharges on imports of raw materials and machinery during the years 2007-2010. According to the Notices, the Company had underpaid tax, and the Customs Department therefore required the Company to pay import duty and value added tax of Baht 9.92 million and Baht 89.57 million, respectively, totaling Baht 99.49 million, together with surcharges of Baht 60.12 million. The payment amount was Baht 159.61 million in total.

On September 9, 2017, the Company received decision from the Appeals Committee of Revenue Department dated July 5, 2017, according to the Notices of Appeal submitted by the Company dated June 23, 2016 and September 19, 2016 regarding the value added tax. The Appeals Committee decided to rescind the additional tax assessment of Baht 90.36 million under the second Assessment Notice because such re-assessment for the existing claim is unlawful.

In addition, such decision also addressed the dispute under first Assessment Notice regarding tax assessments, including fines and surcharges, in the total amount of Baht 159.61 million. Based on the facts and relevant laws, and given that the Company did not submit a Notice of Appeal for such assessment, the matter was closed. As a result, the Company's Management recorded additional tax liabilities adjusted from Baht 21 million in "Provision for other liabilities from tax assessment" to tax liabilities of Baht 159.61 million according to the first Assessment Notice, plus surcharge of Baht 39.37 million, totaling Baht 198.98 million and presented the sum to under the caption "Liabilities of tax assessment" in the statements of financial position as of December 31, 2017.

Warranty Expense Estimate

In December 2016, the Company was informed by a foreign customer to claim of warranty for the damage approximately EURO 28.50 million. The management has an opinion that this must be investigated in respect of the cause of damage whether they were caused by the production process of the Company. The estimation for warranty liability is still uncertainty depending on the outcome of negotiations and inspections that will be occurred in the future. However, the management has estimated the possible liability on the warranty as at December 31, 2017 of Baht 50.77 million and does not expect that the claim would result in significant damages to the Company in excess of the provisioning.

Agreement Regarding Hitachi Brand Value

The Group has entered into a Hitachi Brand Value Agreement with Hitachi Chemical Co., Ltd. for the exclusive right to use the Hitachi brand. The exercise fee will be charged at the rate of 1% of revenue (excluding income within the Group). The agreement is effective from 1 October 2017. Hitachi Brand has a term of 5 years and can be renewed for one year.

The exercise price for the year ended 31 December 2017 of Baht 14 million and the separate financial statements of Baht 13 million were included in the statements of income.

The Remuneration of the Auditor

1) The Audit Remuneration

The company and the subsidiaries had paid the amount of THB 2.93 million to an audit company in which the auditors work for in the past fiscal year.

2) Other Non-audit Fee

The company and the subsidiaries did not pay any of the other services provided by to the auditors or the audit firm in which the auditors work for including the agreement of incomplete services in the past fiscal year.

Independent Auditor's Report

To the Shareholders and the Board of Directors of Thai Storage Battery Public Company Limited

Opinion

I have audited the consolidated and separate financial statements of Thai Storage Battery Public Company Limited and its subsidiaries, and of Thai Storage Battery Public Company Limited, respectively, which comprise the consolidated and separate statements of financial position as at December 31, 2017, the consolidated and separate statements of profit or loss and other comprehensive income, statements of changes in shareholders' equity and statements of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying consolidated and separate financial statements referred to above present fairly, in all material respects, the consolidated and separate financial position of the Thai Storage Battery Public Company Limited and its subsidiaries, and of Thai Storage Battery Public Company Limited, respectively, as at December 31, 2017, and their financial performance and cash flows for the year then ended, in accordance with Thai Financial Reporting Standards (TFRSs).

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). 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 Federation of Accounting Professions' Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of Matters

I draw attention to Note 28 to the financial statements, regarding the Company's receipt of notice from a foreign customer for a claim of warranty for the damage approximately EURO 28.5 million. The management has estimated the cost of the warranty at the amount of Baht 50.77 million. However, the management does not expect that the claim would result in significant damages to the Company in excess of the provisioning. My opinion is not modified with respect to this matter.

Key Audit Matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current year. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Valuation of inventories

Risk

Lead prices fluctuated due to the supply and demand in the global market. This affected battery production costs. The Group was limited in its ability to increase battery selling prices, which affected net realizable value of inventories. According to Note to Financial Statements No. 9, as at December 31, 2017, the Group has inventories valued at the lower of cost or net realizable value in the amount of Bath 964 million. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to accomplish the sale, all of which requires significant judgment by Management. These circumstances significantly affected the valuation of inventories at the end of the year and cost of sales for the year.

Auditor's response

I gained understanding of the methodology used by the Group's Management to determine the net realizable value of inventories, as well as:

- Tested the appropriateness of estimated selling prices by their comparison with selling prices after the subsequent accounting period or their contractual selling price;
- Tested estimated costs to accomplish the sales by their comparison with actual costs incurred during the current year;
- Tested computation of net realizable value of inventories, and;
- Compared costs of inventories and net realizable value to determine the appropriateness of inventory valuation adjustment in accordance with the Group's policy

Other Information

Management is responsible for the other information. The other information comprises the information include in Annual Report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The Annual Report for the year 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 consolidated and separate financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the Annual Report, 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 TFRSs, 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 consolidated and separate 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 TSAs 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 TSAs, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the consolidated and separate 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 consolidated and separate 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.



Sathien Vongsnan

Certified Public Accountant

Registration No. 3495

ANS Audit Co., Ltd.

Bangkok, February 20, 2018

STATEMENT OF FINANCIAL POSITION

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

AS AT DECEMBER 31, 2017

		Unit: Baht			
		Consolidated financial statements		Separate financial statements	
	Notes	2017	2016	2017	2016
Assets					
Current assets					
Cash and cash equivalents	7	176,739,132	165,355,073	21,071,662	13,933,378
Trade and other current receivables	6, 8	583,862,940	714,817,152	422,195,697	477,863,122
Inventories - net	9	964,575,712	1,023,876,359	538,047,479	640,725,894
Input tax refundable		16,809,438	27,574,298	12,715,892	24,322,218
Receivables under forward exchange contracts		-	1,164,312	-	1,164,312
Total current assets		1,741,987,222	1,932,787,194	994,030,730	1,158,008,924
Non-current assets					
Investments in subsidiaries	10	-	-	315,164,449	274,772,449
Investment properties - net	11	306,502,276	304,214,003	101,130,882	94,370,575
Property, plant and equipment - net	12	1,265,894,292	1,401,064,932	953,884,472	1,055,070,503
Intangible assets - net	13	22,513,973	25,332,263	19,345,967	22,100,095
Deferred tax assets - net	14	99,650,944	68,551,453	38,382,240	27,174,802
Other non-current assets	15	10,082,276	27,302,830	4,126,948	9,795,563
Total non-current assets		1,704,643,761	1,826,465,481	1,432,034,958	1,483,283,987
Total assets		3,446,630,983	3,759,252,675	2,426,065,688	2,641,292,911

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

STATEMENT OF FINANCIAL POSITION

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

AS AT DECEMBER 31, 2017

		Unit: Baht			
		Consolidated financial statements		Separate financial statements	
Notes		2017	2016	2017	2016
Liabilities and shareholders' equity					
Current liabilities					
Short-term loans from financial institutions	16	1,105,000,000	927,165,972	470,000,000	441,165,972
Trade and other current payables	6, 17	436,455,429	639,256,042	432,129,846	556,940,451
Liabilities of tax assessment	27	198,986,506	-	198,986,506	-
Provision for tax assessment	27	-	21,000,000	-	21,000,000
Provision for warranty	28	50,773,371	43,975,458	50,773,371	43,975,458
Provision for litigation	29	7,246,000	-	-	-
Income tax payable		11,169,870	33,726,802	-	20,471,710
Total current liabilities		1,809,631,176	1,665,124,274	1,151,889,723	1,083,553,591
Non-current liabilities					
employee benefit	18	65,215,446	88,229,180	35,535,788	45,420,397
Total non-current liabilities		65,215,446	88,229,180	35,535,788	45,420,397
Total liabilities		1,874,846,622	1,753,353,454	1,187,425,511	1,128,973,988
Shareholders' equity					
Share capital					
Registered					
20,000,000 ordinary shares of Baht 10 each		200,000,000	200,000,000	200,000,000	200,000,000
Issued and fully paid					
20,000,000 ordinary shares of Baht 10 each		200,000,000	200,000,000	200,000,000	200,000,000
Shares premium		389,501,173	389,501,173	389,501,173	389,501,173
Retained earnings					
Appropriated - Legal reserve	20	20,000,000	20,000,000	20,000,000	20,000,000
Unappropriated		961,346,310	1,348,977,023	629,139,004	902,817,750
Other components of shareholders' equity		(1,643,687)	-	-	-
Total shareholders' equity attributable to owners of parent		1,569,203,796	1,958,478,196	1,238,640,177	1,512,318,923
Non-controlling interests		2,580,565	47,421,025	-	-
Total shareholders' equity		1,571,784,361	2,005,899,221	1,238,640,177	1,512,318,923
Total liabilities and shareholders' equity		3,446,630,983	3,759,252,675	2,426,065,688	2,641,292,911

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

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

		Unit: Baht			
		Consolidated financial statements		Separate financial statements	
	Notes	2017	2016	2017	2016
Revenues from sales	6, 24	5,282,806,012	5,311,578,585	4,754,888,307	4,484,856,842
Costs of sales		(4,495,114,794)	(3,994,069,689)	(4,342,561,291)	(3,755,493,635)
Gross profit		787,691,218	1,317,508,896	412,327,016	729,363,207
Other income		40,118,724	32,694,294	23,998,345	43,685,461
Dividend income		-	-	74,873,485	16,498,763
Gain on foreign exchange rate - net		2,309,761	11,545,433	2,309,760	11,545,433
Selling expenses	22	(519,296,510)	(603,616,391)	(304,166,124)	(353,336,074)
Administrative expenses	22	(480,073,280)	(520,400,695)	(250,606,228)	(266,596,201)
Tax and surcharge from tax assessment	27	(177,986,506)	(11,000,000)	(177,986,506)	(11,000,000)
Profit (loss) before finance costs and income tax		(347,236,593)	226,731,537	(219,250,252)	170,160,589
Finance costs		(28,092,153)	(24,207,008)	(15,641,572)	(12,320,839)
Profit (loss) before income tax expenses		(375,328,746)	202,524,529	(234,891,824)	157,839,750
Income tax income (expenses)	19	22,354,002	(45,680,283)	13,208,566	(31,140,481)
Profit (loss) for the year		(352,974,744)	156,844,246	(221,683,258)	126,699,269
Other comprehensive income					
Other comprehensive income not to be reclassified to profit or loss in subsequent periods					
Actuarial gains - net from tax	18	21,293,539	891,896	8,004,512	-
Other comprehensive income for the years		21,293,539	891,896	8,004,512	-
Total comprehensive income (loss) for the period		(331,681,205)	157,736,142	(213,678,746)	126,699,269
Profit (loss) attributable to:					
Shareholders of the parent		(348,726,881)	156,512,330	(221,683,258)	126,699,269
Non-controlling interests		(4,247,863)	331,916	-	-
		(352,974,744)	156,844,246	(221,683,258)	126,699,269
Total comprehensive income (loss) attributable to:					
Shareholders of the parent		(327,630,713)	156,949,358	(213,678,746)	126,699,269
Non-controlling interests		(4,050,492)	786,784	-	-
		(331,681,205)	157,736,142	(213,678,746)	126,699,269
Basic earnings (loss) per share					
Net profit (loss) attributable to the shareholders of the parent (Baht)		(17.44)	7.83	(11.08)	6.33
Weighted average number of issued and fully paid ordinary shares (Thousand shares)		20,000,000	20,000,000	20,000,000	20,000,000

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

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

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

STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

Unit: Baht

Separate financial statements						
	Notes	Issued and paid-Up share capital	Premium on ordinary Shares	Retained earnings		Other components of shareholders' equity
				Appropriated		
				Legal reserve	Unappropriated	
Balance as at January 1, 2017		200,000,000	389,501,173	20,000,000	902,817,750	-
Dividend paid	21	-	-	-	(60,000,000)	-
Total comprehensive loss for the year		-	-	-	(221,683,258)	8,004,512
Transfer to retained earnings		-	-	-	8,004,512	(8,004,512)
Balance as at December 31, 2017		200,000,000	389,501,173	20,000,000	629,139,004	-
Balance as at January 1, 2016		200,000,000	389,501,173	20,000,000	836,118,481	-
Dividend paid	21	-	-	-	(60,000,000)	-
Total comprehensive income for the year		-	-	-	126,699,269	-
Balance as at December 31, 2016		200,000,000	389,501,173	20,000,000	902,817,750	-

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

STATEMENT OF CASH FLOWS

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Cash flows from operating activities				
Profit (loss) before income tax	(375,328,746)	202,524,529	(234,891,823)	157,839,750
Adjustments to reconcile profit(loss) to net cash flows				
from (used in) operating activities:				
Depreciation and amortization	191,331,500	196,777,421	152,569,426	150,877,505
(Reversal) allowance for doubtful accounts	(4,433,723)	8,209,468	(5,047,920)	6,281,437
Provision for devaluation of inventories	27,000,582	4,813,110	9,781,292	4,813,110
Provision for other assets	860,118	-	-	-
Loss on impairment of assets	8,290,490	-	-	-
Loss on disposal of assets	1,950,900	9,488,984	1,901,969	5,244,439
Gain on sales of investment properties	-	(1,096,000)	-	-
Write-off of income tax	4,698,801	-	45,489	-
Write-off of trade receivables	5,556,118	-	5,556,118	-
Write-off of inventory	2,409,568	-	2,409,568	-
Write-off of other payable	(1,514,551)	-	(1,514,551)	-
Unrealized gain on exchange rate	-	(665,443)	-	(665,443)
Unrealized gain on forward exchange contracts	-	(1,164,312)	-	(1,164,312)
Provision for warranty	6,797,913	43,975,458	6,797,913	43,975,458
Non-current provisions for employee benefit	11,368,390	10,813,691	5,435,351	5,427,291
Liabilities of tax assessment	177,986,506	-	177,986,506	-
Provision for tax assessment	-	11,000,000	-	11,000,000
Provision for litigation	7,246,000	-	-	-
Dividend income	-	-	(23,998,345)	(16,498,763)
Interest income	(533,651)	-	(316,103)	-
Interest expenses	28,092,153	24,207,008	15,641,572	12,320,839
Write-off of deferred expenses	2,652,062	-	-	-
Profit from operating activities before changes				
in operating assets and liabilities	94,430,430	508,883,914	112,356,462	379,451,311
Operating assets (increased) decreased				
Trade and other current receivables	142,872,007	(40,294,419)	68,501,000	(83,092,282)
Inventories	29,890,497	(168,271,228)	90,487,554	(160,730,571)
Other non-current assets	3,289,211	(7,826,578)	442,645	(6,240,194)
Operating liabilities increased (decreased)				
Trade and other current payables	(199,794,943)	57,175,477	(115,549,223)	102,135,748
Cash from operating activities	70,687,202	349,667,166	156,238,438	231,524,012

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

STATEMENT OF CASH FLOWS

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Interest income	533,651	-	316,103	-
Employee benefits paid	(7,765,200)	(1,866,308)	(5,314,320)	(1,409,139)
Income tax paid	(37,181,807)	(75,508,919)	(21,028,512)	(57,888,821)
Cash received from refund of income tax	5,166,147	-	5,166,147	-
Net cash from operating activities	31,439,993	272,291,939	135,377,856	172,226,052
Cash flows from investing activities				
Purchase of investment in subsidiaries	(40,392,801)	-	(45,682,819)	-
Acquisition of fixed assets	(70,486,405)	(118,224,467)	(59,439,395)	(108,916,138)
Acquisition of intangible assets	(1,896,000)	(2,265,195)	(1,296,000)	(1,458,356)
Cash received from sales of fixed assets	4,541,441	948,185	575,923	183,317
Cash received from sale of investment properties	-	4,000,000	-	-
Dividend received	-	-	23,998,345	16,498,763
Net cash used in investing activities	(108,233,765)	(115,541,477)	(81,843,946)	(93,692,414)
Cash flows from financing activities				
Increase (decrease) in short-term loans from financial institutions	177,834,028	4,553,868	28,834,028	(6,446,132)
Payments on liabilities under finance lease agreements	-	(11,061,614)	-	-
Interest paid	(27,614,542)	(24,351,475)	(15,229,654)	(12,353,246)
Dividend paid	(62,041,655)	(60,001,238)	(60,000,000)	(60,000,000)
Net cash from (used in) financing activities	88,177,831	(90,860,459)	(46,395,626)	(78,799,378)
Net cash and cash equivalents increased (decreased)	11,384,059	65,890,003	7,138,284	(265,740)
Cash and cash equivalents at the beginning of the year	165,355,073	99,465,070	13,933,378	14,199,118
Cash and cash equivalents at the end of the year	176,739,132	165,355,073	21,071,662	13,933,378
Supplemental Disclosures of Cash Flows Information				
Non-Cash transaction:				
Increased of other payable for purchase of investment in subsidiary	-	-	-	5,290,819
Increased of receivables for sale of assets	-	1,489,600	-	-
Decreased of payables for purchase of assets	1,968,730	8,203,820	2,867,930	8,653,420

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

NOTES TO FINANCIAL STATEMENTS

THAI STORAGE BATTERY PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2017

1. GENERAL INFORMATION

Thai Storage Battery Public Company Limited (“the Company”) is a public company incorporated and domiciled in Thailand. The Company is principally engaged in the manufacture and distribution of batteries. The registered office of the Company is at 387 Moo 4, Soi Patana 3, Bangpoo Industrial Estate, Sukhumvit Rd., Praekasa, Samutprakarn.

On July 25, 2017, the Company’s Board of Directors acknowledged completion of the sale of 8,780,730 shares in the Company (43.09% of total issue and paid-up share capital) by the Korphaibool family, the Company’s major shareholder, to Siam Magi Co., Ltd. (a subsidiary of Hitachi Chemical Co., Ltd.) according to the Share Sale and Purchase Agreement dated July 20, 2017. Subsequently, on July 31, 2017, Hitachi Chemical Co., Ltd. and Siam Magi Co., Ltd. (the Offerors) made a tender offer for the acquisition of all securities of the Company from other remaining shareholders for the period from August 1, 2017 to September 5, 2017. The Offerors have no intention to delist the Company’s securities from the Stock Exchange of Thailand (“SET”) nor do they intend to make any material changes to the business’ corporate governance and management policies or dispose of the Company’s core assets for at least 12 months after the tender offer process is completed.

On September 12, 2017, the Offerors reported to the Secretary General of the Office of the Securities and Exchange Commission the acquisition of 8,589,616 tendered shares. The number of ordinary shares held by the Offerors after the tender offer period would be 17,370,346 shares, equivalent to 86.85% of total issued and paid up share capital of the Company.

As at December 31, 2017, the major shareholders of the Company are Siam Magi Co., Ltd. and Hitachi Chemical Co., Ltd., holding 51% and 35.85% of its share capital, respectively.

2. BASIS FOR THE PREPARATION OF FINANCIAL STATEMENTS

The financial statements are prepared in accordance with Thai Financial Reporting Standards (“TFRS”) including related interpretations and guidelines promulgated by the Federation of Accounting Professions (“FAP”) and applicable rules and regulations of the Securities and Exchange Commission.

The financial statements are presented in compliance with stipulations of the Notification of the Department of Business Development, dated October 11, 2016, issued under the Accounting Act B.E. 2543.

The accompanying financial statements have been prepared in Thai language and are expressed in Thai Baht. Such financial statements have been prepared for domestic reporting purposes. For the convenience of the readers not conversant in the Thai language, an English translation of the Thai version of the financial statements is provided.

The accompanying financial statements are prepared on the historical cost basis, except as disclosed in respective accounting policies.

The preparation of the financial statements in conformity with Thai Financial Reporting Standard requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying amounts of assets and liabilities that are not readily apparent from other sources. Subsequent actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

Basis of consolidation

- a) The consolidated financial statements include the financial statements of Thai Storage Battery Public Company Limited (“the Company”) and the following subsidiary companies (“the subsidiaries”):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			December 31,	December 31,
			2017	2016
			%	%
<u>Subsidiaries held directly by the Company</u>				
3K Products Company Limited	Local distribution agency of batteries	Thailand	100.00	100.00
Thai Nonferrous Metal Company Limited	Manufacturer of lead alloy and pure lead	Thailand	97.00	97.00
Power Plas Company Limited	Manufacturer and distribution of plastic casing for batteries	Thailand	100.00	49.00
3K Traction Battery Company Limited	Sales, leasing of forklift batteries and fabrication of metal casing for forklift truck batteries	Thailand	100.00	100.00

- 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) In the year 2016, the financial statements of Power Plas Company Limited are included in the consolidated financial statements even though the Company's shareholding is 49 percent. This is because the Company has control over its financial and operating policies, therefore such company is regarded as a subsidiary. Subsequently, in November 2017, the Company has increased its shareholding proportion to 100% by purchasing all the shares from the existing shareholders.
- f) Material balances and transactions between the Company and its subsidiary companies have been eliminated from the consolidated financial statements.
- g) Non-controlling interests represent the portion of profit or loss and net assets of the subsidiaries that are not held by the Company and are presented separately in the consolidated profit or loss and within equity in the consolidated statement of financial position.

The separate financial statements, which present investments in subsidiaries under the cost method, have been prepared solely for the benefit of the public.

3. NEW FINANCIAL REPORTING STANDARDS

(a) Financial reporting standards that became effective in the current year

During the year, the Company and its subsidiaries have adopted the revised financial reporting standards and interpretations (revised 2016) and new accounting treatment guidance which are effective for fiscal years beginning on or after 1 January 2017. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. The adoption of these financial reporting standards does not have any significant impact on the Company and its subsidiaries' financial statements.

(b) Financial reporting standards that will become effective in the future

During the current year, the Federation of Accounting Professions issued a number of the revised financial reporting standards and interpretations (revised 2017) which are effective for fiscal years beginning on or after 1 January 2018. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes and clarifications directed towards disclosures in the notes to financial statements.

The management of the Company and its subsidiaries believe that the revised financial reporting standards will not have any significant impact on the financial statements when they are initially applied.

4. SIGNIFICANT ACCOUNTING POLICIES

Revenue recognition

Sales of goods

Sales of goods are recognised when the significant risks and rewards of ownership of the goods have passed to the buyer. Sales are the invoiced value, excluding value added tax, of goods supplied after deducting discounts and allowances.

Interest income

Interest income is recognised on an accrual basis based on the effective interest rate.

Dividends

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

Cash and cash equivalents

Cash and cash equivalents comprise of cash in hand, and at banks and all highly liquid investments with a maturity period not over 3 months and no withdrawal restrictions.

Trade and other current receivables

Trade and other current receivables 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.

Inventories

Finished goods and work in process are valued at the lower of cost (under the average method) and net realisable value. The cost of inventories is measured using the standard cost method, which approximates actual cost and includes all production costs and attributable factory overheads.

Raw materials, spare parts and factory supplies are valued at the lower of average cost and net realisable value and are charged to production costs whenever consumed.

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

Allowance for diminution in value of inventories is recorded by considering old, slow-moving and obsolete inventories.

Investment in subsidiaries

Investments in non-marketable equity securities, which the Company classifies as other investments, are stated at cost net of allowance for impairment loss (if any).

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

Investment properties

Investment properties are properties which are held to each rental income, for capital appreciation or for both, but not for sale in ordinary course of business, use in for the production or supply of goods or services or for administrative purposes.

Investment properties are stated at cost less allowance for loss on impairment (if any).

The Group separates part of assets and their estimated useful life as follows:

	Useful life (years)
Condominium units	30

Depreciation is included in determining income.

No depreciation is provided on land and properties under construction.

Property, plant and equipment

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

Depreciations of plant and equipment is calculated by reference to their costs on a straight-line basis over their estimated useful lives as follows:

	Useful life (years)
Buildings	30
Buildings improvements	5 and 20
Machinery and equipment	3 - 10
Furniture and office equipment	4 and 5
Vehicles	4 and 5

Depreciation is included in determining income.

No depreciation is provided on land and assets under installation and construction.

Intangible assets

Computer software is measured at cost. Following initial recognition, computer software is carried at cost less any accumulated amortisation and allowance for impairment losses (if any).

Computer software with finite life is amortised on a straight-line basis over the useful life of 10 years and tested for impairment whenever there is an indication that the computer software may be impaired. The amortisation period and the amortisation method of such computer software are reviewed at least at each financial year end. The amortisation expense is charged to profit or loss.

Related party transactions

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

They also include associated company and individuals 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.

Long-term leases

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 are depreciated over the useful life of the lease assets.

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.

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.

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.

Impairment of assets

At the end of each reporting period, the Company and its subsidiaries perform impairment reviews in respect of the property, plant and equipment 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.

The Company and its subsidiaries are recognised an impairment loss in profit or loss.

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 Company, its subsidiaries and their employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Company and its subsidiaries. The fund's assets are held in a separate trust fund and the Company's and its subsidiaries' contributions are recognised as expenses when incurred.

Defined benefit plans

The Company and its subsidiaries have obligations in respect of the severance payments it must make to employees upon retirement under labor law. The Company and its subsidiaries treat these severance payment obligations as a defined benefit plan.

The obligation under the defined benefit plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from post-employment benefits are recognised immediately in other comprehensive income.

Provisions

Provisions are recognized when the Company and its subsidiaries have 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.

Income tax

Income tax expenses comprise current tax 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 Company and its subsidiaries recognise deferred tax liabilities for all taxable temporary differences while they recognise 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 Company and its subsidiaries review and reduce 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 Company and its subsidiaries record deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

Derivatives

Forward exchange contracts

Forward currency contracts are presented in the financial statements at fair value. Any gains or losses arising from changes in the fair value of those forward currency contracts are recorded in profit or loss.

Price hedging contracts

Forward price hedging contracts and option contracts are presented in the financial statements at fair value. Any gains or losses arising from changes in the fair value of those forward currency contracts are recorded in profit or loss.

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 Company and its subsidiaries apply 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 Company and its subsidiaries measure fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Company and its subsidiaries determine 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.

Basic earnings (loss) per share

Basic earnings (loss) 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.

5. 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:

Consolidation of subsidiary that the Company holds less than half of shares

The Company's management considers that the Company is deemed to have control over an investee 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, even if it holds less than half of the shares or voting rights.

This requires the management to exercise a lot of judgment when reviewing whether the Company has control over investees and determining which entities have to be included in preparation of the consolidated financial statements.

Leases

In determining whether a lease is to be classified as an operating lease or finance lease, the management is required to use judgement regarding whether significant risk and rewards of ownership of the leased asset has been transferred, taking into consideration terms and conditions of the arrangement.

Allowance for doubtful accounts

In determining an allowance for doubtful accounts, the management needs to make judgement and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the prevailing economic condition.

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 exercise 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.

Property plant and equipment, investment properties/depreciation, and intangible assets/amortization

In determining depreciation of building and equipment presented in property plant and equipment and in investment properties, the management is required to make estimates of the useful lives and residual values of the building, equipment and intangible assets and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review building, equipment, and intangible assets for impairment on a periodical basis and records impairment losses when it is determined that their recoverable amount is lower than the

carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

Deferred tax assets

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

Post-employment benefits under defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

Commercial disputes, litigation and uncertainty in tax assessment

The Company and its subsidiaries have contingent liabilities as a result of commercial disputes, litigations and uncertainty in tax assessment.

The management used judgment to assess the effect of these matters and this involves evaluating the degree of probability that a loss will be incurred and the management's ability to make a reasonable estimate of the amount of that loss. Changes in the factors used in management's evaluation and unanticipated events may result in actual results differing from the estimates. However, if management believes that no significant loss will result, no related contingent liabilities are recorded as at the end of reporting period.

6. RELATED PARTIES TRANSACTIONS

Related parties are those parties linked to the Group and the Company as shareholders or by common shareholders or directors. Transactions with related parties are conducted at prices based on market prices or, where no market price exists, at contractually agreed prices.

Relationships with related parties who control the Company or are being controlled by the Company or have transactions with the Group were as follows:

6.1 Related party consisted of:

<u>Related company</u>	<u>Country</u>	<u>Relation</u>
<u>Subsidiaries</u>		
3K Products Co., Ltd.	Thailand	Shareholding
Thai Nonferrous Metal Co., Ltd.	Thailand	Shareholding
Power Plas Co., Ltd.	Thailand	Shareholding
3K Traction Battery Co., Ltd.	Thailand	Shareholding

<u>Related company</u>	<u>Country</u>	<u>Relation</u>
<u>Related company</u>		
Hitachi Chemical Asia (Thailand) Co., Ltd.	Thailand	Group related company
Hitachi Chemical Co., Ltd.	Japan	Shareholder of the Company
<u>Related person</u>		
Directors/Key management personnel		Persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director of the Company (whether executive or otherwise)

6.2 The transactions with related parties for the year ended December 31, 2017 and 2016, with related parties were as follows:

Unit: Million Baht					
	Consolidated		Separate		Pricing policy
	financial statements		financial statements		
	2017	2016	2017	2016	
Transactions with subsidiaries					
(eliminated from the consolidated financial statements)					
Sales of goods	-	-	2,078	2,256	Contract price approximately market price
Purchase of raw materials	-	-	1,027	915	Contract price approximately market price
Other income	-	-	46	19	Contract prices
Utilities income	-	-	6	-	Contract prices
Dividend income	-	-	24	16	As declared
Rental expenses	-	-	2	1	Contract price
Transactions with related companies					
Sales of goods	24	-	24	-	Market price
Brand fee	14	-	13	-	Contract price

6.3 The balances of the accounts between the Company and those related companies as at December 31, 2017 and 2016 are as follows:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Trade and other current receivables				
Subsidiaries	-	-	215,966	215,151
Related company	2,063	-	18,652	-
Trade and other current payables				
Subsidiaries	-	-	100,994	107,434
Related company	14,807	-	13,663	-

6.4 Management compensation - for key management personnel

Management compensation - for key management personnel for the year ended December 31, 2017 and 2016 these consist of the following:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Directors compensation				
Meeting compensation and bonuses	6,357	10,282	3,881	3,993
Management compensation				
Short-term benefits	118,421	142,193	66,146	64,309
Post-employment benefits	2,294	4,271	2,294	1,965
Total	127,072	156,746	72,321	70,267

Commitments in connection with related parties

The Company has commitments in connection with related parties, as described in Note 26.3 to the financial statements.

7. CASH AND CASH EQUIVALENTS

Cash and cash equivalents as of December 31, 2017 and 2016 consisted of

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Cash	1,135	1,495	993	1,350
Cash at bank	166,752	142,608	20,079	12,583
Cheque on hand	9,305	21,252	-	-
Outstanding checks	(453)	-	-	-
Total	176,739	165,355	21,072	13,933

8. TRADE AND OTHER CURRENT RECEIVABLES

Trade and other current receivables as of December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Trade receivables				
Trade receivables - related parties	2,063	-	215,966	211,557
Trade receivables - other parties	585,355	714,298	179,785	252,655
Total trade receivable	587,418	714,298	395,751	464,212
<u>Less</u> Allowance for doubtful debts	(26,160)	(31,154)	(1,233)	(6,281)
Total trade receivables - net	561,258	683,144	394,518	457,931

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Other receivables				
Other receivables - related parties	-	-	18,652	3,594
Other receivables - other parties	3,445	7,433	387	747
Advance payments	1,399	7,786	781	7,542
Advance payment for inventories	607	2,392	607	2,365
Prepaid expenses	6,860	6,240	4,505	4,568
Deposits	5,751	3,828	826	-
Others	7,647	5,678	1,920	1,117
Total other receivables	25,709	33,357	27,678	19,933
<u>Less Allowance for doubtful accounts</u>	<u>(3,104)</u>	<u>(1,683)</u>	<u>-</u>	<u>-</u>
Other receivables - net	22,605	31,674	27,678	19,933
Trade and other current receivables	583,863	714,818	422,196	477,864

The Company had outstanding balances of trade receivables aged on the basis of due dates as follows:

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
<i>Trade receivables - related parties</i>				
<u>Ageing</u>				
Not yet due	2,063	-	175,845	168,060
Over due				
Less than 3 months	-	-	39,410	43,497
More than 3 - 6 months	-	-	711	-
Total	2,063	-	215,966	211,557

Unit: Thousand Baht				
	Consolidated financial			
	statements		Separate financial statements	
	2017	2016	2017	2016
Trade receivables - other parties				
Ageing				
Not yet due	333,386	416,475	166,239	229,323
Over due				
Less than 3 months	217,675	257,705	12,265	9,163
More than 3 - 6 months	7,936	6,650	74	6,529
More than 6 - 12 months	32	1,868	32	1,414
Over 12 months	26,326	31,600	1,175	6,226
Total	585,355	714,298	179,785	262,655
<u>Less</u> Allowance for doubtful accounts	(26,160)	(31,154)	(1,233)	(6,281)
Total trade receivables other parties - net	559,195	683,144	178,552	246,374
Total trade receivables - net	561,258	683,144	394,518	457,931

9. INVENTORIES - NET

Inventories as at December 31, 2017 and 2016 consisted of:

Unit: Thousand Baht						
	Consolidated financial statements					
	Reduce cost to					
	Cost		net realisable value		Inventories - net	
	2017	2016	2017	2016	2017	2016
Finished goods	443,416	223,276	(41,579)	(11,903)	401,837	211,373
Semi-finished goods	165,897	162,486	(372)	(1,455)	165,525	161,031
Raw materials	345,818	556,202	(9,016)	(11,082)	336,802	545,120
Spare parts and factory supplies	34,284	33,658	(2,994)	(2,520)	31,290	31,138
Raw material in transit	29,121	75,214	-	-	29,121	75,214
Total	1,018,536	1,050,836	(53,961)	(26,960)	964,575	1,023,876

Unit: Thousand Baht

Separate financial statement

	Cost		Reduce cost to net realisable value		Inventories - net	
	2017	2016	2017	2016	2017	2016
Finished goods	141,673	152,858	(24,360)	(11,903)	117,313	140,955
Semi-finished goods	154,583	162,486	(372)	(1,455)	154,211	161,031
Raw materials	219,351	247,152	(8,698)	(10,764)	210,653	236,388
Spare parts and factory supplies	29,743	29,658	(2,994)	(2,520)	26,749	27,138
Raw material in transit	29,121	75,214	-	-	29,121	75,214
Total	574,471	667,368	(36,424)	(26,642)	538,047	640,726

During the current year, the Company and its subsidiaries reduced cost of inventories to the net realizable value amount of Baht 27 million, which was included in cost of sales in the amount of Baht 22.35 million and administrative expenses in the amount of Baht 4.65 million. The Company reduced cost of inventories to the net realizable value amount of Baht 9.78 million, which was included in cost of sales in the amount of Baht 5.13 million and administrative expenses in the amount of Baht 4.65 million (In 2016, the Company and its subsidiaries reduced cost of inventories to the net realizable value amount of Baht 4.81 million which was included in cost of sales).

10. INVESTMENTS IN SUBSIDIARIES

Investment in subsidiaries presented in separate financial statements as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht							
	Paid up share capital (Million Baht)		Investment proportion (%)		Cost method		Dividend paid to non-controlling interests during the	
							year	
	2017	2016	2017	2016	2017	2016	2017	2016
3K Products Company Limited	8	8	100	100	8,000	8,000	22,038	16,499
Thai Nonferrous Metal Company Limited	250	250	97	97	229,632	229,632	-	-
Power Plas Company Limited	65	65	100	49	72,242	31,850	1,960	-
3K Traction Battery Company Limited	5	5	100	100	5,290	5,290	-	-
Total					315,164	274,772	23,998	16,499

Details of investments in subsidiaries that have material non-controlling interests

Company's name	Unit: Thousand Baht							
	Proportion of equity interest held		Accumulated balance of non-controlling interests		Profit/loss allocated to non-controlling interests during		Dividend paid to non-controlling interests during	
					the year		the year	
	2017	2016	2017	2016	2017	2016	2017	2016
	%	%						
Thai Nonferrous Metal Company Limited	3	3	2,513	6,999	(5,005)	(1,858)	-	-
Power Plas Company Limited	-	51	-	40,388	754	2,184	(2,040)	-

Summarized financial information that based on amounts before inter-company elimination about subsidiaries that have material non-controlling:

Summarized information about financial position

	Unit: Thousand Baht			
	As at December 31,			
	Thai Nonferrous Metal			
	Company Limited		Power Plas Company Limited	
	2017	2016	2017	2016
Current assets	399,831	427,005	43,071	47,401
Non-current assets	219,425	220,716	55,366	65,494
Current liabilities	(538,815)	401,073	(20,411)	32,021
Non-current liabilities	(7,427)	13,351	(1,113)	1,683

Summarized information about comprehensive income

	Unit: Thousand Baht			
	For the year ended at December 31,			
	Thai Nonferrous Metal			
	Company Limited		Power Plas Company Limited	
	2017	2016	2017	2016
Revenue	1,149,481	1,153,304	153,118	163,529
Profit (loss)	(166,848)	(43,965)	786	4,283
Other comprehensive income	6,565	-	934	892
Total comprehensive income (loss)	(160,283)	(43,965)	1,720	5,175

Summarized information about cash flows

	Unit: Thousand Baht			
	For the year ended at December 31,			
	Thai Nonferrous Metal			
	Company Limited		Power Plas Company Limited	
	2017	2016	2017	2016
Cash flows from (used in)				
operating activities	(119,957)	(39,024)	10,729	20,398
Cash flows used in investing activities	(4,496)	(6,079)	(2,664)	(898)
Cash flows from (used in)				
financing activities	115,128	45,000	(4,039)	(11,062)
Net increased (decreased) in cash and cash equivalents	675	(103)	4,026	8,438

Investments in Power Plas Company Limited

On November 8, 2017, the Company purchased the ordinary shares of Power Plas Company Limited from the existing shareholders in the total amount of Baht 40.39 million (5.1 million ordinary shares at Baht 7.92). This amount is equivalent to the net book value as at September 30, 2017 of Power Plas Company Limited with the excess of investments arising from purchase of investment in Power Plas Company Limited at a price higher than the net book value of the subsidiary at the acquisition date in the amount of Baht 1.64 million. As a result, in the year 2017, the Company's shareholding in such subsidiary increased to 100%. The Company has already registered the transfer of these shares in 2017. This purchase of ordinary shares is in process of presentation in the Board of Directors Meeting to ratify.

Investments in 3K Traction Battery Company Limited

The Board of director of the Company No. 3/2559, held on August 11, 2016, the Board of director of the Company approved to purchase all ordinary shares of 3K Traction Battery Company Limited from 3K Products Company Limited, which is a subsidiary company with a total value of Baht 5.29 million. (499,993 ordinary shares at Baht 10.58). This amount is equivalent to the net book value as at June 30, 2016 of 3K Traction Battery Company Limited (representing 99.99% shareholding). The Company has already registered the transfer of these shares in 2017.

11. INVESTMENT PROPERTIES - NET

Investment properties as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht			
	Consolidated financial statements			
			Condominium	
	Land	Buildings	units	Total
<u>Cost</u>				
As at December 31, 2016	303,167	1,047	-	304,214
Reclassify from property, plant and equipment	-	-	13,250	13,250
As at December 31, 2017	303,167	1,047	13,250	317,464
<u>Accumulated depreciation</u>				
As at December 31, 2016	-	-	-	-
Depreciation for the year	-	12	-	12
Reclassify from property, plant and equipment	-	-	6,490	6,490
As at December 31, 2017	-	12	6,490	6,502
<u>Allowance for impairment</u>				
As at December 31, 2016	-	-	-	-
Increase	3,793	667	-	4,460
As at December 31, 2017	3,793	667	-	4,460
<u>Net book value</u>				
As at December 31, 2016	303,167	1,047	-	304,214
As at December 31, 2017	299,374	368	6,760	306,502

	Unit: Thousand Baht		
	Separate financial statements		
	Land	Condominium units	Total
<u>Cost</u>			
As at December 31, 2016	94,371	-	94,371
Reclassify from property, plant and equipment	-	13,250	13,250
As at December 31, 2017	94,371	13,250	107,621
<u>Accumulated depreciation</u>			
As at December 31, 2016	-	-	-
Reclassify from property, plant and equipment	-	6,490	6,490
As at December 31, 2017	-	6,490	6,490
<u>Net book value</u>			
As at December 31, 2016	94,371	-	94,371
As at December 31, 2017	94,371	6,760	101,131

Investment properties in consolidated financial statements and separate financial statements have approximately the fair value amount of Baht 493.28 million and Baht 243.49 million, respectively. The assessment was made by the independent appraiser, determined according to the market comparison Approach.

The fair value measurement for investment properties, are categorised as Fair Value - Level 2 based on the inputs to the valuation technique used.

Depreciation for the years ended December 31, 2017 amounted to Baht 0.01 million for the consolidated financial statements are included in profit or loss.

As at December 31, 2017, the Company reviewed the purpose of use of its condominium units at one location with net book value of Baht 6.76 million, which were originally recorded as “property, plant and equipment - net”. Their purpose will be changed to be hold for capital appreciation, the Company, therefore, classified them to “investment properties”.

12. PROPERTY, PLANT AND EQUIPMENT – NET

Property, plant and equipment as at December 31, 2017 and 2016 consisted of:

Unit: Thousand Baht							
Consolidated financial statements							
	Land	Buildings and buildings improvements	Machinery and equipment	Furniture and office equipment	Vehicles	Assets under installation and construction	Total
<u>Cost</u>							
As at December 31, 2016	310,408	768,574	2,311,444	200,039	49,532	77,467	3,717,464
Addition	-	96	16,284	3,165	295	48,678	68,518
Transferred in(out)	-	9,308	45,590	8,150	-	(63,048)	-
Reclassify to intangible assets	-	-	-	(230)	-	-	(230)
Reclassify to investment properties	-	(13,250)	-	-	-	-	(13,250)
Disposal/ write-off	-	(828)	(84,958)	(26,072)	(20,582)	(1,278)	(133,718)
As at December 31, 2017	310,408	763,900	2,288,360	185,052	29,245	61,819	3,638,784
<u>Accumulated depreciation</u>							
As at December 31, 2016	-	413,295	1,681,908	177,827	43,231	-	2,316,261
Depreciation for the year	-	21,245	153,356	9,697	2,078	-	186,376
Transferred in(out)	-	306	3	(309)	-	-	-
Reclassify to investment properties	-	(6,490)	-	-	-	-	(6,490)
Depreciation on disposals/ write-off	-	(669)	(82,811)	(25,546)	(18,200)	-	(127,226)
As at December 31, 2017	-	427,687	1,752,456	161,669	27,109	-	2,368,921

Unit: Thousand Baht

Consolidated financial statements						
	Land	Buildings and improvements	Machinery and equipment	Furniture and office equipment	Vehicles	Assets under installation and construction
						Total
<u>Allowance for impairment</u>						
As at December 31, 2016	-	-	128	10	-	138
Increase	-	-	3,831	-	-	3,831
As at December 31, 2017	-	-	3,959	10	-	3,969
<u>Net book value</u>						
As at December 31, 2016	310,408	355,279	629,408	22,202	6,301	77,467
As at December 31, 2017	310,408	336,213	531,945	23,373	2,136	61,819
						1,401,065
						1,265,894

Unit: Thousand Baht

	Separate financial statements					
	Land	Buildings and buildings improvements	Machinery and equipment	Furniture and office equipment	Vehicles	Assets under installation and construction
Cost						Total
As at December 31, 2016	201,085	573,474	1,870,317	147,109	19,291	74,478
Addition	-	-	11,184	1,807	95	43,486
Transferred in(out)	-	8,566	40,206	7,584	-	(56,356)
Reclassify to intangible assets	-	-	-	(230)	-	(230)
Reclassify to investment properties	-	(13,250)	-	-	-	(13,250)
Disposal/ write-off	-	-	(38,581)	(2,419)	(3,661)	(820)
As at December 31, 2017	201,085	568,790	1,883,126	153,851	15,725	60,788
Accumulated depreciation						
As at December 31, 2016	-	320,962	1,363,709	129,805	16,207	-
Depreciation for the year	-	15,870	123,500	7,498	1,423	-
Depreciation on disposals/ write-off	-	-	(37,150)	(2,404)	(3,449)	-
Reclassify to investment properties	-	(6,490)	-	-	-	(6,490)
As at December 31, 2017	-	330,342	1,450,059	134,899	14,181	-
Net book value						
As at December 31, 2016	201,085	252,512	506,608	17,304	3,084	74,478
As at December 31, 2017	201,085	238,448	433,067	18,952	1,544	60,788

Depreciation for the years ended December 31, 2017 and 2016 amounted to Baht 186.38 million and Baht 191.65 million, respectively, for the consolidated financial statements, and amounted to Baht 148.29 million and Baht 146.72 million, respectively, for the separate financial statements, are included in profit or loss.

As at December 31, 2017 and 2016, the Company and its subsidiaries have property, plant and equipment which have been fully depreciated but still in use, amounted to Baht 1,185 million and Baht 1,094 million, and the Company has property, plant and equipment which have been fully depreciated but still in use, amounted to Baht 966 million and Baht 900 million, respectively.

13. INTANGIBLE ASSETS - NET

Intangible assets as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht	
	Consolidated financial statements	Separate financial statements
<u>Computer software</u>		
<u>Cost</u>		
As at December 31, 2016	60,880	52,414
Addition	1,896	1,296
Reclassify from property, plant and equipment	230	230
As at December 31, 2017	63,006	53,940
<u>Accumulated amortisation</u>		
As at December 31, 2016	35,548	30,314
Increase	4,944	4,280
As at December 31, 2017	40,492	34,594
<u>Net book value</u>		
As at December 31, 2016	25,332	22,100
As at December 31, 2017	22,514	19,346

Amortization for the years ended December 31, 2017 and 2016 amounted of Baht 4.94 million and Baht 5.13 million, respectively, for the consolidated financial statements and amounted of Baht 4.28 million and Baht 4.16 million, respectively, for separate financial statements are included in profit or loss.

As at December 31, 2017 and 2016, The Company and its subsidiaries have intangible assets, which have been fully depreciated but still in use, amounted to Baht 13.13 million and Baht 11.16 million, respectively, and the Company has intangible assets, which have been fully depreciated but still in use, amounted to Baht 10.14 million.

14. DEFERRED TAX ASSETS AND LIABILITIES

Movements in deferred tax assets and liabilities during the year were as follows:

	Unit: Thousand Baht			
	Consolidated financial statements			
	Movements increase (decrease)			As at December 31, 2017
	As at January 1, 2017	Profit or loss	Other comprehensive income	
Deferred tax assets				
Trade and other current receivables	5,276	123	-	5,269
Inventories	5,865	3,564	-	9,429
Non-current provisions for employee benefits	17,309	1,058	(5,323)	13,044
Unused tax losses	28,931	36,624	-	65,555
Unrealised profit from inter-sales transactions	2,896	(2,896)	-	-
Provisions	12,995	(2,840)	-	10,155
Property, plant and equipment (allowance for impairment)	-	1,658	-	1,658
Other assets	-	172	-	172
Total deferred tax assets	73,272	37,463	(5,323)	105,412
Deferred tax liabilities				
Property, plant and equipment (depreciation)	4,488	989	-	5,477
Forward foreign exchange contracts	233	(233)	-	-
Unrealised loss from inter-sales transactions	-	284	-	284
Total deferred tax liabilities	4,721	1,040	-	5,761
Deferred tax assets - net	68,551	36,423	(5,323)	99,651

A subsidiary have unused loss carry forward as at December 31, 2017 and 2016 in the amount of Baht 78.50 million and Baht 6.72 million, respectively. Due to the uncertainty of the utilization, the management, therefore, has considered not to recognize this deferred tax.

	Unit: Thousand Baht			
	Separate financial statements			
	Movements increase (decrease)			
			Other	
	As at	Profit	comprehensive	As at December
	January 1, 2017	or loss	income	31, 2017
Deferred tax assets				
Inventories	5,329	1,956	-	7,285
Non-current provisions for employee benefits	9,084	24	(2,001)	7,107
Provisions	12,995	(2,841)	-	10,154
Unused tax losses	-	15,092	-	15,092
Total deferred tax assets	27,408	14,231	(2,001)	39,638
Deferred tax liabilities				
Property, plant and equipment (depreciation)	-	1,256	-	1,256
Forward foreign exchange contracts	233	(233)	-	-
Total deferred tax liabilities	233	1,023	-	1,256
Deferred tax assets - net	27,175	13,208	(2,001)	38,382

15. OTHER NON-CURRENT ASSETS

Other non-current assets as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Export tax subsidy receivable	3,106	3,561	3,106	3,561
Prepaid income tax	-	9,836	-	5,226
Deferred expenses	4,473	7,019	-	-
Deposits	1,219	5,620	-	-
Others	1,284	1,267	1,021	1,008
Total other non-current assets	10,082	27,303	4,127	9,795

16. SHORT-TERM LOANS FROM FINANCIAL INSTITUTION

Short-term loans from financial institutions as at December 31, 2017 and 2016 consisted of:

		Unit: Thousand Baht			
	Interest rate (% per annum)	Consolidated financial statements		Separate financial statements	
		2017	2016	2017	2016
Promissory notes	MMR	1,105,000	856,000	470,000	370,000
Trust receipts	MMR	-	71,166	-	71,166
Total		1,105,000	927,166	470,000	441,166

Overdraft facilities from banks and short-term loans from financial institutions are unsecured. Under those agreements, the Group have to comply with certain conditions and restrictions stipulated in the agreements.

17. TRADE AND OTHER PAYABLES

Trade and other payables as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Trade payables				
Trade payables - related parties	-	-	100,839	101,678
Trade payables - other parties	198,626	289,096	192,997	277,379
Total trade payables	198,626	289,096	293,836	379,057
Other payables				
Other payables - related parties	14,807	-	13,818	5,756
Other payables - other parties	42,937	44,312	31,769	32,656
Accrued expenses	101,978	167,123	60,660	97,273
Payables for purchase of assets	6,235	3,210	5,785	2,762
Accrued sales promotions expenses	38,193	86,392	-	-
Advance received from customers	4,842	17,935	4,842	17,934
Excise Department payable	18,338	18,394	18,111	18,394
Others	10,499	12,794	3,309	3,109
Total other payables	237,829	350,160	138,294	177,884
Total trade and other payables	436,455	639,256	432,130	556,941

18. NON-CURRENT PROVISIONS FOR EMPLOYEE BENEFITS

Movement of the present value of non-current provisions for employee benefits for the years ended December 31, 2017 and 2016 were as follows:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Non-current provision for employee benefits				
beginning of the year	88,229	80,174	45,420	41,402
Included in profit or loss:				
Current service cost	9,161	8,829	4,339	4,407
Interest cost	2,207	1,984	1,096	1,020
Included in other comprehensive income				
Actuarial (gain) loss arising from				
Demographic assumptions changes	633	(892)	344	-
Financial assumptions changes	1,010	-	675	-
Experience adjustments	(28,260)	-	(11,024)	-
Benefits paid during the year	(7,765)	(1,866)	(5,314)	(1,409)
Non-current provision for employee benefits				
ending of the year	65,215	88,229	35,536	45,420

Employee benefit expenses in profit or loss for the year ended December 31, 2017 and 2016, consisted of:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Costs of sales	2,611	2,822	1,802	1,944
Selling and admin expenses	8,757	7,991	3,633	3,483
Total employee benefit expenses	11,368	10,813	5,435	5,427

The actuarial assumption of discount rate is estimated from weighted average of yield rate of government bonds as at the end of reporting date that reflects the estimated timing of benefit payments.

The actuarial assumption of mortality rate for reasonable estimation of probability of retirement in the future is estimated from mortality table.

Principal actuarial assumptions as at December 31, 2017 and 2016 (represented by the weighted-average) consisted of:

	Percentage (%) / annum			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Discount rate	2.1 - 2.6	2.5 - 2.6	2.1	2.5
Future monthly salary increase rate	4.5 - 6.5	4.5 - 6.5	5.0	5.0
Future daily salary increase rate	3.0 - 4.5	3.0 - 4.0	4.0	4.0
Employee turnover rate (depending on age of employees)	0.0 - 60.0	0.0 - 60.0	0.0 - 60.0	0.0 - 60.0
Mortality rate	100% of Thai	100% of Thai	100% of Thai	100% of Thai
	Mortality	Mortality	Mortality	Mortality
	Ordinary Tables	Ordinary Tables	Ordinary Tables	Ordinary Tables
	of 2017	of 2008	of 2017	of 2008

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at 31 December 2017 are summarised below:

	Unit: Thousand Baht			
	Change of the present value of the employee benefit obligations			
	Consolidated financial statements		Separate financial statements	
	Increase	Decrease	Increase	Decrease
	0.5%	0.5%	0.5%	0.5%
Discount rate	(63,117)	67,426	(34,423)	36,708
Salary increase rate	67,350	(63,167)	36,671	(34,446)

As at December 31, 2017, the maturity analysis of undiscounted cash flows of benefit payments was as follows:

	Unit: Thousand Baht			
	Consolidated financial statements		Separate financial statements	
	2017	2016	2017	2016
Within 1 year	9,234	4,319	6,237	3,573
Over 1 and up to 5 years	22,896	46,564	10,160	24,655
Over than 5 years	48,886	47,227	28,297	20,994

19. INCOME TAX

Income tax income (expenses) for the year ended December 31, 2017 and 2016, were as follows:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2017	2016	2017	2016
Current income tax				
Corporate income tax charge	(14,069)	(65,865)	-	(44,574)
Deferred tax:				
Relating to origination and reversal of				
temporary differences	36,423	20,185	13,209	13,434
Income tax income (expenses) reported in				
the statements of profit or loss	22,354	(45,680)	13,209	(31,140)

Reconciliation of effective rate for the year ended December 31, 2017 and 2016 were as follows:

	Unit: Thousand Baht			
	Consolidated financial statements			
	2017		2016	
	Tax rate		Tax rate	
	(%)	Unit: Baht	(%)	Unit: Baht
Profit before income tax		(375,329)		202,525
Current income tax expenses at tax rate	20.00	(75,066)	20.00	40,505
Adjustment in respect of income tax expense				
of previous year	-	-	0.03	69
Non - deductible expenses by the Revenue Code	(11.08)	41,575	3.28	6,632
Double expense by the Revenue Code	0.62	(2,327)	(0.50)	(1,020)
Promotional privileges	-	-	(0.36)	(729)
Current year losses for which no deferred tax assets				
was recognized	(2.50)	9,382	-	-
Prior year temporary differences which no deferred				
tax assets was recognized	(1.09)	4,082	-	-
Intercompany profit	-	-	0.07	144
Unutilized tax loss carry forward	-	-	0.04	79
Income tax (income) expenses	5.95	(22,354)	22.56	45,680

Unit: Thousand Baht				
Separate financial statements				
	2017		2016	
	Tax rate		Tax rate	
	(%)	Unit: Baht	(%)	Unit: Baht
Profit before income tax		(234,892)		157,840
Current income tax expenses at tax rate	20.00	(46,978)	20.00	31,568
Adjustment in respect of income tax expense of previous year	-	-	(0.12)	(195)
Non - deductible expenses by the Revenue Code	(15.72)	36,929	2.34	3,702
Double expense by the Revenue Code	0.99	(2,327)	(0.40)	(635)
Dividend income tax-free	2.04	(4,800)	(2.09)	(3,300)
Prior year temporary differences which no deferred tax assets was recognized	(1.69)	3,967	-	-
Income tax (income) expenses	5.62	(13,209)	19.73	31,140

20. LEGAL 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 profit after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of the registered capital. The statutory reserve is not available for dividend distribution. At present, the statutory reserve has fully been set aside.

21. DIVIDEND

Ordinary Shareholders' Meeting of 2017 of the Company, held on April 27, 2017, resolved to approve dividend payment from its net profit for the year 2016 to its ordinary shareholders for 20 million shares at the rate of Baht 3 per share, totaling Baht 60 million. The dividend payments to shareholders have been paid on May 4, 2017.

Ordinary Shareholders' Meeting of 2016 of the Company, held on April 26, 2016, resolved to approve dividend payment from its net profit for the year 2015 to its ordinary shareholders for 20 million shares at the rate of Baht 3 per share, totaling Baht 60 million. The dividend payments to shareholders have been paid in May 2016.

22. EXPENSES BY NATURE

Significant expenses classified by nature as at December 31, 2017 and 2016 consisted of:

	Unit: Thousand Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2560	2559	2560	2559
Salaries, wages and other employee benefits	619,841	624,235	398,983	374,565
Depreciation and amortization	191,332	196,777	152,569	150,878
Sales promotion expenses	148,264	188,298	7,539	22,203
Excise tax expenses	236,084	258,512	236,084	258,512
Repair and maintenance expenses	64,052	67,343	51,426	52,386
Electricity expenses	164,798	152,755	148,909	136,392
Shipping expenses	65,582	73,802	31,445	34,496
Rental expenses	36,049	35,897	4,150	3,061
Tax and surcharge from tax assessment	177,987	-	177,987	-
Raw materials and consumables used				
and purchase of finish goods	3,620,657	3,366,157	3,554,136	3,106,285
Changes in inventories of finished goods				
and work in process (increase) decrease	60,217	(93,078)	19,088	(99,742)

23. PROMOTIONAL PRIVILEGES

Thai Nonferrous Metal Company Limited, which is a subsidiary, has received promotional privileges from the Board of Investment for its recycle production of unused materials, pursuant to the investment promotion certificate No. 1134(2)/2550 issued on 8 February 2007. Subject to certain imposed conditions, the privileges include an exemption from corporate income tax for a period of 8 years from the date the promoted operations commenced generating revenues (8 January 2008) and exemption of import duty on machinery as approved by the board.

Power Plas Company Limited, which is a subsidiary, has received promotional privileges from the Board of Investment for the manufacture of plastic part for industries, pursuant to the investment promotion certificate No. 2406(5)/2553 issued on 22 December 2010. Subject to certain imposed conditions, the privileges include an exemption from corporate income tax for a period of 8 years from the date the promoted operations commenced generating revenues (13 January 2011) and exemption of import duty on machinery as approved by the board.

24. BUSINESS SEGMENT INFORMATION

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance. The chief operating decision maker has been identified as the President.

The Company and its subsidiaries are principally engaged in the manufacture and distribution of batteries. Its operations are carried on only in Thailand. Segment performance is measured based on operating profit or loss, on a basis consistent with that used to measure operating profit or loss in the financial statements. As a result, all of the revenues, operating profits and assets as reflected in these financial statements pertain exclusively to the aforementioned reportable operating segment and geographical area.

The Group's geographical segment information based on location of customer for the year ended December 31, 2017 and 2016 was as follows:

	Unit: Thousand Baht	
	Revenue	
	For the year ended December 31,	
	2017	2016
Thai	2,823,678	3,323,782
Other countries	2,459,128	1,987,797
Total	5,282,806	5,311,579

Major customers

Revenues from transactions with any single customer which have amount of 10 percent or more of the Group's revenues for the year ended December 31, 2017 and 2016 amounted to Baht 771 million derived from one customer. (2016: Baht 717 million and Baht 322 million derived from two major customers)

25. PROVIDENT FUND

The Company and its subsidiaries and their employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. Details are as follow:

Company name	The fund is managed by	% of basic salary
Thai Storage Battery Public Company Limited	UOB Asset Management (Thailand) Company Limited	3
3K Products Company Limited	TMB Asset Management Company Limited	2 - 5
Thai Nonferrous Metal Company Limited	UOB Asset Management (Thailand) Company Limited	3

Both the Company and its subsidiaries and employees contribute to the fund monthly. The fund will be paid to employees upon termination in accordance with the fund rules. During the year 2017, the Company and its subsidiaries contributed Baht 9 million (2016: Baht 7 million) (The Company only: Baht 5 million (2016: Baht 5 million)) to the fund.

26. COMMITMENTS AND CONTINGENT LIABILITIES

26.1 Capital commitments

As at December 31, 2017 and 2016, the Company and its subsidiaries had capital commitments of approximately Baht 15 million and Baht 12 million, respectively relating to the purchase of machinery and equipment.

26.2 Operating lease commitments

The Company and its subsidiaries had entered into lease agreements in respect of the lease of warehouse and motor vehicles. The terms of the agreements are generally between 1 and 5 years.

Future minimum rentals payable under these non-cancellable operating lease contracts as of December 31, 2017 were as follows:

	Unit: Million Baht	
	Consolidated financial statements	Separate financial statements
Payable		
Up to 1 year	17.05	3.01
Over 1 but not over 5 years	25.91	11.90

26.3 Commitment and contingent liabilities with financial institutions

As at December 31, 2017, the Company and its subsidiaries had outstanding bank guarantees of approximately Baht 28 million and The Company only Baht 26 million, respectively, issued by banks on behalf of the Company and its subsidiaries in respect of certain performance bonds as required in the normal course of their businesses.

As at December 31, 2016, the Company and its subsidiaries have been granted various types of credit facilities, by several financial institutions of which Baht 4,158 million and The Company only Baht 2,569 million, has not been utilized. Most of the facilities have been cross-guaranteed by the Company and its subsidiaries.

26.4 Agreement Regarding Hitachi Brand Value

The Group entered into the Agreement Regarding Hitachi Brand Value with Hitachi Chemical Co., Ltd, to be granted the non-exclusive right to use the “Hitachi” brand. The license fee will be charged at 1% of sales (excluded intercompany sales).

The term provided in such agreements was 5 years and will be renewed for the further period of 1 year and was effective from October 1, 2017.

For the year end December 31, 2017, the license fee was recognized in the statement of income for the consolidated financial statements in the amount of Baht 14 million and for the separate financial statements in the amount of Baht 13 million.

27. TAX ASSESSMENT

On January 4, 2013, the Company received 135 First Assessment Notices from the Customs Department concerning assessments of import duty, value added tax and surcharges on imports of raw materials and machinery during the years 2007-2010. According to the Notices, the Company had underpaid tax, and the Customs Department therefore required the Company to pay import duty and value added tax of Baht 9.92 million and Baht 89.57 million, respectively, totaling Baht 99.49 million, together with surcharges of Baht 60.12 million. The payment amount was Baht 159.61 million in total.

The Company performed a preliminary review of its documentation and noted some discrepancies. Specifically, serial numbers of, and amounts stated in, certain import entry forms specified in the Notices from the Customs Department did not match those per the Company’s documentation and accounting records. In addition, on October 5, 2010, the Customs Department, the authority conducting the investigation, informed the Company that the Company’s customs clearance agents had forged customs documents and receipts in order to mislead the Company, causing the Company to believe that all documents were genuine. The Company, therefore, requested all original supporting documents from the Customs Department in order to file charges against the customs brokers. The Company received three sets of supporting documents from the Customs Department and proceeded with legal action against the customs clearance agents on October 19, 2010. The Court of First Instance ruled that there were sufficient grounds under the Criminal Code to accept the lawsuit against the customs clearance agents and their authorized representatives.

On May 25, 2016, the Company received 135 Second Assessment Notices concerning assessments of fines for value added tax from imports of raw materials and machinery during the years 2007-2010, all of which were not assessed by the Custom Department in the first Assessment Notices. According to the second Assessment Notices, the Company had underpaid tax, and, therefore, the Customs Department required the Company to pay a fine amounting to Baht 90.36 million.

On the basis of the above facts, the Company's Management believes that the Company has taken full and appropriate action and had no intention to defraud a government agency. The Company believes that the documents that it possesses passed through customs procedures and obtained receipts from the Customs Department signed off by a finance official of the Company, and supporting documentation for customs procedures signed off by genuine Customs Officials. In addition, the Company's Management believes that the Company will not incur losses as a result of the above assessment, and that if losses were incurred they would not exceed the import duty shortfall of Baht 21.28 million (including fines and surcharges). For prudent reason, the Company has, therefore, recorded provision of approximately Baht 21 million for tax assessment in "Provision for other liabilities from the tax assessment" in the statements of financial position as of December 31, 2016.

On September 9, 2017, the Company received decision from the Appeals Committee of Revenue Department dated July 5, 2017, according to the Notices of Appeal submitted by the Company dated June 23, 2016 and September 19, 2016 regarding the value added tax. The Appeals Committee decided to rescind the additional tax assessment of Baht 90.36 million under the second Assessment Notice because such re-assessment for the existing claim is unlawful.

In addition, such decision also addressed the dispute under first Assessment Notice regarding tax assessments, including fines and surcharges, in the total amount of Baht 159.61 million. Based on the facts and relevant laws, and given that the Company did not submit a Notice of Appeal for such assessment, the matter was closed. As a result, the Company's Management recorded additional tax liabilities adjusted from Baht 21 million in "Provision for other liabilities from tax assessment" to tax liabilities of Baht 159.61 million according to the first Assessment Notice, plus surcharge of Baht 39.37 million, totaling Baht 198.98 million and presented the sum to under the caption "Liabilities of tax assessment" in the statements of financial position as of December 31, 2017.

28. PROVISION FOR WARRANTY

In December 2016, the Company was informed by a foreign customer to claim of warranty for the damage approximately EURO 28.50 million. The management has an opinion that this must be investigated in respect of the cause of damage whether they were caused by the production process of the Company. The estimation for warranty liability is still uncertainty depending on the outcome of negotiations and inspections that will be occurred in the future. However, the management has estimated the possible liability on the warranty as at December 31, 2017 of Baht 50.77 million and does not expect that the claim would result in significant damages to the Company in excess of the provisioning.

29. PROVISION FOR LITIGATION

In 2013, a subsidiary received a summons and a copy of a labour Complaint from the Labour Court (Region 2), resulting in a legal claim by a former employee for damages from unlawful termination of employment. The claim amounts of Bath 14.50 million, plus interest accruing from the date of complaint until payment of the compensation settlement. The case is currently under the consideration of the Labour Court. Management estimated the claim, as at December 31, 2017, in the amount of Baht 7.25 million and does not expect that the claim would impose significant damages on the Company in excess of the provisioning.

30. FINANCIAL INSTRUMENTS

Financial risk management

The Company's financial instruments, as defined under Thai Accounting Standard No.107 "Financial Instruments: Disclosure and Presentations", principally comprise cash and cash equivalents, trade and other receivable, investments, short-term loans and liabilities under finance lease agreement. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Company and its subsidiaries are exposed to credit risk primarily with respect to trade and other receivable. The Company and its subsidiaries manage the risk by adopting appropriate credit control policies and procedures and therefore do not expect to incur material financial losses. In addition, the Company and its subsidiaries do not have high concentrations of credit risk since they have a large customer base. The maximum exposure to credit risk is limited to the carrying amounts of trade and other receivables as stated in the statement of financial position.

Interest rate risk

The Company and its subsidiaries exposure to interest rate risk relates primarily to its cash at banks, short-term loans borrowings and liabilities under finance lease agreement. Most of the financial assets and liabilities bear floating interest rates or fixed interest rates which are close to the market rate.

Significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

Unit: Million Baht

Consolidated financial statements as at December 31, 2017

	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
Financial Assets				
Cash and cash equivalent	166	11	177	0.125 - 0.75
Trade and other current receivables	-	583	583	-
	166	594	760	
Financial liabilities				
Short-term loans from financial institutions	1,105	-	1,105	1.80 - 2.10
Trade and other current payables	-	437	437	-
	1,105	437	1,542	

Unit: Million Baht

Consolidated financial statements as at December 31, 2016

	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
Financial Assets				
Cash and cash equivalent	89	76	165	0.125 - 2.50
Trade and other current receivables	-	714	714	-
	89	790	879	
Financial liabilities				
Short-term loans from financial institutions	927	-	927	MMR
Trade and other current payables	-	639	639	-
	927	639	1,566	

Unit: Million Baht

Separate financial statements as at December 31, 2017

	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
Financial Assets				-
Cash and cash equivalent	20	1	21	0.125 - 0.75
Trade and other current receivables	-	422	422	-
	20	423	443	
Financial liabilities				
Short-term loans from financial institutions	470	-	470	2.00 - 2.10
Trade and other current payables	-	432	432	-
	470	432	902	

Unit: Million Baht

Separate financial statements as at December 31, 2016

	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
Financial Assets				-
Cash and cash equivalent	12	2	14	0.125 - 2.50
Trade and other current receivables	-	478	478	-
	12	480	492	
Financial liabilities				
Short-term loans from financial institutions	441	-	441	MMR
Trade and other current payables	-	557	557	-
	441	557	998	

Foreign currency risk

The Company's exposure to foreign currency risk relates primarily to purchase of major raw materials and sales of goods which are denominated in foreign currencies. The Company seeks to reduce this risk by entering into forward exchange contracts when it considers appropriate. Generally, the forward contracts mature within one year.

The balances of financial assets and liabilities denominated in foreign currencies are summarised below.

Currency	Financial assets as at		Financial liabilities as at		Average exchange rate as at	
	December 31,	December 31,	December 31,	December 31,	December 31,	December 31,
	2017	2016	2017	2016	2017	2016
	(Million)	(Million)	(Million)	(Million)	(Baht per 1 foreign currency unit)	
US Dollars	3	4	1	3	32.6809	35.8307
Japanese Yen	1	14	1	19	0.2898	0.3080

Forward exchange contracts outstanding are summarised below.

As at	Foreign currency	Bought	Sold	Contractual exchange rate	
		amount	amount	Bought	Sold
		(Million)	(Million)	(Baht per 1 foreign currency unit)	
December 31, 2017	-	-	-	-	-
December 31, 2016	US Dollars	5	-	34.9773 - 36.0522	-

31. FAIR VALUE OF FINANCIAL INSTRUMENT

The Company uses the market approach to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards, except that the cost approach or income approach is used when there is no active market or when a quoted market price is not available.

Fair value hierarchy

In applying the above-mentioned valuation techniques, the Company endeavors to use relevant observable inputs as much as possible. TFRS 13 Fair Value Measurement establishes a fair value hierarchy categorising such inputs into three levels as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

As at December 31, 2017, the Company had investment properties that were disclosed fair value.

Valuation techniques and inputs to Level 2 valuation

The fair value of derivatives 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 commodity price yield curves.

During the current year, there were no transfers within the fair value hierarchy.

32. CAPITAL MANAGEMENT

The primary objective of the Group's capital management is to ensure that it has an appropriate financing structure and to preserve the ability to continue its business as a going concern.

According to the statement of financial position as at December 31, 2017, the Group's debt-to-equity ratio was 1.19: 1 (2016: 0.87: 1) and the Company's was 0.96: 1 (2016: 0.75: 1).

33. RECLASSIFICATION

Certain amounts in the financial statements as at December 31, 2016, and statement of profit or loss and other comprehensive income for the year ended December 31, 2016, been reclassified to conform to the current period's classification but with no effect to previously reported net income or shareholders' equity. The reclassifications are as follows:

Account	Unit: Baht		
	Consolidated financial statement		
	As previously reported	Reclassified amount	As reclassified
<u>Statement of financial position</u>			
Trade and other current receivables	696,679,707	18,137,445	714,817,152
Other current assets	18,137,445	(18,137,445)	-
Trade and other current payables	(607,908,921)	(31,347,121)	(639,256,042)
Provision for tax assessment	-	(21,000,000)	(21,000,000)
Other current liabilities	(52,347,121)	52,347,121	-

Unit: Baht			
Separate financial statements			
Account	As previously reported	Reclassified amount	As reclassified
Statement of financial position			
Trade and other current receivables	469,813,585	8,049,537	477,863,122
Other current assets	8,049,537	(8,049,537)	-
Trade and other current payables	(535,437,436)	(21,503,015)	(556,940,451)
Provision for tax assessment	-	(21,000,000)	(21,000,000)
Other current liabilities	(42,503,015)	42,503,015	-

Unit: Thousand Baht			
Consolidated financial statement			
Account	As previously reported	Reclassified amount	As reclassified
Statement of profit or loss and other comprehensive income			
Costs of sales	4,022,228,676	(28,158,987)	3,994,069,689
Selling expenses	545,066,067	58,550,324	603,616,391
Administrative expenses	561,792,032	(41,391,337)	520,400,695
Tax and surcharge from tax assessment	-	11,000,000	11,000,000

Unit: Thousand Baht			
Separate financial statements			
Account	As previously reported	Reclassified amount	As reclassified
Statement of profit or loss and other comprehensive income			
Costs of sales	3,783,652,622	(28,158,987)	3,755,493,635
Selling expenses	325,177,087	28,158,987	353,336,074
Administrative expenses	277,596,201	(11,000,000)	266,596,201
Tax and surcharge from tax assessment	-	11,000,000	11,000,000

34. APPROVAL OF FINANCIAL STATEMENT

These financial statements have been approved by the Company's Board of director to be issued on February 20, 2018.



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