



**HANA**

**Microelectronics Public Company Limited**

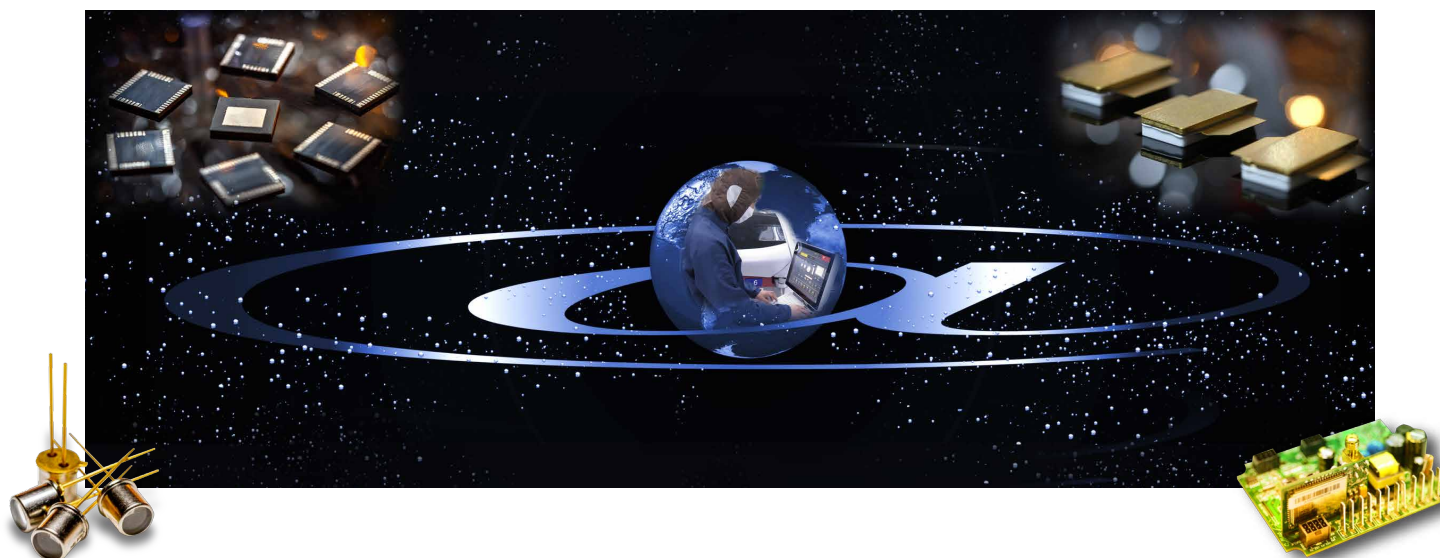
บริษัท ฮานา ไมโครอิเล็กทรอนิกส์ จำกัด (มหาชน)

# ANNUAL REPORT 2018

รายงานประจำปี 2561







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# The Group Financial Highlights

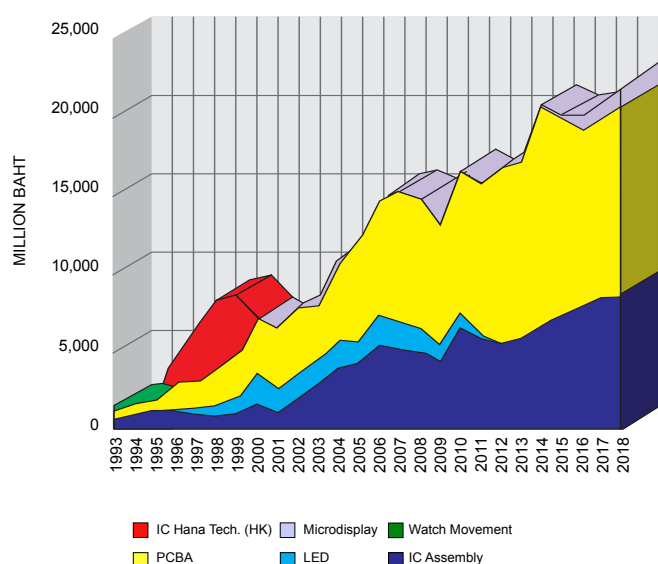
(Million Baht )

	2018	2017	2016	2018/2017 % change
Total Revenue	22,853	22,583	21,064	1%
Sales Revenue	22,264	21,551	20,523	3%
Gross Profit	3,203	3,214	2,876	0%
Operating Profit	2,309	2,290	1,969	1%
Net Profit before Non Recurring Items	2,360	2,357	2,027	0%
Net Profit (Loss) for the year	2,375	2,888	2,105	-18%
Recurring EBITDA*	3,420	3,374	3,149	1%
Total Assets	25,368	24,403	23,756	4%
Total Liabilities	4,285	3,713	3,794	15%
Shareholders Equity	21,083	20,690	19,962	2%
Net (Cash**) Debt / Equity	-0.18	-0.27	-0.29	
Net Profit (after tax) % Sales	11%	13%	10%	-15%
Recurring EBITDA Margin	15%	16%	15%	-2%
Return on Equity	11%	14%	11%	-19%
Dividend per share (from the profits of)	2.00	2.00	2.00	0%
Payout ratio	68%	56%	76%	22%
EPS before Non Recurring Items	2.93	2.93	2.52	0%
EPS after Non Recurring Items	2.95	3.59	2.62	-18%
Book Value per share (net of treasury shares)	26.19	25.71	24.80	2%
Shares balance repurchased (m)	-	-	-	
Net Number of shares outstanding (year end)	804.88	804.88	804.88	0%

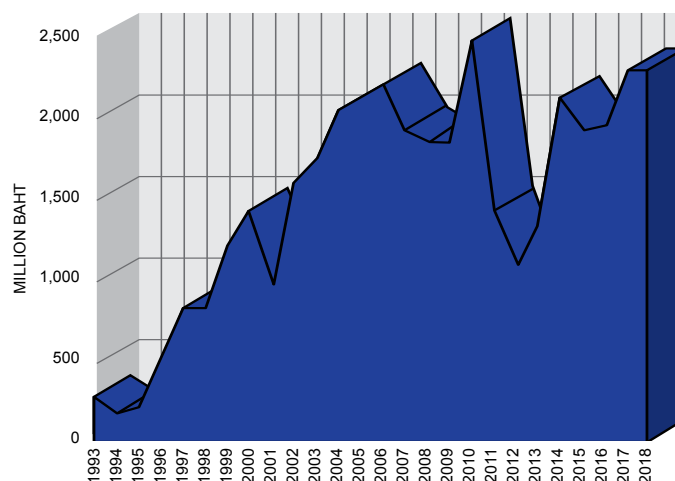
\* Operating revenues before deducting of finance cost, income tax expenses, depreciation and amortization

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

## Sales Revenue



## Operating Profit



# Chairman's Statement



## Dear Shareholder,

I am pleased to report another strong year of operating profits for the Hana Group. Robust US consumer demand supported a second consecutive year of strength for semiconductors and other electronic devices until the simmering issues between China and the USA ruptured into the current trade tariff wars bringing a cloud of uncertainty over future global growth.

Our semiconductor division continued to expand - driven predominantly by market share wins from customer mergers and acquisitions plus the development of our new patented packaging solution for sensors used for the smart phone industry. That combined with our continued focus on quality allowed us to grow semiconductor revenue by 5% in USD and about 12% in units shipped.

Revenues for our microelectronics divisions grew by 13% driven by demand for test & measurement equipment assemblies, IoT devices such as tyre tag RFID, sensors for automotive and medical products (hearing aids). Touch pads for lap tops as expected, continued to decline. The worries relating to the possible escalation of the trade tariff wars have increased interest for those companies potentially exposed to consider Thailand as a possible alternative manufacturing site. Whilst everyone awaits an outcome there is a lot of activity both from current and potential customers in preparation to shift business should the tariff issue escalate further.

Whilst our Thai operations may gain from any future tariff escalations, our Cambodian facility has already started to benefit with the transfer from China of a high volume consumer device business which we plan to ramp up in Q1'19. In addition, this has encouraged other component manufacturers such as those producing plastic and rubber parts to locate nearby our factory which we hope will support the development of our Cambodian operation significantly. Our target to achieve profitability for this division by the year end 2019 now looks very encouraging.

In contrast, our China division could not escape the clouds of the tariff issue. Whilst we have successfully supported those few customers already affected by working with our sister companies in Thailand, this still had a negative impact on the China operations. Clearly the future performance of the Jiaying factory will be dependent on the outcome of the impending trade negotiations and this at the time of writing it is unclear. However, we continue to focus our direction towards assembling devices for non-US destinations and local consumption in China to mitigate any future trade war tensions and we expect over the course of the next three years to substantially increase our domestic sales.



# Chairman's Statement

Hana Technologies, Inc. (formerly named Hana Microdisplay Technologies, Inc.) Ohio, USA continued in 2018 to contribute well to the group's profitability driven by RFID tyre tag business and optical devices. In 2019, we shall invest in developing our capabilities to support the new wave of sensor devices and related electronics required for the evolution of the automobile from internal combustion to EV and from driven to self-driven.

Our location close to Detroit puts us in a key position to exploit this growing demand and it will be a strategic focus in 2019 and onwards for our USA operation.

Our key financial performances were as follows:

- Revenues up 3% from THB 21,551 million in 2017 to THB 22,264 million in 2018
- Operating income up 1% from THB 2,290 million to THB 2,309 million
- EBITDA income up 1% from THB 3,374 million to THB 3,420 million
- NPAT down 18% from THB 2,888 million to THB 2,375 million
- Cash and financial investments down from THB 9.7 billion in 2017 to THB 8.7 billion 2018

During 2018 we invested approximately THB 2.3 billion to expand our capacity putting us in a position to continue our growth in 2019. Throughout 2018, we continued to invest in our two main R&D projects relating to power management both at the high and low voltage spectrums. In particular, we have made good progress with our low power wireless charging developments with a focus on the hearing aid industry, and have filed related patents. We expect to see some positive contribution from this activity within 2019.

In summary 2018 was influenced by fluctuating exchange rates and growing concerns over the USA/China trade tariff wars. Both of these key factors were and will continue to be beyond our control. However, throughout 2018 the semiconductor cycle saw strong US consumer demand and that coupled with our market share wins supported Hana performance during the year.

The eventual outcome of the USA/China trade war will undoubtedly have a significant influence over the global economy going forward and will impact the electronics industry in particular. Against this uncertainty I believe Hana continues to be well positioned with a strong balance sheet and should the tariff issue accelerate our Thai and Cambodian operations may benefit.

I would like to thank my fellow board members and all the staff of the Hana Group for the excellent result in 2018 and together the Company remains confident in facing the challenges of 2019.

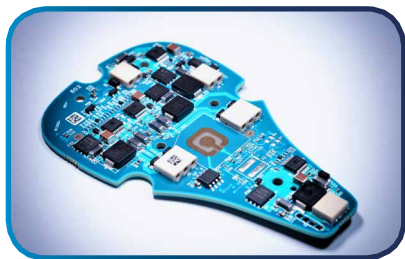


John Thompson

Chairman of the Board of Directors

# Operation Review

## Hana Microelectronics Public Co., Ltd. (Lamphun)



The electronics industry continued to strengthen in 2018 with Hana Lamphun benefiting, with both revenue and profits increasing over 10% from 2017. Looking ahead and despite the uncertainties due to the USA/China trade conflict, we continue to see growing demand in particular from the automotive and RF sectors. A number of new projects starting in 2019 give us continued optimism to continue our growth in 2019.

We have completed the facilitisation of the second floor (12,000 square meters) at our second factory in Lamphun which doubles our floor space at that plant including another 6,000 square meters of production space. In addition we have 25 rai (10 acres) of land adjacent to this plant which provides a land reserve for our future expansion at this location.

Over the past few years we have invested heavily in new IT software systems to enhance our operations and related manufacturing systems automation, such as MES (Manufacturing Execution System), PDM (Production Data Management), NPI (New Product Introduction) to reduce manual procedures, errors and improve productivity. In 2019 we will also implement a new ERP “Enterprise Resource Planning” software system which is a major endeavour but together with the abovementioned software packages we will have the most advanced best in class software suite which will take us forward for the next ten years.

In addition, once again, in 2018 we won a number of Thailand's annual awards for QCC (Quality Control Circle) and Kaizen (continuous improvement). These programs encourage teamwork with a focus on cost savings, productivity and yield improvements.

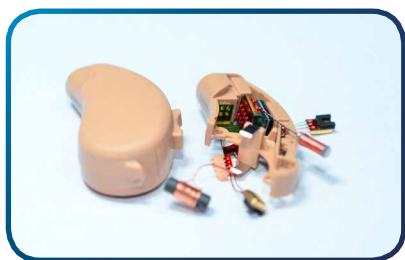
This year, Hana LPN also received another two prestigious awards, “The National Award for Safe, No Disease, and Happy Workplace”, and “Best Company (Golden) Award - Occupational Health and Safety”. These national awards give recognition to our successful focus on environmental control and health and safety issues.

It is anticipated the 2019 will be a very busy year for the Hana LPN with the preparation to strive for the new manufacturing support system and additional business from various customers.

I would like to thank all our Hana LPN staff for their dedication and hard work in 2018 and we look forward to 2019 with confidence and readiness to meet our new challenges.

Mr. Wing Keung Chow

Vice President and General Manager





# Operation Review

## Hana Semiconductor (Ayutthaya) Co., Ltd.



The journey of steady organic growth continued in 2018 for Hana Semiconductor (Ayutthaya) “Hana-AYT”. Continuing from 2017, Hana-AYT had record revenue growth and shipment growth in 2018.

This performance was once again made possible due to the dedication of our loyal employees at all levels and also by the faith that our customers placed on us. We will always strive to live up to the faith and trust that our customers place on Hana-AYT.

With the support from both our employees and customers, Hana-AYT achieved record sales revenues and double digit growth in volume shipped. To support this growth in 2018 and for the future, Hana-AYT spent record level of capital investment in both equipment and facility.

In 2018, we continued our journey of developing and introducing new technologies and capabilities across multiple types of applications and packaging methodologies. In addition, we continued to work towards protecting our technology edge by filing for intellectual property protection for new developments. This parallel effort of developing technologies while at the same time protecting it with IP filing worked to our benefit and allowed us to gain a lot of traction in 2018. We will continue aggressively developing new packaging methodologies and protecting them in 2019.

As always, quality is considered a “business enabler” for Hana-AYT and we continued to focus in development and evolution of our quality culture in 2018. The customer complaint PPB (parts per billion) metric remained in low single digits even though we ramped up production of many new packages in 2018. Investments were made in automation and quality systems so that Hana-AYT can continue to support the journey towards “Zero Defect”. In 2018, Hana-AYT also became certified for IATF 16949 and was successfully approved for ITAR products.

In 2019, Hana-AYT will strategically invest and focus on products for selected segments of the market which will provide us with a quantifiable differentiator from our competitors. We strongly believe that this will allow Hana-AYT to become a supplier of choice in the industry. Quality will continue to remain a focus in all areas and at all levels of Hana-AYT since this is the most important criteria that will enable business growth.

Living up to the faith that the employees place in Hana-AYT is the fundamental value of the management team of Hana-AYT and will continue to adhere to this value with all honesty and sincerity in 2019 also. Identifying, developing and rewarding new talent will continue to remain a focus for us in 2019. Developing the future leaders of Hana-AYT remains a strategic initiative.

A word of sincere thanks to this dedicated team whose loyalty and trust in Hana-AYT enabled the rapid growth in 2018 and will also be the basis of the growth in 2019 and beyond. We expect 2019 to be challenging but with such a strong and dedicated team, I am optimistic we will overcome any challenges and will continue our steady and solid growth in 2019.

**Mr. Sanjay Mitra**  
Vice President and General Manager

# Operation Review

## Hana Microelectronics (Jiaxing) Co., Ltd.



2018 proved to be a challenging year for Hana Jiaxing with approximately 30% of our revenue destined for the USA and a part of that being impacted by the trade issue between China and The USA. Taking this into consideration and despite this, Hana Jiaxing still achieved another year of growth in 2018 albeit single digit.

To cope and adjust with these changes to the business circumstances of Hana Jiaxing, we re-structured our Operations and New Technology organizations. This restructuring initiative was aimed to achieve better operational efficiency and technical support for our customers and to better weather the challenges in 2019 and beyond.

More efforts were given to developing local customers in 2018. China is not only a global manufacturing base but also a huge and fast growing market. Tremendous changes over the past decades have brought in more challenges for doing manufacturing in China, but the changes have also created huge business opportunities for everybody. We have been very encouraged by some successful projects that we won during the year from local customers. This domestic business focus will continue to be one of our key strategies in 2019 and beyond.

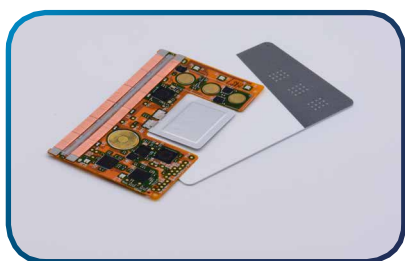
Efficiency and quality improvement was a continuous priority on our “to do” list. During 2018, we invested even more in automation, not only in the assembly lines but also in office administration. In terms of quality system improvement, we successfully moved from the old automotive standard to the new IATF 16949 system.

We made promising progress in developing IGBT customers in both local and oversea markets. Our investment in the state of the art IGBT assembly machines brought in great interest from many potential customers. We will continue to invest resources in this business segment in-line with our long-term strategies for the growth of Hana Jiaxing.

Thanks to all our employees for their hard work and dedication in 2018 and whilst we see even more uncertainties ahead in 2019 for Hana Jiaxing, we will concentrate on our continuous improvement quests, providing our valuable customers with world class quality and an EMS service at a competitive price.

**Mr. Steven Lee**

Vice President and General Manager





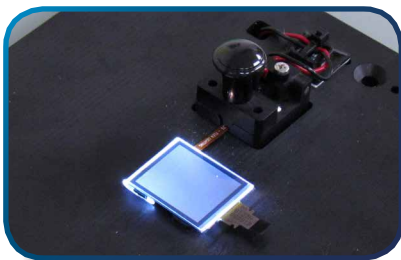
# Operation Review

Hana Technologies, Inc.



Hana Technologies "HTI" (formerly names Hana Microdisplay Technologies) had a relatively flat 2018 on a year-on-year basis, dropping only about 5% in overall sales whilst maintaining profitability. After a mildly slow start in Q1, slight increases in each quarter of the year rose the overall performance back up near 2017 for the year. The Telecom market segment grew significantly for HTI in 2018, compared to being flat the previous 2 years. A noticeable decrease in Consumer Electronics customer loading, combined with a flat Radio-Frequency Identification (RFID) market offset the Telecom growth.

While the RFID sales were relatively flat, it was a dynamic market for HTI in 2018. HTI's largest tire tag customer moved to a more cost-effective design midyear. This lowered the overall revenue, but margin and profitability were maintained in the transition. All other tire tag customers grew in revenue. HTI also signed additional tire tag customers, more than doubling its previous number of customers. While most of these new tire tag customers are at the beginning of multi-year adoption programs, it is a positive sign for the future of the market, and HTI's presence in it. Other RFID business for retail applications grew by 20% in 2018, but remains a lower portion of the overall RFID sales numbers.



For non-RFID Microelectronics activity, a drop in camera module assemblies was offset by increases in Telecom and other electronic products. Attempts to diversify its microelectronics business will not pay full dividends for HTI until late 2019 and 2020. Microdisplay assembly work was also down in 2018. While there remain several small customers in this market, growth in 2019 will come from other display and microelectronics production activity. HTI enabled new process technologies to produce devices with applications for drones, medical devices, and reflective display technologies. These additional capabilities will help HTI broaden its customer base and strengthen its overall operational performance.



HTI continues to try to nurture and develop business opportunities for its sister companies. For the past 2 years, the primary beneficiary of this has been the Lamphun factory and to a lesser extent the Ayutthaya factory. With the growth in tire tag business and other display-related prospects, HTI hopes to increase its activity with the JiaXing factory in 2019.

We have changed our name from Hana Microdisplay Technologies, Inc. to Hana Technologies, Inc. (HTI) on 27 December 2018. This was done to reflect the reduction in microdisplay activity as a percentage of overall business. As HTI increased and broadened its capabilities, it felt the new name more accurately presented the desired image to potential customers and partners. In 2019, HTI will continue to attempt to increase its presence in the consumer electronics, telecom, and RFID markets, as well as develop new opportunities in medical, automotive and other markets.

**Dr. John Erdmann**  
President and Chief Executive Officer

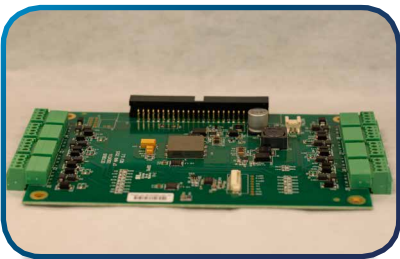
# Operation Review

## Hana Microelectronics (Cambodia) Co., Ltd.



During 2018 Hana Cambodia increased its capabilities by qualifying four new customers for production. Our employee development program and quality enhancement of IATF 16949:2016, ISO 9001:2015 was instrumental in gaining our new customer's confidence.

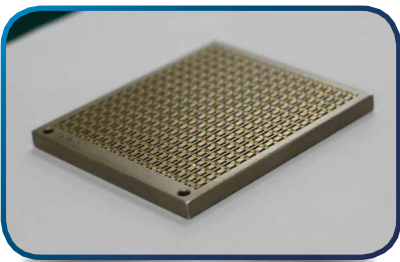
We continue work towards capturing new business by adding microelectronics assembly to complement our final assembly capabilities for many customers seeking a lower cost base and also for those customers that have concerns over the USA/China trade issues. This transformation is currently underway and will further improve our offering to customers in order to capture more business.



Several cost saving programs have been initiated in order to improve the Company's supply chain and procurement processes such as the optimization of our manufacturing footprint and elimination of functional duplication. This is a milestone achievement for all of us and we need to continue to maintain our good team work, good quality standards and continue to make improvement in all areas in order to progress.

The interest in Hana Cambodia has recently accelerated due to the trade conflict between China and USA and additionally to concerns over rising labour costs. We expect to capitalize on the trade conflict event to grow our business significantly during 2019.

Whilst it is still early days for Hana Cambodia, with the investment in training and building up our manufacturing capabilities we are confident they will bear fruit in the near future.



**Mr. Somchai Chantachirathumrong**  
General Manager



# Hana Board of Directors



**1. Mr. Terrence Philip Weir**

Executive Director

**2. Mr. John Thompson**

Chairman of the Board of Directors

**3. Mr. Richard David Han**

Executive Director

**4. Mr. Yingsak Jenratha**

Independent Director

**5. Mr. Winson Moong Chu Hui**

Executive Director

**6. Mrs. Salakchitt Preedaporn**

Independent Director

# Hana Executives



**1. Mr. Terrence Philip Weir**  
Executive Vice President and Chief Financial Officer

**2. Mr. Winson Moong Chu Hui**  
President and Chief Operating Officer

**3. Mr. Richard David Han**  
Executive Vice Chairman and Chief Executive Officer

**4. Mr. Wing Keung Chow**  
Vice President and General Manager  
Hana-Lamphun Operation

**5. Ms. Achara Chaicharncheep**  
Senior Manager of Finance and Accounting



# Management Team



## Hana Microelectronics Public Co., Ltd. - Headquarter Management

1 2 3 4 5 6 7 8

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



## Hana Microelectronics Public Co., Ltd. - Lamphun Management

12 13 14 15 16 17 18 19 20 21  
1 2 3 4 5 6 7 8 9 10 11

1. **Mr. Sathit Umpai**  
Director of Operations
2. **Mr. Wasan Suthum**  
Director of Operations
3. **Mr. Christian Robert Cron**  
Director of Supply Chain Management
4. **Ms. Chonsita Kitisrivorapot**  
Senior Manager of Inventory Control
5. **Ms. Kittima Kongsing**  
Senior Manager of Production & Material Control
6. **Mr. Wing Keung Chow**  
Vice President & General Manager
7. **Ms. Tipawan Duangkaew**  
Senior Manager of Customer Service
8. **Ms. Napassanun Namwongsa**  
Senior Manager of Quality Management Support
9. **Ms. Krongtong Wannawichit**  
Senior Manager of Human Resources
10. **Mr. Wichai Sukprasertkul**  
Senior Director of Operations
11. **Mr. Kam Fu Yim**  
Director of Quality Management
12. **Mr. Chukiat Suksatian**  
Senior Manager of Operation
13. **Mr. Nonthawit Junrat**  
Senior Manager of Operation
14. **Mr. Tosaporn Musikcharoen**  
Senior Manager of Manufacturing Support
15. **Mr. Stephen Boyd**  
Senior Manager of Operation
16. **Mr. Ian Donald Ticehurst**  
Senior Manager of Corporate Management Information System (Corporate MIS)
17. **Mr. Thawatchai Kumprasert**  
Senior Manager of Management Information System (MIS)
18. **Mr. Seksit Mulachiwa**  
Senior Manager of Procurement
19. **Mr. Nikorn Tolongtong**  
Senior Manager of Customer Service
20. **Mr. Somjai Namwongsa**  
Senior Manager of Human Resources Development
21. **Mr. Wan Wah Vincent Wong**  
Senior Manager of Supply Chain Management

# Management Team



## Hana Semiconductor (Ayutthaya) Co., Ltd. Management

9 10 11 12 13 14 15 16 17 18 19 20  
1 2 3 4 5 6 7 8

1. **Mrs. Thawanvaree Pichitnorakarn**  
Senior Manager of Purchasing & Supplier Management
2. **Ms. Samantha Kulasinghe**  
Senior Director of Manufacturing Support & Services Production Planning, Industrial Engineer
3. **Ms. Praphaphun Naradilok**  
Director of Human Resources and Training
4. **Ms. Areenee Kittisupornpong**  
Director of Management Information System (MIS)
5. **Ms. Sirirat Silapapipat**  
Senior Manager of CSO Operations
6. **Ms. Suparin Kengradomkij**  
Senior Manager of Logistic/Packing and Finished Goods
7. **Mrs. Rhodora F. Ceballo**  
Senior Manager of Front of Line, Process Engineer and New Product Introduction (NPI)
8. **Mrs. Saowanee Rachatakarn**  
Director of Finance
9. **Mr. Chaweng Tantiyaphorn**  
Senior Director of Test Operations
10. **Mr. Vicente T. Lau, Jr.**  
Director of Quality and Reliability Assurance (QRA) Operations
11. **Mr. Pongsak Klongjai**  
Senior Manager of Assembly Productions
12. **Mr. Sithigorn Petchruk**  
Senior Manager of Equipment Technical Support
13. **Mr. Punsak Eammongkolchai**  
Senior Director of IC Manufacturing & Hybrid / Metal Can Operations
14. **Mr. Pongsakorn Jangsatian**  
Senior Manager of Quality System and Quality Engineer (QS & QE)
15. **Mr. Sanjay Mitra**  
Vice President and General Manager
16. **Mr. Supakit Tantara**  
Director of Assembly Engineering and New Product Introduction (NPI)
17. **Mr. Paitoon Kungsaranuwat**  
Senior Manager of Test Equipment & Maintenance
18. **Mr. Anake Wannathong**  
Senior Manager of CSO Test Operations
19. **Mr. Seri Sukchean**  
Senior Manager of Facility, Industrial Engineer & Environment/Safety
20. **Mr. Wanakorn Nonkhunthod**  
Director of Supply Chain Management



## Hana Microelectronics (Jiaxing) Co., Ltd. Management

6 7 8 9 10 11 12  
1 2 3 4 5

1. **Ms. Jane Li**  
Director of Finance & Logistics
2. **Mr. Andy Shen**  
Director of Operations
3. **Mr. Steven Lee**  
Vice President & General Manager
4. **Mr. Felix Zheng**  
Director of Operations
5. **Ms. Lucy Guo**  
Senior Manager of Human Resources
6. **Mr. Steven Quah**  
Senior Manager of Quality & Reliability Assurance
7. **Mr. Steven Chua**  
Director of New Product Introduction & Technology
8. **Mr. CK Kim**  
Director of Product Development & Technical Marketing
9. **Mr. SC Ding**  
Director of Production & Materials Control
10. **Mr. KY Chew**  
Director of Marketing & Account Management
11. **Mr. Peter Xu**  
Director of Manufacturing Support
12. **Mr. Gordon Gu**  
Senior Manager of Facility



# Management Team



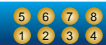
## Hana Microdisplay Technology, Inc. Management



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



## Hana Microelectronics, Inc. Management

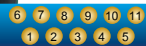


1. **Mrs. Malee Lowchareonkul**  
Senior Manager of Business Development and Customer Support
2. **Mr. Sanjay Mitra**  
President – HMI (USA)
3. **Mr. Thang Bui**  
Senior Director of Business Development and Customer Support
4. **Mrs. LeAna Bui**  
Account Manager
5. **Mr. Mark Wadekamper**  
Director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

# Management Team



## Hana Microelectronics (Cambodia) Co., Ltd. Management



1. **Mr. Maosheng Ren**  
Manager of Operation
2. **Ms. Vandy Leng**  
Marketing / Customer Service
3. **Mr. Somchai Chantrachirathumrong**  
General Manager
4. **Ms. Montha Kim**  
Senior Supervisor of Human Resources & Administration
5. **Ms. Leakina Nin**  
Accountant
6. **Mr. Sitha Ya Chey**  
Senior Supervisor of Facility
7. **Mr. Borey Horn**  
Senior Supervisor of Planning Material Control (PMC)
8. **Mr. Luechon Boonlue**  
Senior Manager of Quality Assurance (QA) & Facility
9. **Mr. Khemrin Kiev**  
Manager of Supply Chain
10. **Mr. Warin Samarnso**  
Senior Manager of Human Resources
11. **Mr. Adul Meesup**  
Senior Manager of Operation



# Profiles of Directors & Executives



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



Age:	54 years old
Date of Appointment:	1 January 2017
Number of years as the director:	2 years
Working Experience:	<ul style="list-style-type: none"> <li>• 2017 – present, Chairman of the Board of Directors, Independent Director and Chairman of Audit Committee, Hana Microelectronics Public Co., Ltd.</li> <li>• 2007 - present, Executive Director, NT Asset (Thailand) Co., Ltd.</li> <li>• 2005 - present, Independent Director and Audit Committee, Bangkok Post Public Co., Ltd.</li> </ul>
Educational Background:	<ul style="list-style-type: none"> <li>• Bachelor (Honours), London University, United Kingdom</li> <li>• Associate Chartered Accountant (ACA), The Institute of Chartered Accountants in England &amp; Wales (ICAEW), United Kingdom</li> </ul>
IOD Training Course:	<ul style="list-style-type: none"> <li>• Directors Accreditation Program (DAP) 57/2006</li> </ul>
Take the position as the director or management in other companies:	Yes

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

Shareholding of Mr. John Thompson				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

# Profiles of Directors & Executives

## 2. Mr. Richard David Han

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



Age:	62 years old
Date of Appointment:	26 July 1993
Number of years as the director:	25 years 5 months
Working Experience:	<ul style="list-style-type: none"> <li>• 2004 – present, Nomination Committee Hana Microelectronics Public Co., Ltd.</li> <li>• 1993 – present, Executive Vice Chairman and Chief Executive Officer, Hana Microelectronics Public Co., Ltd.</li> </ul>
Educational Background:	<ul style="list-style-type: none"> <li>• B.A. Business Studies, Westminster, London, United Kingdom</li> <li>• M.B.A. (Marketing) City University, London, United Kingdom</li> </ul>
IOD Training Course:	<ul style="list-style-type: none"> <li>• Directors Accreditation Program (DAP) 57/2006</li> <li>• Understanding the Fundamental of Financial Statements (UFS) 4/2006</li> </ul>

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

Subsidiaries of Hana	Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd. 2. Hana Semiconductor (Ayutthaya) Co., Ltd. 3. Hana Technologies, Inc. 4. Hana Microelectronics, Inc. 5. Hana Microelectronics (Jiaxing) Co., Ltd. 6. Hana Microelectronics Investment Co., Ltd. 7. Hana Microelectronics International Co., Ltd. 8. Hana Microelectronics Enterprise Co., Ltd. 9. Hana Technologies Group Ltd. 10. Hana Technologies Investment Ltd. 11. Hana Semiconductor Holdings Ltd. 12. Hana Semiconductor International Ltd. 13. Hana Macau Commercial Offshore Ltd. 14. Omac Sales Ltd. 15. Hana Microelectronics (Cambodia) Co., Ltd. 16. Power Master Semiconductor Co., Ltd.	1. Omac (HK) Limited 2. Omac Limited 3. Rainbow Joy Limited	1. Thai British Security Printing Public Co., Ltd.
Position: Executive Director	Position: Executive Director	Position: Non-executive Director

Shareholding of Mr. Richard David Han				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
1,040,000 shares	-	-	1,040,000 shares (0.129%)	None	None



# Profiles of Directors & Executives

## 3. Mr. Winson Moong Chu Hui

- Executive Director
- President and Chief Operating Officer



Age: 73 years old  
 Date of Appointment: 26 July 1993  
 Number of years as the director: 25 years 5 months  
 Working Experience: 1993 - present, Executive Director, Hana Microelectronics Public Co., Ltd.  
 Educational Background: Bachelor of Engineering, Cheng Kong University, Taiwan  
 IOD Training Course: Director Accreditation Program (DAP) 117/2015

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

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

Shareholding of Mr. Winson Moong Chu Hui				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
6,280,000 shares	-	-	6,280,000 shares (0.780%)	None	None

# Profiles of Directors & Executives



## 4. Mr. Terrence Philip Weir

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

Age:	60 years old
Date of Appointment:	26 July 1993
Number of years as the director:	25 years 5 months
Working Experience:	1993 - present, Executive Director, Hana Microelectronics Public Co., Ltd.
Educational Background:	Bachelor of Economics, Macquarie University, CPA, Australia
IOD Training Course:	Director Certification Program (DCP) 6/2001, Diploma
Other Trainings:	Inaugural Corporate Governance Conference 2018: "Building Trust in Transforming Economy" by The Securities and Exchange Commission (SEC) and Securities Investors Association (Singapore) - September 2018

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

Subsidiaries of Hana:	Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd. 2. Hana Semiconductor (Ayutthaya) Co., Ltd. 3. Hana Technologies, Inc. 4. Hana Microelectronics, Inc. 5. Hana Microelectronics (Jiaxing) Co., Ltd. 6. Hana Microelectronics Investment Co., Ltd. 7. Hana Microelectronics International Co., Ltd. 8. Hana Microelectronics Enterprise Co., Ltd. 9. Hana Technologies Group Ltd. 10. Hana Technologies Investment Ltd. 11. Hana Semiconductor Holdings Ltd. 12. Hana Semiconductor International Ltd. 13. Hana Macau Commercial Offshore Ltd. 14. Omac Sales Ltd. 15. Hana Microelectronics (Cambodia) Co., Ltd. 16. Power Master Semiconductor Co., Ltd. Position: Executive Director	None	None

Shareholding of Mr. Terrence Philip Weir				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
325,000 shares	-	-	325,000 shares (0.040%)	None	None



# Profiles of Directors & Executives

## 5. Mrs. Salakchitt Preedaporn

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



Age:	58 years old
Date of Appointment:	1 December 2013
Number of years as the director:	5 years 2 months
Working Experience:	<ul style="list-style-type: none"> <li>• 2013 - present, Independent Director Hana Microelectronic Public Co., Ltd.</li> <li>• 2009 - present, Financial and Accounting Consultant</li> <li>• 1992 - 2009, Accounting Manager S. Napa (Thailand) Co., Ltd. &amp; Group Company</li> </ul>
Educational Background:	Bachelor of Accounting, Thammasat University, Thailand
IOD Training Course:	<ul style="list-style-type: none"> <li>• Risk Management for Committee Program (RMP) 2/2013</li> <li>• Director Accreditation Program (DAP) 107/2014</li> <li>• Director Certification Program (DCP) 205/2015</li> <li>• Nomination Committee Best Practice Guideline (M-ND) 1/2017</li> </ul>
Other Trainings:	<ul style="list-style-type: none"> <li>• "Thai people know and flight against corruption, National Anti-Corruption Day" by the Anti-Corruption Organization of Thailand (ACT) - September 2018</li> <li>• Inaugural Corporate Governance Conference 2018: "Building Trust in Transforming Economy" by The Securities and Exchange Commission (SEC) and Securities Investors Association (Singapore) - September 2018</li> </ul>

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

Listed company : None

Non-listed company : None

Shareholding of Mrs. Salakchitt Preedaporn				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
0 share	10,000	-	10,000 share (0.001%)	None	None

# Profiles of Directors & Executives



## 6. Mr. Yingsak Jenratha

- Independent Director
- Audit Committee
- Chairman of Nomination Committee
- Corporate Governance Committee



Age:	72 years old
Date of Appointment:	1 December 2013
Number of years as the director:	5 years 2 months
Working Experience:	<ul style="list-style-type: none"> <li>• 2013 – present, Independent Director Hana Microelectronics Public Co., Ltd.</li> <li>• 2010 – 2011, Management Advisor International Precision Product Co., Ltd.</li> <li>• 2008 -2009, Vice President and General Manager Hana Microelectronics Co., Ltd. (Jiaxing), China</li> </ul>
Educational Background:	<ul style="list-style-type: none"> <li>• Bachelor of Art in Political Sciences, Chaingmai University, Thailand</li> <li>• Mini MBA, Kasetsart University, Thailand</li> <li>• Operation Management Certificate from GIBA (Graduated Institute of Business Administration), Chulalongkorn University, Thailand</li> </ul>
IOD Training Course:	<ul style="list-style-type: none"> <li>• Anti-Corruption for Executive Program (ACEP) 9/2014</li> <li>• Director Accreditation Program (DAP) 11/2014</li> <li>• Role of the Nomination and Governance Committee (RNG) 8/2016</li> </ul>
Take the position as the director or management in other companies:	
Listed company	: None
Non-listed company	: None

Shareholding of Mr. Yingsak Jenratha				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
20,000 shares	40,000	-	60,000 shares (0.007%)	None	None



# Profiles of Directors & Executives



## 7. Mr. Wing Keung Chow

• Vice President and General Manager Hana-Lamphun



Age: 60 years old

Date of Appointment: 1 January 2008

Working Experience:

- 2008 - Present, Vice President and General Manager Hana Microelectronics Public Co., Ltd.
- 2001 - 2007, Vice President Marketing & Customer Services Hana Microelectronics Public Co., Ltd.

Educational Background: Master Degree of Management, SASIN, Chulalongkorn University, Thailand

IOD Training Course: None

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

Listed company : None

Non-listed company : None

Shareholding of Mr. Wing Keung Chow				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
759,500 shares	40,000	-	799,500 shares (0.099%)	None	None

## Profiles of Directors & Executives



**Ms. Achara Chaicharncheep**

- **Senior Manager of Finance and Accounting**



Age:	50 years old
Date of Appointment:	14 October 2013
Working Experience:	1996 – present, Senior Accounting Manager, Hana Microelectronics Public Co., Ltd. (Headquarter)
Educational Background:	Bachelor of Accounting, Kasetsart University, Thailand
IOD Training Course:	None
Take the position as the director or management in other companies:	
Listed company	: None
Non-listed company	: None

Shareholding of Ms. Achara Chaicharncheep				Indirect Shareholding	
Number of shares as of 1 January 2018	Movement during the year		Number of shares as of 31 December 2018	Spouse	Minor Child
	Acquisition	Disposition			
30,000 shares	-	-	30,000 shares (0.004%)	None	None



# Hana Overview and Nature of Business

## Hana Overview

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

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

## Vision, Mission and Corporate Objectives

In 2018, the Board of Directors annually reviewed and approved the Company's vision, mission and corporate objectives or the long term goals as below.

### Vision

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

### Mission

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

### Corporate objectives/Long term goals

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

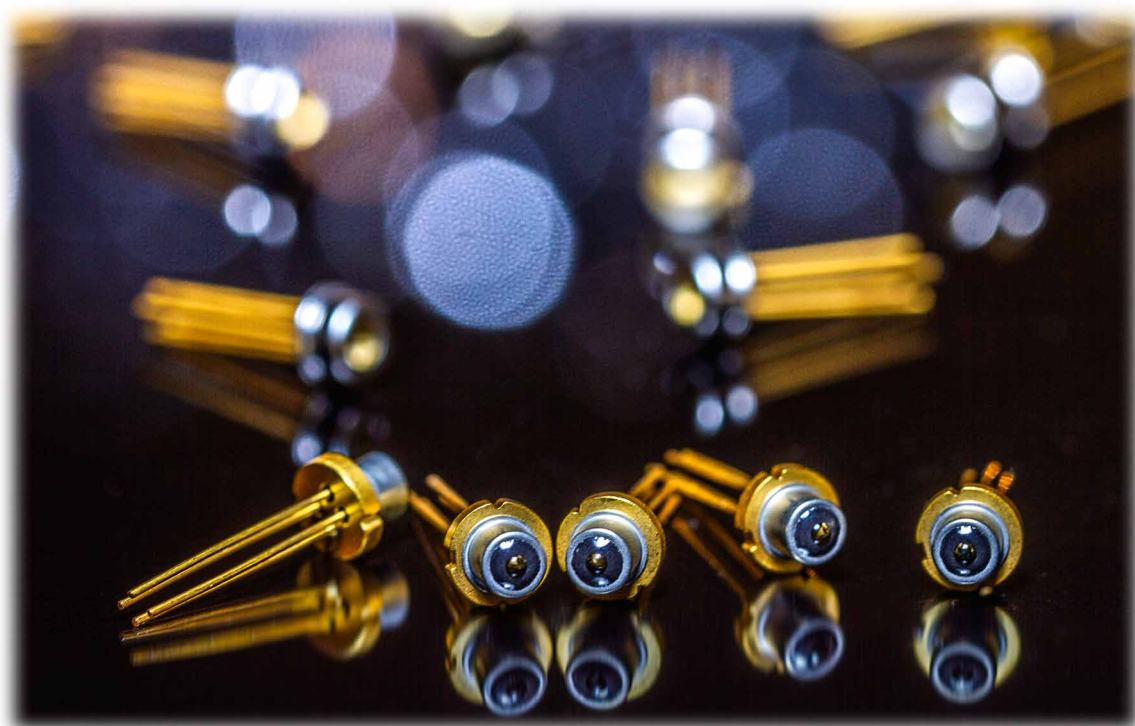


# Hana Overview and Nature of Business

## Major changes and development of the Company

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

- |             |  |
|-------------|--|
| <b>2016</b> | <ul style="list-style-type: none"><li>• Hana Microelectronics Public Co., Ltd., Sahaphat Group Industrial Park branch purchased the additional land located next to the existing factory totally 24 rai amounting to THB 72.3 million for future business expansion.</li></ul>   |
| <b>2017</b> | <ul style="list-style-type: none"><li>• Hana Microelectronics Public Co., Ltd., Sahaphat Group Industrial Park branch made the decision to expand the second floor for manufacturing space, which will double the area of the factory, in order to prepare for our new business expansion.</li><li>• A subsidiary, Hana Semiconductor (Ayutthaya) Co., Ltd., built a 3-story building for the warehouse, to meet our capacity expansion.</li></ul> |
| <b>2018</b> | <ul style="list-style-type: none"><li>• Hana Microelectronics Public Co., Ltd., Sahaphat Group Industrial Park branch expanded its second floor adding an additional 6,000 square meters of production space.</li><li>• A subsidiary, Hana Microdisplay Technologies, Inc. changed its name to Hana Technologies, Inc. to better reflect its broader capabilities.</li></ul>   |



# Hana Overview and Nature of Business

## 2018 Awards and Recognition



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



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



Hana received the renew certificate of membership of Thailand's Private Sector Collective Action Coalition Against Corruption “CAC”, Thai Institute of Directors Association (IOD). Hana has joined the CAC membership since 2013.

# Hana Overview and Nature of Business

## 2018 Awards and Recognition

Hana received CSR-DIW Continuous Award 2018, the Standard for Corporate Social Responsibility from the Department of Industrial Work (CSR-DIW). The award recognized the Company for its implementation under given CSR-DIW standards and sustainable development.



Hana received the “The National Award for Safe, No Disease, and Happy Workplace” from the Ministry of Public Health granted in 2017, valid until 2020. We strongly promote a safe and pleasing working environment for better health and safety. Such “Work Wellness” is a corporate initiative designed to keep our employees safe and secure which improves both efficiency and safety at work.

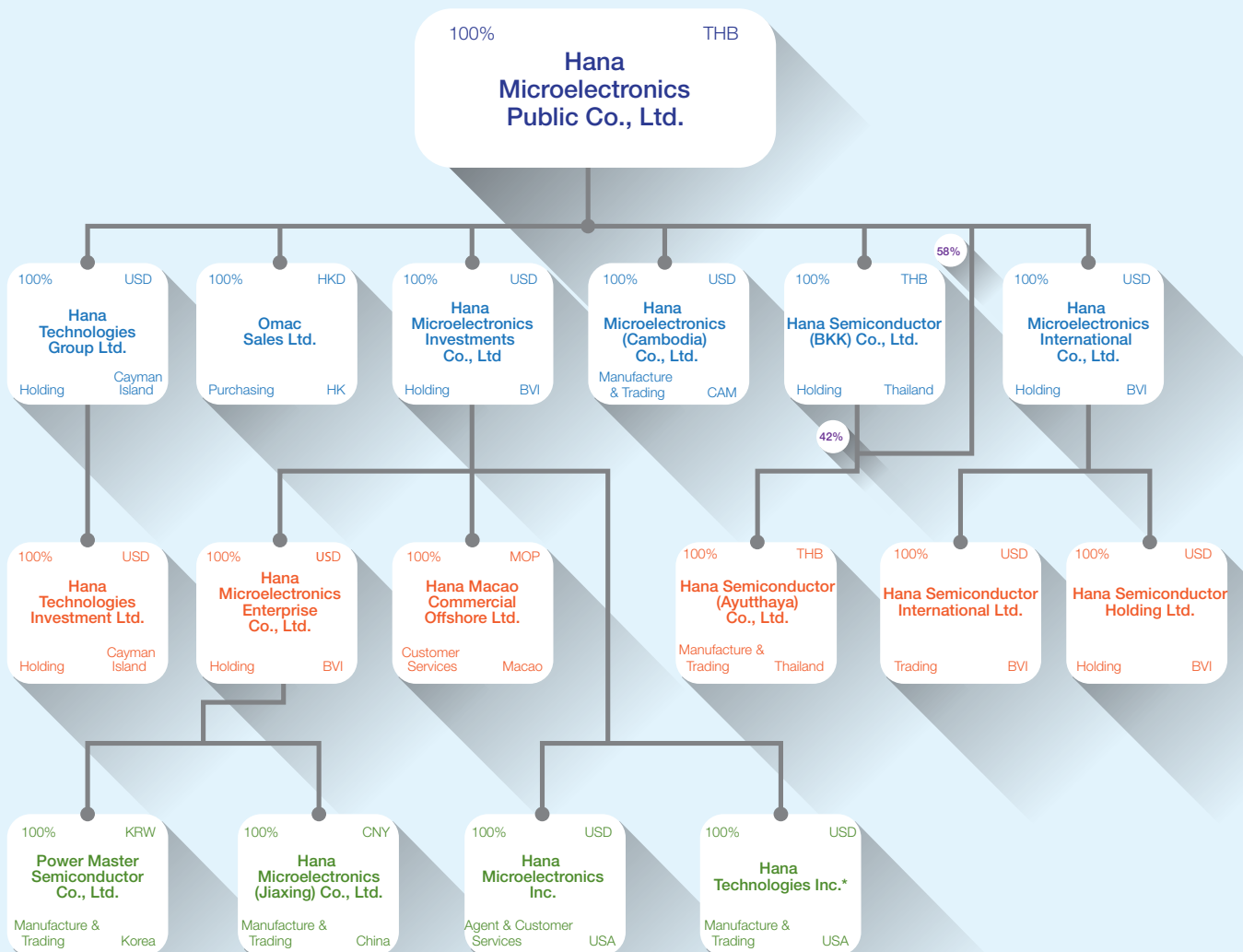
Hana received two diamond awards of 2018 Thailand Quality Prize for QCC (Quality Control Circle) granted by Technology Promotion Association (Thailand-Japan) and 2018 Thailand Kaizen Award (continuous improvement) from the Ministry of Industry. These national awards represent of excellent in all aspects of organization management and operating results.





# Hana Overview and Nature of Business

## Hana Group Structure



\* Formerly named Hana Microdisplay Technology, Inc.

# Hana Overview and Nature of Business

## Business operating policy

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

### Manufacturing

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

### Holding

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

### Purchasing

Omac Sales Ltd.

### Customer services

Hana Macao Commercial Offshore Ltd.

### Trading

Hana Semiconductor International Ltd.

### Agent and customer services

Hana Microelectronics, Inc.

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

Holding shares by the Company directly	Type of business	No. of shares/Registered shares (Type of stock - Common stock)
<b>Hana Semiconductor (BKK) Co., Ltd.</b> 65/98 Soi Vibhavadi-Rangsit 64 Junction 2, Kwang Talad Bangkhen, Khet Laksi, Bangkok 10210, Thailand	Holding	99,999,994/100,000,000 Baht
<b>Omac Sales Ltd.</b> 16 E, On Fook Industrial Building, 41-45 Kwai Fung Crescent, Kwai Chung, N.T., Hong Kong	Purchasing of electronic components and equipment	99,999/100,000 HKD
<b>Hana Microelectronics International Co., Ltd.</b> P.O. Box 71, Craigmuir Chambers, Road Town, Tortola, British Virgin Islands	Holding	2/2 USD
<b>Hana Microelectronics Investment Co., Ltd.</b> P.O. Box 71, Craigmuir Chambers, Road Town, Tortola, British Virgin Islands	Holding	2/2 USD
<b>Hana Technologies Group Ltd.</b> P.O. Box 309, Ugland House, South Church St., George Grand Cayman, Cayman Islands	Holding	2/2 USD

# Hana Overview and Nature of Business

Holding shares by the Company directly	Type of business	No. of shares/Registered shares (Type of stock - Common stock)
<b>Hana Semiconductor (Ayutthaya) Co., Ltd.</b> 100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand	Manufacturing and trading of electronic components	69,999,993/120,000,000 Baht
<b>Hana Microelectronics (Cambodia) Co., Ltd.</b> Neang Kok Village, Pakkhlong Commune, Mondul Seyma District, Koh Kong Province Cambodia	Manufacturing and trading of electronic components	5,000,000/5,000,000 USD
Holding shares by the Company's subsidiaries	Type of business	No. of shares/Registered shares (Type of stock - Common stock)
<b>Hana Semiconductor International Ltd.</b> P.O. Box 957, Offshore Incorporations Center, Road Town, Tortola, British Virgin Islands	Trading of electronic components	1,851,283/10,000,000 USD Holding shares by Hana Microelectronics International Co., Ltd.
<b>Hana Semiconductor Holdings Ltd.</b> P.O. Box 957, Offshore Incorporations Center, Road Town, Tortola, British Virgin Islands	Holding	709,118/10,000,000 USD Holding shares by Hana Microelectronics International Co., Ltd.
<b>Hana Technologies Investments Ltd.</b> P.O. Box 309, Ugland House, South Church St. George, Grand Cayman, Cayman Islands	Holding	100 / 100 USD Holding shares by Hana Technologies Group Ltd.
<b>Hana Technologies, Inc.</b> 2061 Case Parkway South, Unit # 6, Twinsburg, Cleveland, Ohio 44087, USA	Manufacturing and trading of electronic components	437,752/ 437,752 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
<b>Hana Microelectronics, Inc.</b> 3130 De La Cruz Boulevard Unit # 10, Santa Clara, California 95054 USA	Agent and customer services	1,000/1,000 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
<b>Hana Microelectronics Enterprise Co., Ltd.</b> P.O. Box 957, Offshore Incorporations Center, Road Town, Tortola, British Virgin Islands	Holding	2/2 USD Holding shares by Hana Microelectronics Investment Co., Ltd.
<b>Hana Macao Commercial Offshore Ltd.</b> Rua De Pequim No. 126 EDF. Commercial I TAK C18 Macao	Customer services	1/1 MOP (Macau Pataca) Holding shares by Hana Microelectronics Investment Co., Ltd.
<b>Hana Microelectronics (Jiaxing) Co., Ltd.</b> No#18, Hengnuo Road, Xingcheng Industrial Zone, Ziuzhou district, Jiaxing City, Zhejiang Province, 314000 P.R. China	Manufacturing and trading of electronic components	40,000,000/40,000,000 USD Holding shares by Hana Microelectronics Enterprise Co., Ltd.
<b>Hana Semiconductor (Ayutthaya) Co., Ltd.</b> 100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand	Manufacturing and trading of electronic components	50,000,001/120,000,000 Baht Holding shares by Hana Semiconductor (BKK) Co., Ltd.



# Hana Overview and Nature of Business

Holding shares by the Company's subsidiaries	Type of business	No. of shares/Registered shares (Type of stock - Common stock)
Power Master Semiconductor Co., Ltd. 77 Cheongam-ro, Nam-gu, Pohang-si, Kyeonbuk, Korea	Manufacturing and trading of electronic components	6,544,157/ 100,000,000 Won Holding shares by Hana Microelectronics Enterprise Co., Ltd.

## Nature of Business

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

Manufacturing Service	Location	Ultimate Holding
Printed Circuit Board Assembly, Chip on Board, RF, SMD, Automotive Sensors	Hana Microelectronics Public Co., Ltd., Lamphun plant 1 and 2, Thailand	100%
Integrated Circuit Assembly & Test, MEMS, Sensor, SIP, Optocoupler	Hana Semiconductor (Ayutthaya) Co., Ltd., Thailand	100%
Printed Circuit Board Assembly, Chip on Board and Chip on Flex Assembly & Test, SMT, Coil Winding, Integrated Circuit Assembly & Test, LED Packaging and Test	Hana Microelectronics (Jiaxing) Co., Ltd., P.R. China	100%
Liquid Crystal Microdisplays and Radio Frequency Identification (RFID) Devices	Hana Technologies, Inc., USA	100%
Secure Reader Box Build, RFID (Radio-Frequency Devices) Reader, Smart Card Reader, Cable Harness for Secure Reader Box Build, Telecommunication Devices and Computer Components and Pre-Assembly: Semi-Electronic	Hana Microelectronics (Cambodia) Co., Ltd., Cambodia	100%

# Hana Overview and Nature of Business

## Revenue structure by product group

(Unit: Million Baht)

Product	Company	% of share holding by the Company	2018		2017		2016	
			Revenue	%	Revenue	%	Revenue	%
IC ASSEMBLY	HS-AYT & HM-JX	100%	8,649	39	8,653	40	8,046	39
PCBA	HM-LPN, HM-JX & HMC	100%	12,575	56	11,741	55	11,528	56
MICRODISPLAY	HTI	100%	1,040	5	1,157	5	949	5
Total			22,264	100	21,551	100	20,523	100

Remark:

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

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

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

HTI: Hana Technologies, Inc.

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

## Hana Product Group

### 1. Printed Circuit Board Assembly (PCBA)

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

### 2. IC Assembly and Test

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

### 3. Microdisplay

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

## Product distribution and raw material

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

# Hana Overview and Nature of Business

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

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

## Production capacity

The production capacity in 2018 is as follows.

(Unit: Pieces/ Year)

Manufacturing Plants	2018		2017		2016	
	Production Capacity	Actual Production	Production Capacity	Actual Production	Production Capacity	Actual Production
A) IC						
• Ayutthaya plant	5,252,969,000	4,947,572,288	5,066,503,900*	4,519,490,902*	4,425,920,000	4,031,144,791
• Jiaxing plant	1,781,584,800	1,274,227,000	1,739,000,000	1,117,471,758	1,772,000,000	1,273,285,348
B) PCBA						
• Lamphun plant	1,200,000,000	1,000,000,000	1,200,000,000	1,000,000,000	1,000,000,000	800,000,000
• Jiaxing plant	57,252,000	43,703,000	76,500,000	46,400,000	91,000,000	63,521,559
• Cambodia plant	36,360,000	29,660,000	27,380,000	26,349,144	4,380,000	3,747,995
C) MICRODISPLAY						
• USA plant	151,000,000	104,550,000	91,000,000	77,280,000	70,800,000	67,575,000

\*Restated the numbers

## Industry Competitive Condition

In 2018 the markets recovered. Sales in USD terms of Hana group increased about 8%, and with good profitability.

The Company remains competitive by providing assemblies to the quality level demanded by the customers at a competitive cost. The management believes that company maintains a competitive cost structure equal or lower than the majority of its competitors.

### To compete with our competitors:

1. Hana (Thailand) is focusing towards higher technology and better infrastructure than those in the more labour intensive countries.
2. Hana (China) also provides a competitive geographic location but with more corporate technical and administrative support to distinguish them from local competitors.
3. Furthermore, Hana is also planning to cope with the labor cost increase. Our manufacturing plant in Cambodia starts to operate, to take advantage of the lower labor cost there.
4. Hana provides a wide range of products and processes in various locations to distinguish itself from other competitors who also have multiple factory sites but a smaller product range.
5. Even with the recent fluctuations in the worldwide economy, Hana has maintained a strong cash flow.
6. Hana has multiple sites which provides alternative production facilities in case any one site experience any difficulty.



# Hana Overview and Nature of Business

## Future Projects in Plan

Hana is placing a greater emphasis on design and development of new packaging solutions and has been successful in registering patents for such designs which will broaden our capabilities for our customers.

## Company General Information

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

# Hana Overview and Nature of Business

## Major shareholders

Major Shareholders as of the latest closing registration book on 24 October 2018

Type of Shares: Ordinary shares

No.	Name	No. of Shares	%
1.	OMAC LIMITED, OMAC (HK) LIMITED, RAINBOW JOY LIMITED	253,419,360	31.49
2.	LGT BANK (SINGAPORE) LTD.	83,069,900	10.32
3.	THAI NVDR CO., LTD.	59,302,784	7.37
4.	STATE STREET EUROPE LIMITED	41,137,198	5.11
5.	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	20,685,477	2.57
6.	BNP PARIBAS SECURITIES SERVICES, LONDON BRANCH	17,230,700	2.14
7.	BNP PARIBAS SECURITIES SERVICES LUXEMBOURG	13,803,800	1.72
8.	BNP PARIBAS SECURITIES SERVICES S.A.,JERSEY BRANCH	10,989,500	1.37
9.	ABERDEEN STANDARD GROWTH FUND	10,650,700	1.32
10.	NORTRUST NOMINEES LIMITED-THE NORTHERN TRUST COMPANY RE IEDP AIF CLIENTS NORTRUST NOMINEES 10 PERCENT ACCOUNT	9,810,819	1.22

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

## Dividend Policy

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

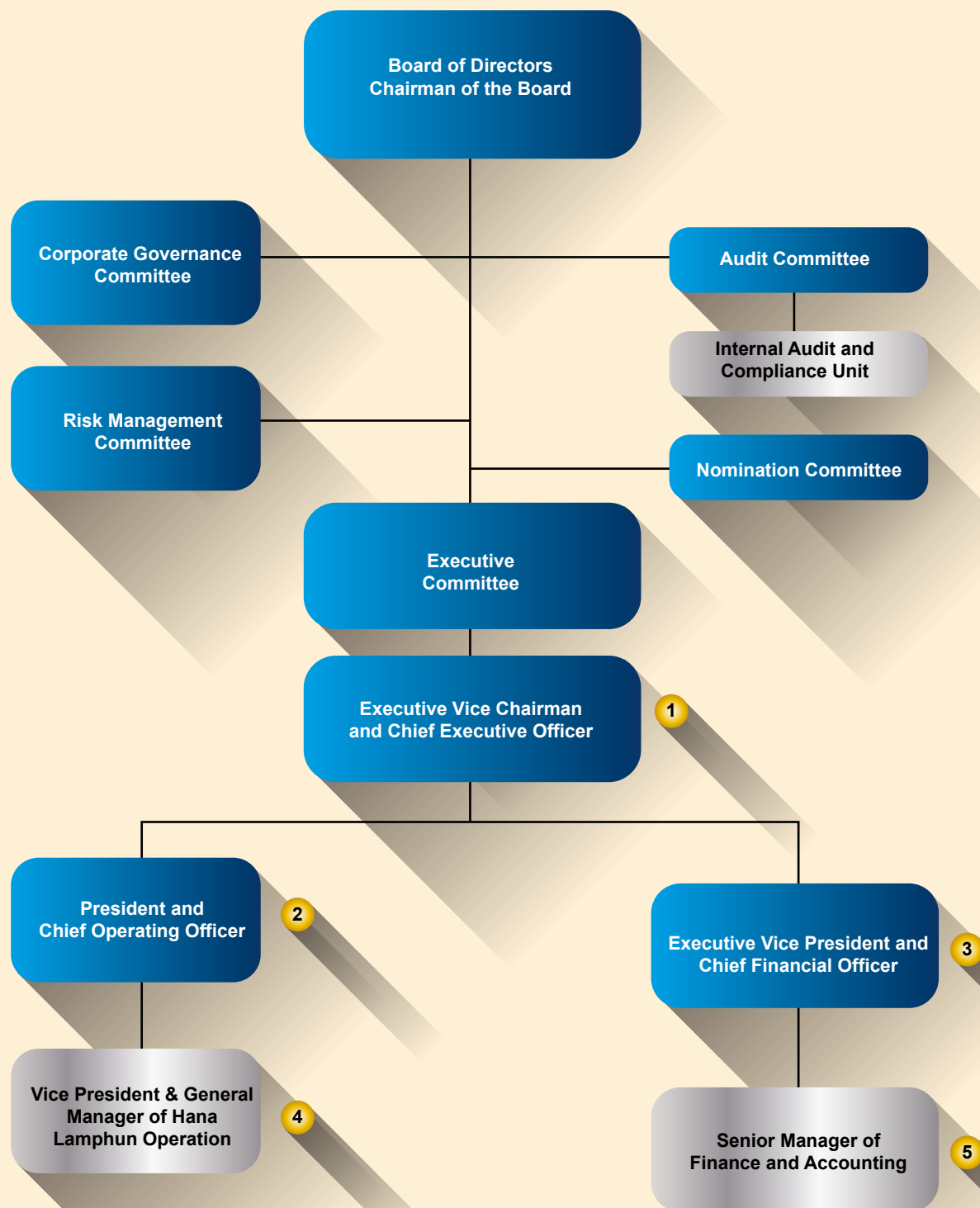
Dividend payment detail	2018	2017	2016
Interim dividend (Baht/share)	1.00	1.00	1.00
Annual Dividend (Baht/share)	1.00	1.00	1.00
<b>Total dividend payment (Baht/share)</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>
Total amount paid (Baht)	1,609,757,720	1,609,757,720	1,609,757,720
Percentage of total dividend payment against the net profit	68%	56%	76%

## Non-Financial KPI

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

KPI	Target	Actual in 2018
1. Training hours per year (average hour per person)	30 hours	46 hours
2. Continuous Improvement Program (CIP) participation rate	60%	78%
3. Customers' satisfaction	80%	85%
4. Zero audit failures (customer audit and 3rd party audit)	0	0
5. Customer complaint handling cycle time	100%	100%
6. Zero type A accidents	0	0

# Management Structure



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



# Management Structure

## Board of Directors

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

The Board of Directors as of 31 December 2018 is as follows.

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

### Term of service of independent directors:

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

### Authorized Directors:

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

### Board duties and responsibilities:

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

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

# Management Structure

## Authorities of the Board of Directors:

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

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

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

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

## Segregation of duties between the Board of Directors and Management

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

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

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

# Management Structure

## Management Team

As of 31 December 2018, the executive of the Company consists of 5 members as follows.

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

### Duties and Responsibilities of Chief Executive Officer:

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

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

## Sub-Committees of the Board of Directors

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

### Executive Committee:

Structure: The Committee currently comprises of three members.

Term: There is no term limit.

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

# Management Structure

## Duties and responsibilities of the Executive Committee:

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

## Audit Committee:

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

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

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

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

## Duties and responsibilities of the Audit Committee:

1. To review the Company's financial reporting process in order to ensure that it is accurate and adequate
2. To review the Company's internal control system and internal audit system to ensure that they are suitable and efficient, to determine an internal audit unit's independence, as well as to approve the appointment, transfer and dismissal of the head of an internal audit department
3. To review the Company's compliance with the laws on securities and exchange, the regulations of the SET and other laws relating to the Company's business
4. To consider, select and nominate an independent auditor including propose their remuneration including consider the performance of auditors and dismissal as well as attend the meeting at least once a year with the external auditors without executive management present
5. To review the connected transactions or transactions that may lead to conflicts of interests in order to ensure that they are in compliance with the SET regulations and applicable laws, and are reasonable and for the highest benefit of the Company



# Management Structure

6. To prepare and disclose in the Company's annual report, an Audit Committee's report which shall be signed by the Chairman of Audit Committee and consist of at least the following information:
  - 6.1 an opinion on the accuracy, completeness and creditability of the Company's financial report,
  - 6.2 an opinion on the adequacy of the Company's internal control system,
  - 6.3 an opinion on the compliance with related laws i.e. the Securities and Exchange Act, the SET regulations, or the laws relating to the Company's business,
  - 6.4 an opinion on the suitability of an auditor,
  - 6.5 an opinion on the transactions that may lead to conflicts of interests,
  - 6.6 the number of the Audit Committee meetings, and the attendance of such meetings by each committee member,
  - 6.7 an opinion or overview comment received by the Audit Committee from its performance of duties in accordance with the charter, and
  - 6.8 other transactions which, according to the Audit Committee's opinion, should be known to the shareholders and general investors, subject to the scope of duties and responsibilities assigned by the Board of Directors
7. To support and monitor the risk management systems and ensure the measures of the Company are appropriate
8. To review the Company's compliance with private sector's anti-corruption and certification program, including the Collective Action Coalition Against Corruption's Self-Evaluation Tool
9. In its performance of duties, if it is found or suspected that there is a transaction or any of the following acts which may materially affect the Company's financial condition and operating results, the Audit Committee shall report it to the Board of Directors for rectification within the period of time that the Audit Committee thinks fit:
  - 9.1 a transaction which causes a conflict of interest;
  - 9.2 any fraud, irregularity, or material defect in an internal control system; or
  - 9.3 an infringement of the SET regulations or any law relating to the Company's business

If the Board of Directors or management fails to make a rectification within the period of time under the first paragraph, any Audit Committee may report on the transaction or act under the first paragraph to the SEC and the SET.
10. To perform any other duties as assigned by the Board of Directors
11. To review and revise the Audit Committee Charter and propose any revision to the Board of Directors for approval

## Nomination Committee:

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

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

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

# Management Structure

## Duties and responsibilities of the Nomination Committee:

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

## Corporate Governance Committee:

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

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

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

## Duties and responsibilities of the Corporate Governance Committee:

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

## Risk Management Committee:

**Structure:** The Risk Management Committee was established in 2008. The Committee can appoint their management team of each Hana location responsible for ensuring an appropriate risk management process is in place.

**Term:** No term limit

Name	Position
1. Mr. Terrence Philip Weir	Chairman
2. Mr. Wing Keung Chow	Member
3. Mr. Sanjay Mitra	Member
4. Mr. Steven Lee	Member
5. Mr. Somchai Chanchirathumrong	Member

# Management Structure

## Duties and responsibilities of Risk Management Committee:

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

## Meeting Attendance

Meeting	Board of Directors	Audit Committee	Nomination Committee	Corporate Governance Committee	Non-Executive Meeting	Annual General Meeting
Total number of meetings in 2018	7	4	3	1	1	1
Number of meeting attended/participated in 2018						
Independent Directors:						
Mr. John Thompson	7/7	4/4	-	-	1/1	1/1
Mrs. Salakchitt Preedaporn	7/7	4/4	3/3	1/1	1/1	1/1
Mr. Yingsak Jenratha	7/7	4/4	3/3	1/1	1/1	1/1
Executive Directors:						
Mr. Richard David Han	7/7	4/4	3/3	-	-	1/1
Mr. Winson Moong Chu Hui	7/7*	-	-	-	-	1/1
Mr. Terrence Philip Weir	7/7	4/4	-	1/1	-	1/1

\*Mr. Winson Moong Chu Hui held the Board of Directors Meeting 1 time through conference call from overseas.

## Corporate Secretary to the Board of the Directors

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

### Detail of the corporate secretary:

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

## **Duties and responsibilities of the corporate secretary are as follows:**

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

## **Remuneration of the Board of Directors and Executives**

### **Remuneration for Directors:**

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



# Management Structure

Individual disclosure of remuneration for the Board of Directors in 2018 is as follows.

Name	Position	Meeting Allowance (Baht)	Bonus (Baht)	Total (Baht)
1. Mr. John Thompson	Independent Director Chairman of Board of Directors Chairman of Audit Committee	736,000	92,000	828,000
2. Mrs. Salakchitt Preedaporn	Independent Director Audit Committee Corporate Governance Committee Nomination Committee	412,500	55,000	467,500
3. Mr. Yingsak Jenratha	Independent Director Audit Committee Chairman of Nomination Committee Corporate Governance Committee	412,500	55,000	467,500
4. Mr. Richard David Han	Executive Director Nomination Committee	-	-	-
5. Mr. Winson Moong Chu Hui	Executive Director	-	-	-
6. Mr. Terrence Philip Weir	Executive Director Chairman of Corporate Governance Committee Chairman of Risk Management Committee	-	-	-
Total				1,763,000

## Remuneration for Executives:

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

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

# Management Structure

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

In 2018, the total remuneration of 5 executive managements is as follows.

Type of remuneration	Amount (Baht)
Salary	17,092,820
Bonus	4,239,970
Provident fund	835,965
Board remuneration	-
<b>Total</b>	<b>22,168,755</b>

## Human Resources

As of 31 December 2018, the Company and its subsidiaries had a total number of employees of 10,941. For 2018, the total remuneration including salary, overtimes, bonus, provident funds, etc. was Baht 3,938 million. In Thailand, there were 8,622 employees with Baht 2,788 million paid for remuneration.

### Number of employees and remuneration in Thailand:

Y2018	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.
Production	3,028 employees	3,662 employees
Administration and others	941 employees	991 employees
<b>Total employees</b>	<b>3,969 employees</b>	<b>4,653 employees</b>
<b>Total remuneration</b>	<b>THB 1,263 million</b>	<b>THB 1,525 million</b>

# Corporate Governance

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

## Compliance with Corporate Governance Code developed by SEC

A compliance program is an important element in the corporate governance. In 2018, the Board of Directors approved the resolutions as proposed by the Corporate Governance Committee to consider and review the application of the Corporate Governance Code for Listed Companies 2017 (the "CG Code"), developed by the Securities and Exchange Commission, by means that are suitable for the Company's business towards eight principles as follows.

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

In 2018, the Board also resolved to approve the non-application areas with the reasons provided so that the Board could review annually.

## Compliance with the SET Principles of Good Corporate Governance

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

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

In 2018, the Company has reviewed our corporate governance practices and there are a couple areas that the Company adapted alternative approaches, having regard to the Company's particular circumstances. As a result, the Company has not complied with certain good corporate governance best practices for the following reasons.

# Corporate Governance

Disclosure of non-compliance	Reasons
<p><b>1. Independent directors more than 50%</b> The independent directors should make up more than 50% of the Board.</p>	<p>The Board structure of the Company consists of three independent directors and three executive directors, which is accounted for 50% of the Board, whereby:</p> <ol style="list-style-type: none"> <li>1. The Chairman of the Board and the Chief Executive Officer (CEO) is not the same person;</li> <li>2. The Chairman is an independent director;</li> <li>3. The Chairman and the CEO are not immediate family members;</li> <li>4. The Chairman is not part of the management team.</li> </ol> <p>Furthermore, in 2018 the Board upon the recommendation of the Nomination Committee considered that a current mix of directors with the expertise and experience to fulfill their essential oversight roles is still appropriate.</p>
<p><b>2. Appointment of Remuneration Committee</b> The Remuneration Committee should be appointed and composed of majority of independent directors with specified sets of duties and responsibilities and held at least 2 meetings per year.</p>	<p>As the remuneration structure of the Board has been set for the independent directors only, whereas the remuneration of executive directors is paid as senior company employees. The Company has not established the Remuneration Committee as the Board of Directors is capable of reviewing the remuneration of the independent directors by the Board as a whole. The Board is responsible for determining remuneration policy and structure of compensation for independent directors with transparency, benchmarking with industry and considering each director according to individual duties and responsibilities. For the Board's remuneration in all kinds, the Board has proposed to shareholders for final approval annually.</p>
<p><b>3. Disclosure of CEO remuneration</b></p>	<p>The Board is of opinion that the compensation disclosure is highly sensitive as the CEO receives remuneration as a managerial or employee of the Company, not as a director.</p> <p>The Company has disclosed the remuneration in the form of group executives, the policy on CEO remuneration and performance evaluation of the CEO. Therefore, the disclosure of CEO's remuneration to the public may be considered as deemed appropriate in future.</p>



# Corporate Governance

Disclosure of non-compliance	Reasons
<p>4. Adopt an internationally recognized reporting framework</p> <p>The sustainability report should be prepared in form of Global Reporting Initiative (GRI) and more advance to adapt integrated reporting based on IIRC framework.</p>	<p>The Company has not yet prepared the sustainability report in form of GRI and Integrated Reporting. However, the Company has prepared the CSR report in accordance with the CSR-DIW Reporting Initiative, for the second year, which is in line with the industry context in Thailand and is recognized internationally. The report has disclosed on the Company's website (<a href="http://www.hanagroup.com">www.hanagroup.com</a>).</p>

In 2018, Hana has adhered to and complied with the good corporate governance for a listed company as recommended by the Stock of Exchange of Thailand in 5 principles as follows.

## 1. Rights of Shareholders

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

### • Rights to attend the shareholders' meeting and vote

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

#### Before the meeting day:

The Company sets the date, time and place of the meeting by taking into consideration the convenience of shareholders in attending and encouraging shareholders, including institutional investors, to attend the meeting. The Company holds the Annual General Meeting of Shareholders (AGM) within 4 months after financial year ends. In 2018, the Company held the AGM on 30 April 2018 at 14:00 hrs. at its head office located at 65/98 Soi Vibhavadi-Rangsit 64, Junction 2, Kwang Talad Bangkhen, Khet Laksi, Bangkok making it convenient for shareholders including institutional investors to travel and attend the meeting. The Company arranged with the Thailand Securities Depository Co., Ltd. or "TSD" which is the Company's securities deposit registrar send the notice of shareholders' meeting by posted mail 21 days prior to the meeting date in order to provide sufficient time for shareholders and institutional investors to review the details of information disclosed in the notice of meeting. The notice of meeting expressly indicated the matters to be tabled at the meeting, whether for acknowledgement, approval or consideration, including the Board's opinion on each agenda. Other supporting information and documents were also attached to the notice. In addition to the direct delivery, the notice of meeting was made available to the shareholders through the Company's website ([www.hanagroup.com](http://www.hanagroup.com)) 30 days in advance and the notice of meeting was published through SET's information system or "SET Portal" in both Thai and English versions, which were the same as the original notice mailed to shareholders.

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

## On the meeting day:

The Board of Directors is to ensure that the meeting is conducted transparently and efficiently as well as to facilitate the exercise of shareholders' rights. The quorum including the total number of shareholders in attendance in person or by proxies, voting procedures and voting count method are clearly advised to the meeting prior to the discussion of the agenda items. The chairman shall convene the meeting according to the terms and conditions in line with the Company's Articles of Association and manage appropriate time for each agenda set forth in the meeting invitation. During the meeting, shareholders are given the opportunities to raise questions, recommendations as well as provide their opinions on the Company's performance or other concerns on an equitable basis. In regards to the AGM conducted in 2018, 6 out of 6 directors (100%) attended the meeting which included the chairman of the Board, the chairman of all sub-committees, Chief Executive Officer, Chief Operating Officer and Chief Financial Officer. The external auditor also attended the meeting with the directors so that they could listen to shareholders' opinions or suggestions and also answer any questions.

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

## After the meeting day:

The meeting minutes recording the course of the meeting, the list of directors and executives attending the meeting, voting procedures, vote counting methods, the agenda discussed, the results of shareholder voting counts on each agenda and the decisions made by the meeting with the number of votes of shareholders casting affirming, opposing, abstaining and invalid votes including shareholders' questions and answers are made available within the appropriate time to shareholders. The minutes of the AGM in 2018 were posted to the Company's website within the following business day after the meeting and at the same time sent to the Stock Exchange of Thailand. If shareholders have any inquiries or comments on the minutes, they can contact to the corporate secretary. The minutes are maintained at the Company's head office.

## ● Rights in Addition to voting rights

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

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

# Corporate Governance

In 2018, the Company had no actions that violated the right of shareholders, such as not changing or adding agenda items without notifying shareholders in advance or which limit the access to the Company's information that is released to public. In addition, the Company did not prevent or obstruct any opportunities for shareholders to communicate with each other.

## 2. Equitable Treatment of Shareholders

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

### **Treat all class equally:**

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

### **Protect minority shareholders' rights:**

The Company has the policies to promote the right of minority shareholders by allowing minority shareholders to propose agenda items and nominate candidates to be elected as the directors in advance at the AGM. For 2018 AGM, shareholders could, during the period from 28 September – 30 December 2018, submit proposals for 2018 annual shareholder meeting to the Board of Directors for consideration. The procedures and criteria to propose agenda items and nominate the directors to the Board of Directors have been posted to the Company's website under section "Investor Relation" title "Corporate Governance." However, in 2018 there were no shareholder proposals sent to the Board of Directors for consideration.

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

### **Prevent insider trading:**

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

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

# Corporate Governance

- Confirm the shareholding status with individual director and executive through the corporate secretary on a monthly basis.
- Report to the Board for the shareholding status of individual director and executive at every Board's meeting.

In 2018, no director or executive traded the Company's shares by using inside information.

## 3. Roles of Stakeholders

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

### Employees

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

**Health and safety in the workplace:** The combined efforts of the Company and employees are required to improve the health and wellbeing of employees at work. Hana has been certified for the Occupational Health and Safety Management Systems in accordance with OHSAS/TIS 18001. The Company's policy is to provide the safe and proper workplace to protect injury and illness from work. In order to eliminate or reduce health, safety and welfare related risks to our employees, various health and safety management programs have been implemented such as health and safety risk management system including audit, safety activities and safety incentive program to promote health and safety awareness. Employees take part in work environment management, e.g. by reporting hazards, incidents, illness and suggesting measures to be taken.

In 2018, the Company also provided health and safety training for newly hired and existing employees, including our partners and subcontractors, to ensure full awareness occupational hazards, to encourage and promote safety in the workplace.

The accident statistic report is posted on the bulletin board by detailing the target and accident statistics and being updated every day. In 2018, there were 6 cases of accident with small accident or employees take leave less than 3 days but no accident death. When an accident occurs, a report describing the circumstances is submitted, and steps are taken to identify the cause and implement necessary improvements. With the trend of accident in working increasingly during the past years, the Company further reviewed the safety risk management, improvement of accident prevention processes and monitoring mechanism enhancement in order to prevent accidents at work and reduce the number of accidents that could occur in the future.

Accident case	2018	2017	2016
Small accident or employees stop working less than 3 days (case)	6	3	3
Accident that employees stop working more than 3 days (case)	0	1	0
<b>Total</b>	<b>6</b>	<b>4</b>	<b>3</b>



# Corporate Governance

In 2018, Hana Semiconductor (Ayutthaya) Co., Ltd., a subsidiary, received the certificate of achievement of Zero Accident Campaign 2018 for the gold level granted by the Ministry of Labour. Management commitment and workers participation are the key success in driving working towards zero accident vision.



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

Summary of welfare program provided to employees:

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

# Corporate Governance



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

**Employee training and development:** Hana has always recognized the need to develop its employees as the most important asset in the organization. In 2018 there was a series of training programs implemented aimed to enhance its employees' professional expertise and to keep up with the existing business challenges in all Hana plants. A variety of learning and development activities were put in place and supported by executive management such as soft skill managerial training, introduction of Corporate Talent Management Program, on the job learning and close coaching and mentoring by supervisors.

The people's development aims to enhance employees' well-being, knowledge and competency which are the key contribution to Hana's ongoing success. The Company has committed its resources to develop employees to perform more productively in key areas of knowledge, skills and other positive mindset training which also increase confidence and happiness in the plants.

In 2018, the Company and its subsidiaries developed our employees as following major areas.

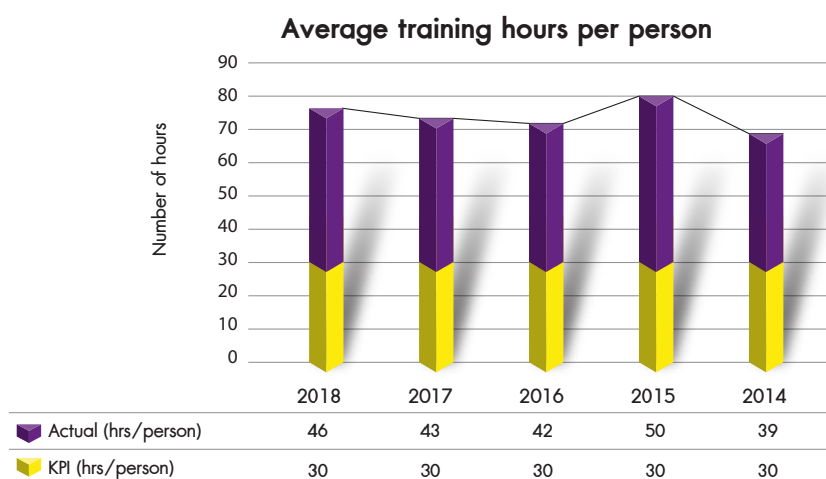
# Corporate Governance

## Hana Microelectronics Public Co., Ltd. (Hana Lamphun)

**Corporate Talent Management Program:** The success of the first 2016-2017 Talent Program has inspired the more active activities in 2018. In addition to the training by Hana executives, Hana LPN management and the corporate training provided more workshops and sharing opportunities included in the program. This not only enhanced creativity it also allowed more hands-on opportunities for talents to execute their managerial skills, but also promoted peers interaction and strengthen bonding among the young generation targeting to entry level to middle management. In 2018, the Company and its subsidiaries arranged Talent Field Trip to Hana China plant where the visit promoted the development of cross-cultural by working with peers in various assignments and celebrated the achievement and friendship together.

**Training and People Development:** In 2018, Hana continued to focus on people development. Despite global economic challenges, the Company continued to grow and our people asset has played a crucial role in the Company's success. While upgrading our technology and technical capability and world class standards, we ensure to equip our people with necessary and up-to-date knowledge and skill sets so that they leverage their professional competency to cope up with business challenges, shine and grow within the organization.

In 2018, the Company provided trainings to employees totally 182,965 hours for total 3,969 employees, which were for daily employees 108,379 hours and for monthly employees 74,586 hours. Therefore, the average training per person per year for monthly and daily employees versus the KPI in 2018 compared with previous years is as follows.



# Corporate Governance

In 2018, a wide range of courses was provided to employees, which can be broken down into the following categories:

Training course (type)	Number of training hour			%
	Daily employees	Monthly Daily employees	Total hours	
Professional certification	19,982	3,232	23,215	12.69
Professional re-certification	35,735	5,173	40,909	22.36
Technical skills	9,387	19,557	28,944	15.82
Quality	18,878	13,246	32,124	17.46
General	5,785	9,284	15,069	8.24
Management skills	2,326	16,051	18,377	10.04
Safety & EMS	11,190	5,568	16,759	9.16
Computer skills	431	2,422	2,853	1.56
Multi skills	3,768	49	3,817	2.09
Job transfer	896	3	899	0.49
<b>Total</b>	<b>108,379</b>	<b>74,586</b>	<b>182,985</b>	<b>100</b>

## Hana Semiconductor (Ayutthaya) Co., Ltd. (Hana AYT)

**Corporate Talent Management Program:** “Value of machines depreciate while people appreciate with time” quoted by GM of Hana AYT. This year Hana AYT’s top talents joined the overseas workshop in Jiaxing, China to enhance their experiences for international business. In becoming future managers of next generation, the talents were groomed with managerial skills, language skills, crisis management and professional business communication. This program tends to support Hana AYT’s growth in the future and to increase the capability of entry level management to be ready for the competitive edge and currently grooming its second generation of talents.

**Career Development Program (CDP):** Hana AYT continues to foster career growth of their middle management staff through Career Development Program (CDP). They value the inclusion of people with different abilities and encourage high achievers to build a long and successful career with the Company. The CDP candidates are well provided with intensive training, challenges and opportunities that support professional and personal development, teamwork and collaboration.

**Hana Institute of Technology (Ayutthaya) HIT:** Hana AYT succeeded to minimize employee turnover by continued collaborating with the Office of the Non-Formal and Informal Education (NCER) to open the technician classroom for interested and potential employees with the vocational certificate degree in electronic field. Hana AYT provided the facilities and equipment where daily employees can pursue their technical skills during working hours. Upon graduation, their career paths along with job promotion and salary adjustment will be granted in accordance with the conditions met with the Company’s criteria. Hana AYT still continues developing its people in all levels with knowledge and technical skills to cope with future technology needs.



# Corporate Governance

## Hana Microelectronics (Jiaxing) Co., Ltd. (Hana JX)

**Corporate Talent Management Program:** Compared with 2017, Hana JX made a tremendous progress on its talent management program in 2018, in the way of intensive training courses, language competency and group assignment performance. The year Talent group focus was on English communication study based on their actual working needs and higher managerial level cases simulation summarized by senior managers and executives to promote their individual skills. Hana JX took the role of being host again for Hana Group Talent to join 2018 Hana JX field trip this year. This field trip consists of factory visit and coordinating training and assigned projects by deeply immersing in managerial knowledge and skills from their respective plants and work experience where also learning that was shared by senior executives all plants resulting the talents successfully conquered linguistic and cultural hurdles that strengthen their individual loyalty, teamwork productivity and problem-solving abilities.

**Training and People Development:** In 2018, we conducted management training program for Hana JX second batch of talents, while continued to implement technical oriented training for its workers both through online class and on-job training, together with the regular examination and certification. The technical training is revolving around system and certification requirement, quality systems and replacing the current ISO/TS 16949 QMS standard with IATF 16949.

## Hana Microelectronics (Cambodia) Co., Ltd.

**Training and People Development:** With the growth of business in 2018, Hana Cambodia still continues to develop their workforce and management teams to technical training to embrace growth. This year also includes sending local Cambodian staff for overseas training in other Hana locations. Training tends to be on areas of operations related topics, English communications and Leadership. The increase of in-house training has grown 20% from 2017 aiming to prepare the workforce to support the new customers which will be located in Hana Cambodia from 2019 onwards.

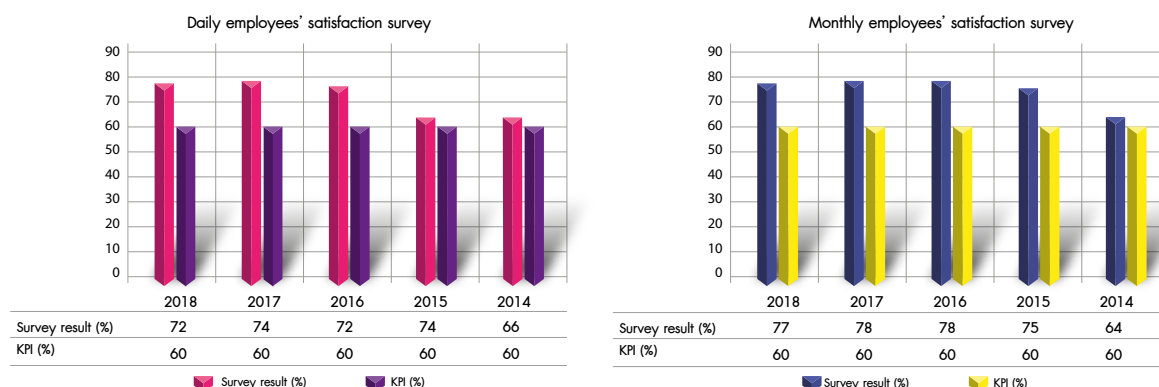
This year is also the preparation for trainings to upgrading for ISO 45001 (Occupational Health and Safety) and ISO 14001 (Environment Management System) where the target is certification system to be granted within 2019.



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

# Corporate Governance

Employee satisfaction survey vs. KPI of year 2018 compared with the previous years:



## Human rights

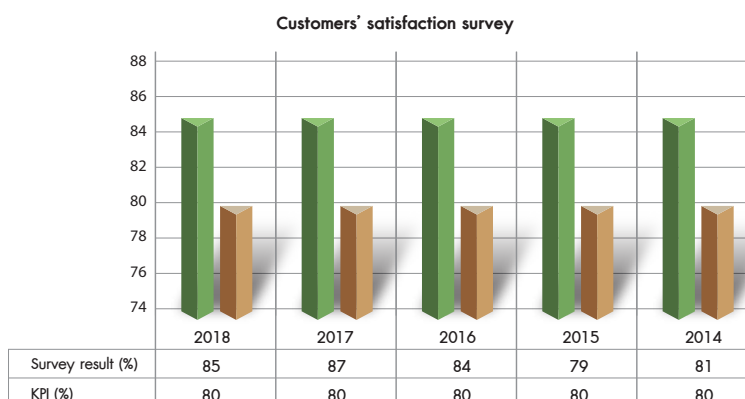
The Company believes that respect of human rights is an important part of being a good corporate citizenship. The Company has upheld human rights in every activity we do and we do not tolerate such discrimination of others. There will be no child labour or abusive hiring. Our Human Resource representatives provide advice and counsel to employees and managers to address issues involving human and labour rights. The Company also establishes a welfare committee as an internal channel of communication to develop a consensus between employees and the Company. In 2018, the Company has no claim or report of human right violations from employees, business partners, or local communities.

## Customers

Hana places the highest value on our customers. The Company aims to meet or exceed our customers' expectation for product quality, delivery, reliability, and competitive prices. Hana has been accredited to Quality Management System (QMS) with the aim to deliver high quality products on time. Our policy is to strive for the customer satisfaction, zero defects, and meeting the international standard requirements. Over 23 years of ISO 9001 certification demonstrates our commitment towards quality, continuous improvement, and sustainment.

The Company and its subsidiaries continue to support the supply chain management particularly for the customers so that we could coordinate such business activities and processes to minimize their total costs and maximize their effectiveness in the marketplace including problems' solving solutions of their complaints or recommendations. Our customer satisfaction surveys conducted yearly help the Company to get actionable customer feedback and to focus on the importance of fulfilling and exceeding customer expectations.

Customers' satisfaction survey vs. KPI of year 2018 compared with the previous years:



# Corporate Governance

## Intellectual property

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

## Business partners

Hana promotes fair and open competition and aims at developing and securing long term relationship with suppliers and contractors. Procurement of goods and services shall be conducted in a manner of the highest ethical standards, which assure a quality end product, as well as the continued confidence of customers, suppliers, and other stakeholders. The hire of services or the purchase of goods will be based solely upon price, quality, service, and delivery. Procurement actions will be based on the following principles:

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

Hana promotes fair and equitable procurement activities. We strive to establish long term relationship with our suppliers, based on trust and adherence to our business code of conduct. We manage our business and treat our suppliers and business partners in a manner that exemplifies our honesty, ethics, integrity and in full compliance with applicable laws and regulations, and this applies to every business decision in every area of the Company, from Board of Directors and management to every employee.

Hana strives to maintain professional and mutually beneficial partnership with suppliers, distributors and representatives who are an integral link in our achievement. We always conduct supplier and vendor negotiations and selection in a transparent manner and for the best interest and benefit of Hana. In 2018, with the upward cycle of semiconductor industry, material availability and material quality are critical and we are very careful in managing our supply chain to prevent the shortage/excess in our raw material supply and finished goods on-time delivery to customers. The timely procurement of necessary raw materials and components is critical and to avoid the supply problem, we work diligently to develop close relationship with multiple suppliers. We also encourage appropriate, honest, constructive and timely communication within the Company and with the key suppliers as suppliers' communication is very vital. In 2018, there was no dispute or lawsuit between the Company and suppliers or any business partners.

Hana AYT conducts suppliers' business review and site visits each quarter and uses these activities as a tool to develop and strengthen relationship with our key business partners. Suppliers' relation, communication and collaboration are the key to our success.

# Corporate Governance



## Shareholders

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

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

## Business competitors

The Board focuses on running its business with open and fairness and have a practical guidance for the competitors such as fair competition, not involved in the competition by the dumping, persecution or deprivation influence in order to avoid competition, not take any action that violates the intellectual property or copyright of competitors, not use dishonest methods to discredit a competitor or no trade secret violations. In 2018, there was no dispute or lawsuit between the Company and any competitors.



# Corporate Governance

## Creditors

The Company treats creditors responsibly with honesty and fairness to obtain a fair return to both parties and comply with the agreement including the terms of guarantee and managing cash flow to be able to pay to the creditors according to the terms and conditions. The Company will notify the creditor status in the event of payment default and to comply with the Consumer Protection Law and other related laws. In case that the Company cannot comply with the agreed terms, the Company shall notify the creditors in advance to jointly find solutions. In 2018, there was no dispute or lawsuit between the Company and any creditors.

## Communities, society and environment

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

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

The Company encourages the use of resources efficiently by arranging various energy saving projects (refer to Corporate Social Responsibility Section). The Board supports the training of all employees to achieve a better understanding and create awareness of the environment. In 2018, various environmental training courses had been provided to employees by both internal and external instructors such as:

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

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

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

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

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

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

# Corporate Governance

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



## Government authorities and associated organizations

Hana requires its executive, directors and employees to understand and abide by those laws, regulations, policies, and procedures that applicable to them in the performance of their job duties including the duties to pay tax to the government properly.

## Anti-corruption

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

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

**Risk assessment:** In 2018, the Risk Management Committee assessed the potential corruption risks by conducting the corruption risks separate from other risks. The risk profile was reported to the Board by having the Compliance Unit perform compliance audit in mitigated risks with the established policy.

**Training and communication:** In 2018, the Company communicated and provided training to employees regarding its anticorruption policy and related policies i.e., corporate code of conducts, gifts and hospitality policy, conflict of interest policy, at which time management received training from the corporate trainers. Employees can get access to the policies via the Company's bulletin boards and intranet website. The supplier code of conduct covering the anti-corruption policy has been communicated with both overseas and local suppliers for their acknowledgment and compliance. In 2018, the Company received the signed acknowledgement from 1,675 suppliers, which was accounted for 100% from the goal of 100%.

# Corporate Governance

**Monitoring and review:** The Audit Committee reviews the anti-corruption policy on an annual basis and proposes any amendment to the Board for approval. The Audit Committee also monitors the implementation of the policy and makes recommendations accordingly. Internal control systems and procedures shall be reviewed periodically by an internal audit department to ensure that they are effective in countering bribery and the audit results are to be discussed with relevant operational personnel and reported to senior management and the Audit Committee. In 2018, the risk assessment including the compliance with the anti-corruption policy was reported to the Board for consideration.

**Certification:** In 2018, the Company passed the re-certification as a member of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) for the Company's actions and effort to support the mobilization of the private sector in the fight against corruption since 2013. In addition, the Company also became the partnership of PACT Network established by the Thaipat Institute to promote concrete anti-corruption in the private sector.



## Channel of Complaints

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

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

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

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

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

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

In 2018, the Board did not receive any complaints about corruption/fraud, breach of business ethics and corporate governance, human right violation or no complaint that damage to the Company's reputation due to the administration of the Board of Directors, as well as no legal dispute concerning labour, human rights, and the environment.

## 4. Disclosure and Transparency

The Company ensures timely disclosure of all material matters and all relevant information is reported to the Stock Exchange of Thailand in accordance with the disclosure requirements. It is critical to have as much information as can be available so that continuous evaluation of investment performance may be conducted. The Company will make the effort to disclose information broadly and proactively through channels of communication that allow equal access to market participants. New information that is likely to materially influence the valuation of the Company's shares shall be disclosed to the market immediately and the information disclosed to investors will be accurate, not misleading and sufficient for investors to make decisions. In addition to the information disclosure in accordance with relevant regulations, through the channels of the Stock Exchange of Thailand and annual report as well as 56-1 report, the Company also discloses information in both Thai and English versions through other channels such as the Company's website with regularly post and update. In 2018, the Board of Directors approved the Communication and Disclosure Policy to ensure all information relevant and material disclosure in an appropriate, equal and timely manner. There was no violation that Hana breached the disclosure rules and regulations. The financial reports have been disclosed in a timely manner during the past years.

The Company has not set up the Investor Relations Department, but the Company's executive directors are actively involved in the role of investor relations on a continuous basis as the Company believes that their ability to deliver confident and clear presentation is as important a skill as technical and managerial capabilities. The Corporate Affairs Department is also available to provide basic information upon request. In 2018, the Board of Directors approved the IR Code of Conduct to set clear directions and support the investor relation function and ensure the effective communication between the Company, investors, shareholders, the financial community and other stakeholders.

The Company usually arranges an analyst meeting each quarter to inform the investor community of the financial result and also clarify all inquiries from Institutional Investors, Fund Managers and analysts who attend the meeting. In 2018, the Company conducted analyst meetings four times to provide information about the past quarters' performance to the interested persons. Additionally, the Company's visits by interested analysts are also welcome and can be arranged by appointment. This year, the Company also arranged the factory visit for shareholders and investors to visit our manufacturing plant in Ayutthaya. The factory visit consisted of the presentation of Hana business and financial highlights including production line tours which allowed them to observe products being manufactured and processes at work, as well as provided opportunities for them to have questions answered directly by factory personnel.



# Corporate Governance



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

Name	Department	E-mail address	Phone number	Fax number
Mr. Terrence Philip Weir	Finance	<a href="mailto:terry@hanabk.th.com">terry@hanabk.th.com</a>	0 2551 1297	0 2551 1299
Ms. Jirapa Kongmanee	Corporate Affairs	<a href="mailto:jjirapak@hanabk.th.com">jjirapak@hanabk.th.com</a>	0 2551 1297 # 117	0 2551 1299
Ms. Penpimol Kotchabhakdi	Corporate Affairs	<a href="mailto:penpimol_k@hanabk.th.com">penpimol_k@hanabk.th.com</a>	0 2551 1297 # 226	0 2551 1299

## Conflict of interest

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

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

In 2018, there was no conflict of interest from directors and executives reported to the Board.

## 5. Responsibilities of the Board of Directors

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

### Board diversify

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

### Nomination of director and independent director

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

In 2018, there was no proposal for candidates sent by shareholders to the Nomination Committee to review. Therefore, the Board considered those directors who retired by rotation and which the Board considers based on their qualifications in line with a company's business strategies including working experiences, expertise, previous year performances, willingness and time devoted to the Board that are suitable to be considered for re-election.

### Qualification of director

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

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

### Qualification of independent director

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

# Corporate Governance

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

- 1) Holds shares less than 0.5% of the total shares eligible to vote of the Company, subsidiaries, associates, or controlling parties, including the shares held by the related parties of an independent director (This shareholding threshold of the Company shares held by the independent directors is more strict than the minimum requirements of the SEC and SET.)
- 2) Who is not an executive director, employee, or consultant who receives remuneration from the Company or any of its subsidiaries, who is also neither a controlling person of the Company or subsidiaries nor a related person at least for the past two years
- 3) Is not the person who has relationship by means of descent or legal registration as father, mother, spouse, brothers and sisters, and children, nor being spouse of daughters and sons of management, major shareholders, controlling party/person who is in the process of nomination to be the management or controlling person of the Company or its subsidiary. This also includes normal business transactions, rent or lease of fixed assets, financial assistance, loan granting or receiving, guarantee, or other related transactions obliged the Company or its contractual party for the liability to pay the other party that is accounting from 3% of net tangible assets of the Company or twenty million baht whichever is lower.
- 4) Have no or never have business relationship with the Company, subsidiaries, associates, or related person that deprives such independence nor being a major shareholder, executive director, management of related person who has business with the Company, associate and subsidiary unless the foregoing status ended at least two years
- 5) Is not or has never been the auditor of the Company, subsidiaries, associates, major shareholders, or controlling person, nor being a major shareholder, controlling person, or partner of the auditing firm unless the foregoing status ended at least two years
- 6) Is not or has never been the professional service provider, nor legal or financial advisor with receive service fee more than two million baht per year from the Company, subsidiaries, associates, major shareholders, or controlling person, and is not a major shareholder, controlling person, or partner of the above mentioned service firms unless the foregoing status ended at least two years
- 7) Is not the director who is nominated to be the representative of directors of the Company, major shareholder, or any other shareholder related to the major shareholders
- 8) Does not conduct the same business and compete business with the Company or subsidiary, nor being a business partner or executive director, paid employee or hold more than 1% of voting shares from other companies which have the same business and compete with the Company
- 9) Has no other conditions that unable to exercise independent opinion regarding the business operation of the Company

## Appointment of directors

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

# Corporate Governance

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

## **Supervision of subsidiary and associated companies**

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

## **Board of directors' meetings**

The Board of Directors set the meeting schedules in advance by informing in the meeting agenda before each year-ending so that the directors can arrange their times to attend the meetings. In 2018, the Company held 7 meetings of the Board of Directors, which are the normal agenda items. The total number of directors attending the meeting must be no less than one half of the total number of directors to constitute a quorum. The chairman of the Board and CEO set the agenda of the Board's meetings. Any director may suggest agenda items and may raise at meetings other matters that they consider importance of discussion. Information and data for the Board's understanding of the business to be discussed at meetings are distributed in advance of meetings according to the policy that is to provide 5 days in advance. To prepare for meetings, directors are responsible for reviewing the materials that are sent to them in advance. If there are additional inquiries, the directors can contact the CEO, the corporate secretary or designate executives. At the Board meeting, ample time is scheduled to allow full discussion of important matters. Management presentations are scheduled to permit an appropriate portion of the Board's meeting time to be available for discussion and comments. The Board's policy is to vote on the agenda item by having at least 2 out of 3 of total directors present in the meeting for each agenda item. In 2018, the Board invited the General Manager of Hana Lamphun plant to attend the Board's meeting in order to provide additional business information and to allow independent directors to visit the plant. The minutes of Board of Directors meeting are properly made and contain key facts such as the timing of start and finish, name of directors present and absent, summary of items of major discussion and resolutions, the minute taker and certifier. The minutes are maintained at the Company's head office and cannot be edited without prior consent of the Board's approval.





# Corporate Governance

## The meeting without attendance of management

The Board encourages the non-executive directors to have a separate meeting in absence of management to encourage more open discussion without management present. In 2018, the independent directors conducted a meeting without attendance of management one time on 14 November 2018. The meeting was conducted with the participation of internal and external auditors.

## Orientation for new directors

The newly appointed director shall receive an orientation regarding the Company's business, duties and responsibilities of directors. The brief review shall be led by the Chief Executive Officer, Chief Financial Officer or his appointee. All other necessary information shall be given by the corporate secretary. In 2018, the Company provided the factory visit for independent directors to interact with factory management and employees in order to help them to gain more understanding and update our business activities, operation and production technology.



# Corporate Governance

## Director development

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

In 2018, the director attended following training courses/seminar.

Name	2018 Training course/seminar
1. Mr. Terrence Philip Weir, an executive director	<ul style="list-style-type: none"><li>Inaugural Corporate Governance Conference 2018: "Building Trust in Transforming Economy" by The Securities and Exchange Commission (SEC) and Securities Investors Association (Singapore) - September 2018</li></ul>
2. Mrs. Salakchitt Preedaporn, an independent director	<ul style="list-style-type: none"><li>"Thai people know and fight against corruption, National Anti-Corruption Day" by the Anti-Corruption Organization of Thailand (ACT) - September 2018</li><li>Inaugural Corporate Governance Conference 2018: "Building Trust in Transforming Economy" by The Securities and Exchange Commission (SEC) and Securities Investors Association (Singapore) - September 2018</li></ul>

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

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

In 2018, the corporate secretary further attended the training courses/seminars held by the SET, Thai Investors Association and other institutions such as:-

- Disclosure guideline based on the updated Corporate Governance Code (CG Code) by The Securities and Exchange Commission (SEC), Stock Exchange of Thailand (SET) and The Thai Listed Companies Association
- Enhancing Good Corporate Governance based on CGR Scorecard by The Thai Listed Companies Association and Stock Exchange of Thailand (SET)
- Good IT Governance: Risk Management and Data Responsibility by The Securities and Exchange Commission (SEC) and the Business Software Alliance (BSA)
- Enhance Efficiency and Growth through Process Innovation by Stock Exchange of Thailand (SET) and Thailand Productivity Institute
- "Thai people know and fight against corruption, National Anti-Corruption Day 2018" by the Anti-Corruption Organization of Thailand (ACT)
- Workshop "Road to Certify" by Thailand's Private Sector Collective Action Coalition Against Corruption (CAC), Thai Institute of Directors
- PwC Forensics Seminar on Employee Fraud and Labour Law in Actions by PricewaterhouseCoopers Consulting (Thailand) Ltd.

# Corporate Governance

## Service on Other Boards

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

## Performance assessment of the Board of Directors

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

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

Further, the Board also can provide feedback in the assessment form to improve the Board's performance. The corporate secretary concludes the Board's group performance and report to the Board meeting. In 2018, the overall performance of the Board's group was assessed at "very good" ranking.

The Board also has conducted the performance evaluation of an individual director using the self-assessment method with evaluation criteria. In 2018, the corporate secretary concluded the Board's individual performance and reported to the Board's meeting with the average performance was "very good" ranking.

## Performance assessment of the sub-committees

The Board has also annually conducted the performance evaluation of all sub-committees that are the Audit Committee, the Nomination Committee, the Corporate Governance Committee and the Risk Management Committee. Those Committees evaluate their own assessment and the corporate secretary reports the result to the Board. In 2018, each sub-committee got the average score as "very good".

## Performance assessment of CEO

On an annual basis, the performance of CEO is evaluated by the independent directors, where the evaluation criteria have been applied from the guidance of the Stock Exchange of Thailand. The areas to assess CEO cover his leadership, strategy formulation, strategy execution, financial planning and performance, relationships with the board, external relations, human resources management and relations, succession, products/service knowledge and personal qualities. In 2018, the independent directors assessed the CEO with satisfactory performance.

## CEO succession plan

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



# Corporate Governance

An emergency succession is required when CEO is unable to perform the duties due to accident or other unexpected circumstances. A special meeting of the Board would be convened to decide which of the executives might be appointed as Acting CEO for the remainder of the time required. In the event of permanent changes due to retirement or planned vacancy, the entire Board shall be involved in choosing a successor. However, the Board could delegate much of the responsibility to implement the search to the Nomination Committee or a special ad hoc committee to work with the Board and current CEO to identify and develop potential internal candidates, monitor the development of candidates and assess the readiness of candidates, or conduct an external search if cannot come to an agreement on an internal candidate, etc.

Managing the CEO succession plan is the Board's responsibility. In 2018, the Board reviewed the succession plan to ensure that key components are up-to-date, particularly the CEO's job description, minimum qualification requirements, minimum experience and personal characteristics and the succession readiness improvement.

## **Business ethics**

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

In 2018 to ensure that employees have the knowledge and understanding of the policies and practices of business ethics, the Company conducted trainings for employees and provided the post-tests to evaluate the training results. In addition, all the directors were required to sign a certification of acknowledgement and compliance with the code of conducts for the Board of Directors. The internal audit department also monitored the implementation and compliance for the code of conducts.

For the available whistleblowing channels, no compliant or dispute regarding ethical issue was reported in 2018.

## **Auditor's remuneration**

In 2018, the Annual General Meeting of Shareholders approved the appointment of Ms. Kamontip Lertwitworatep, Certified Public Accountant No. 4377 of EY Office Limited to be the Company's auditor with the remuneration of not exceeding Baht 2,270,000.

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



# Corporate Governance

## Audit fee

(Unit: Baht)

Company	Auditor name	2018	2017
Hana Microelectronics Public Co., Ltd.	Ms. Kamontip Lertwitworatep	2,270,000	2,270,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	Ms. Kamontip Lertwitworatep	1,160,000	1,160,000
Hana Semiconductor (BKK) Co., Ltd.	Ms. Kamontip Lertwitworatep	150,000	150,000
Hana Semiconductor International Co., Ltd.	Ms. Kamontip Lertwitworatep	340,000	340,000
Total		3,920,000	3,920,000

## Non-audit fee

(Unit: Baht)

Company	Non-audit fees	2018	2017
Hana Microelectronics Public Co., Ltd.	1. BOI audit fee	360,000	360,000
	2. Inventory destruction fee	40,000	60,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	1. BOI audit fee	270,000	450,000
	2. Inventory destruction fee	0	20,000
Total		670,000	890,000

For the financial year ended 31 December 2018, the external auditors confirmed to the Audit Committee on the actions they take to maintain their professional independence with respect to the Company and its affiliates in accordance with the Code of Ethics for Professional Accountants issued by Thailand's Federation of Accounting Professions by not holding any shares in the Company and its affiliates, not providing non-audit services, and not purchasing goods and services from the Company and its affiliates.



# Internal Control and Risk Management

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

In 2018, the Board has performed self-assessment to evaluate the internal control system by applying the control assessment criteria from the Stock Exchange of Thailand. There is an Internal Audit Department and Compliance Unit to monitor and oversee the overall company activities in line with established system and applicable laws and regulations. The Risk Management Committee has been appointed to ensure implementation of the risk management policy to be monitored and limited overall risks at an acceptable level.

From the Board of Directors' Meeting No. 7 held on 13 December 2018 with the Audit Committee attended the meeting, the Board has assessed the Company's internal control system based on 5 components of COSO's Internal Control Integrated Framework which are Control Environment, Risk Assessment, Control Activities, Information & Communication, and Monitoring Activities.

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

## 1. Control Environment

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

## 2. Risk Assessment

The Risk Management Committee has been appointed to ensure implementation of the risk management policy to be monitored and limited overall risks at an acceptable level. Substantial risks are identified in consideration of both internal and external factors and prioritization based on the impact and likelihood of identified risks for further suitable risk mitigations. The Company also considers the potential for fraud in assessing risks to the achievement of objectives. The Company's risk profile has been reviewed by the Risk Management Committee and proposes to the Board regularly whereas the risk management policy has been reviewed annually.

## 3. Control Activities

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

## 4. Information and Communication

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

## 5. Monitoring Activities

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

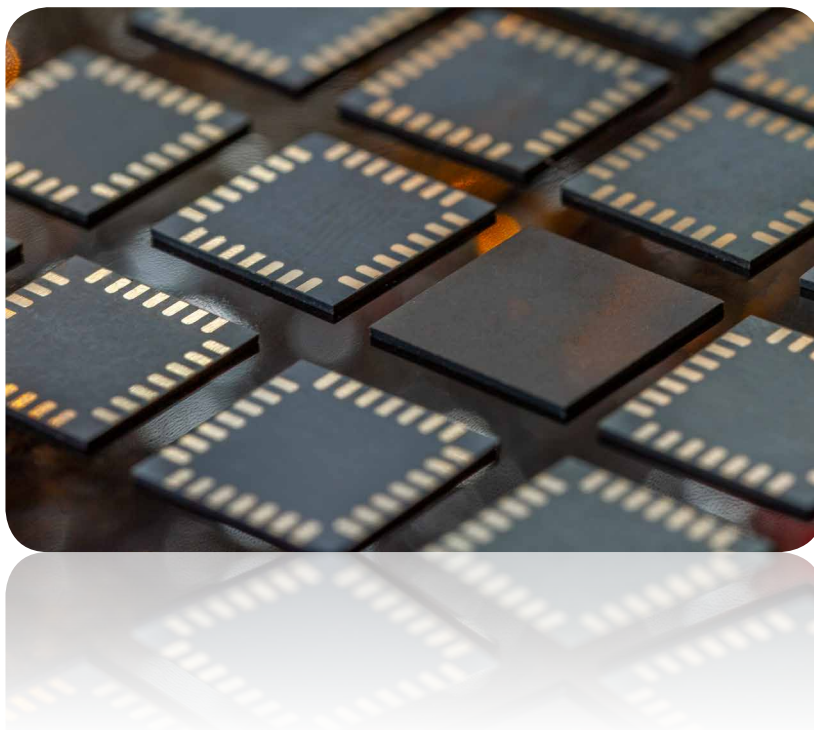
# Internal Control and Risk Management

## Internal Audit

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

## Compliance Unit

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





# Related Party Transactions

## Related Transactions in 2018:

According to the Note 7 on related party transactions of the consolidated financial statements for the year ended 31 December 2018, relevant details of related party transactions entered into by the Company and its subsidiaries were disclosed. Those related party transactions were entered into in the ordinary course of business between the Company and its subsidiaries and such transactions have been conducted with fair and at arms' length on commercial terms.

In 2018, there was no related party transaction between the Company or its subsidiaries and connect persons who may have conflicts of interest or any other situations which could be against the best interest of the Company and its shareholders (as regulated by the Securities and Exchange Commission or the Stock Exchange of Thailand).

## Procedures for Related Party Transactions:

In case of normal business transactions made with related parties under Section 89/12 (1) as required by the Securities and Exchange Act such as general trading conditions or transactions that support the normal course of business, such transactions shall be approved by the Board of Directors or in compliance with the principle approved by the Board of Directors.

For related party transaction that may have a potential conflict of interest, the Audit Committee shall review and approve by the Board. In case that there is any transaction which has or may have the conflict of interests of directors or related persons, directors who have interests shall inform foresaid transaction to the Board and abstain from voting in that agenda.

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

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

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

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

## Protecting Investors:

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



# Related Party Transactions

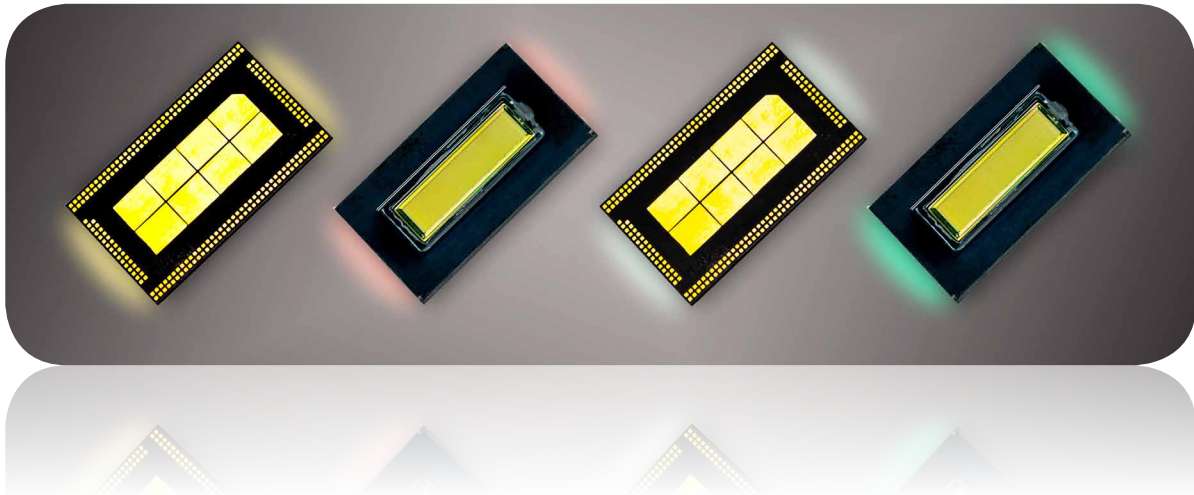
## Policy of related transactions in future:

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

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

## Opinion of the Audit Committee:

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



# Corporate Social Responsibility



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

## CSR Policy, Vision, Strategies and Sustainable Development:

**Policy:** The Board of Directors commits that the Company will conduct business with respect to its economic, social, and environmental responsibilities, as well as for other stakeholders. The Board also commits that the Company's business will be conducted in an open, honest, and ethical manner. Hana and its subsidiaries recognize the importance of protecting human rights, consumer rights, environmental management, compliance with applicable laws, regulations and to contribute to community development for long term success of the Company, society and stakeholders.

**Vision:** To operate our business in harmony with society for the mutual benefit of our stakeholders and community.

**Strategy:** Hana's business environment is highly competitive. The Company seeks to expand its sales each year and to continually improve the capabilities and productivity of its production processes. Whilst doing so the management and staff are mindful of the CSR policies for sustainable development and review each change to ensure compliance with the CSR objectives toward sustainable development with regards to the economic, social and environmental impact. In addition, the Company and its subsidiaries have established CSR committees at each plant with representatives from different departments which focus on the Company's relationship with our stakeholders.

# Corporate Social Responsibility



**CSR Development:** In 2018, Hana received CSR-DIW Continuous Award from the Department of Industrial Works for sustainable development for the second year by adopting the CSR-DIW (Corporate Social Responsibility: Department of Industrial Works) 7 standards composed of corporate governance, human rights, labour practice, fair operating practice, consumers issue, environment and lastly the community involvement and development, including prepared the CSR report in accordance with the CSR-DIW Reporting Initiative which is in line with the industry context in Thailand and is recognized internationally.

## Stakeholders Prioritization:

Our key stakeholder groups are identified as follows.

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Shareholder/Investor	<ul style="list-style-type: none"> <li>Analyst meeting</li> <li>Annual General Meeting of Shareholders</li> <li>Annual Report, 56-1 Report, Press Release</li> <li>ESG scorecard questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>Consistent dividend payment</li> <li>Steady growth</li> <li>Environment, Social and Governance</li> </ul>	<ul style="list-style-type: none"> <li>Dividends paid each year based on the Company's cash flow</li> <li>Company vision for constantly strives to grow and be competitive</li> <li>Corporate governance scorecard</li> <li>Environmental management</li> </ul>
Customer	<ul style="list-style-type: none"> <li>Customer audits</li> <li>Customer's satisfaction survey</li> <li>Customer visits</li> <li>Risk assessment</li> </ul>	<ul style="list-style-type: none"> <li>Quality products with on time delivery and competitive product pricing</li> <li>Ethical and environmentally responsible</li> <li>Occupational health, Safety and Labour</li> </ul>	<ul style="list-style-type: none"> <li>Quality management system</li> <li>Supply chain management</li> <li>Code of conduct, Electronic Industry Citizenship Coalition (EICC) Code of Conduct</li> <li>Occupational health, safety and labour</li> <li>Green product</li> <li>Productivity improvements</li> <li>Cost reduction programs</li> <li>Working to grow with new and existing customers</li> </ul>

# Corporate Social Responsibility

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Employee	<ul style="list-style-type: none"> <li>Employee's satisfaction survey</li> <li>Orientation, exit interview</li> <li>Training and workshop</li> <li>Complaint channels</li> <li>Operation meeting</li> <li>Risk assessment</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate compensation and welfare</li> <li>Occupational health and safety</li> <li>Career development</li> </ul>	<ul style="list-style-type: none"> <li>Employee Relation Committee</li> <li>Occupational health, safety and Labour</li> <li>Career development program</li> </ul>
Business Partner/ Supplier	<ul style="list-style-type: none"> <li>Supplier audit</li> <li>Supplier quality management</li> <li>Risk assessment</li> </ul>	<ul style="list-style-type: none"> <li>Fair and transparent supplier selection</li> <li>Payment on time</li> <li>Supply chain management</li> </ul>	<ul style="list-style-type: none"> <li>Code of conduct</li> <li>Treatment of creditors</li> <li>Supply chain management</li> </ul>
Community	<ul style="list-style-type: none"> <li>Activities conducted outside the company</li> <li>Feedback from Industrial Estate</li> <li>Recruitment</li> <li>Procurement</li> </ul>	<ul style="list-style-type: none"> <li>Operate with no impact to the environment</li> <li>Social contribution</li> <li>Employment opportunities for local people</li> <li>Support local business</li> </ul>	<ul style="list-style-type: none"> <li>Environmental management</li> <li>CSR to support community project</li> <li>Hiring local people when qualified</li> <li>Products and services purchase from local business when qualified</li> </ul>

## Our Priorities:

Following are our sustainability development efforts on areas that are of greatest interest and concerns to our stakeholders.

### Economy

1. Strong cash flow and continuous dividend payment
2. Good business governance
3. Ethic and anti-corruption

### Social

1. Occupational Health, Safety and Labour policies
2. Labour practice
3. Community and social interaction

### Environment

1. Environmental policy and management
2. Efficient use of resources
3. Minimize environmental impact





# Corporate Social Responsibility

In 2018, the Company and its subsidiaries operated our businesses by integrating with CSR principles of the Stock Exchange of Thailand as follows.

## 1. Corporate Governance

The Board realizes and commits to conduct business with the good corporate governance in conformance with OECD Principles of Corporate Governance as a key international standard in making an organization more efficiency, transparency, enhancing the credibility and strengthening sustainable growth. The Board has established and approved the corporate governance policy and the corporate code of conducts as the guidelines for the directors, executives and employees in discharging their duties. Due to our continued development of good corporate governance, the Company received an “excellent or five-star” CG rating as evaluated by Thailand Institute of Directors (IOD) in 2018.

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

## 2. Fair Operating Practice

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

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

**Customer relationship management:** The customer satisfaction surveys are conducted annually to improve the Company’s products, services and other business processes in order to meet the customers’ needs and requirements enabling the Company to maintain and expand its customer base in the long term.

Our responsible principle toward customers is to operate our business in compliance with applicable laws, rules and regulation as well as compliance with the Electronic Industry Citizenship Coalition (EICC) which is the code of conduct for electronic industry best practices.

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

## 3. Anti-Corruption

Hana has been a signatory company of Thailand’s Private Sector Collective Action Coalition Against Corruption (CAC) since 2013, with the objective to support the Coalition against Corruption aiming to counter corruption in any forms. The Company was certified as a member of Thailand’s Private Sector Collective Action Coalition Against Corruption for the first time in 2015, which was valid for 3 years. In 2018, the Company received the CAC re-certification for the second time.

The Company realizes the importance of the fight against corruption. The written anti-corruption and related policies have been established with the monitoring process to ensure that employees and concerned parties comply with the policies

# Corporate Social Responsibility

and anti-corruption programs. The Company also provides whistleblowing channels, set up an anti-corruption committee with the senior management as a chairman, does corruption risk assessment, employees' training as well as participating with partners to fight against corruption. In addition, the Company organizes activities to promote the honesty and integrity of employees and business partners as part of anti-corruption measures. In 2018, there were 184 employees and partners awarded for this project, which affirms that the Company has supported the fighting corruption through the implementation of policies and effective mechanisms to prevent corruption at company and industry levels.



## 4. Respect of Human Rights

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

In 2018, the Company had no major issues regarding labour and human rights from our key customers' in-depth audits, where those audits had focused on anti-discrimination, anti-harassment and abuse, prevention of involuntary labour and underage labour, working hours, compensation, freedom of association, and etc.

The Company was awarded as an outstanding workplace for skill development promotion for 2018 given by the Department of Skill Development, the Ministry of Labour. This award is due to the success of the organization's efforts in creating and developing our skilled workforce. Skilled employees who have sufficient expertise play an important role to improve productivity level and reduce operational costs, meanwhile employees can upgrade their skillsets for growth opportunities, higher incentives and career advancement.

# Corporate Social Responsibility



## 5. Fair Labour Treatment

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

In addition, Hana supports projects of the government to protect the rights of disabled persons to provide them with employment opportunities. The Company employs persons who are disabled and arranges the appropriate job matching to their capability. The Company also improved workplace environment to enable employees with disabilities easier access to the Company's facilities. Furthermore, Hana also arranges a place for disabled persons to open shops in the factory compound at no cost, which gain the good support from employees. In 2018, Hana Semiconductor (Ayutthaya) Co., Ltd., a subsidiary of the Company, joined the International Day of Persons with Disabilities having the theme of "Empowering persons with disabilities and ensuring inclusiveness and equality". Hana Ayutthaya received a prize of "The excellent organization that support persons with disabilities" by the Office of the National Development and Disabilities, the Ministry of Social Development and Human Security by empowerment and supporting disability programs for 6 consecutive years. This represents our commitment to promote and create opportunities for hiring people with disabilities and improving their well-being.





# Corporate Social Responsibility

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

**Social protection:** Our compensation policy is fair and reasonable according to employees' capability by considering the packages with the same industry and in accordance with their position, experience and their performance in the Company as well as the economic and social situation. Moreover, the Company provides various employees' welfare for example annual vacation, overtime with the consent of employee, medical treatment, educational fund granted for children of low income employees, employees' cooperatives and other welfares such as group life and accident insurances, annual health check, special vaccination such as Influenza vaccine, Fitness Center, library at certain location, etc.

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





# Corporate Social Responsibility

The Company provides pregnancy care support for pregnant employees by providing training regarding midwifery and newborn care, gift sets and pregnancy allowance per month. In 2018, the Company provided the support to pregnant employees and scholarships for employees' children over Baht 1 million.



## **Safety, health and environment at the workplace:**

The Company focuses on the work environment that is safe for both physical and mental health. The Company has been certified for OHSAS 18000 and TIS18001 which is an international and Thai's occupational health and safety management system since 2005 to date. The Company is committed to developing environmental and safety, health of employees and those involved, as well as uphold social responsibility and labour, along with operating the business and making continuous improvement as follows.

1. Conserve natural resources and energy effectively to prevent pollution and minimize generation of all wastes.
2. Provide the safe and proper workplace and equipment in order to prevent any accident and incidence from occurrence.
3. Strictly comply with labour and other applicable legal and regulations and provide full support to customers' requirements with regard to occupational health, safety, environment, including social and labour accountability (e.g., Electronic Industry Citizenship Coalition (EICC) Code of Conduct.)

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



In 2018, Hana Lamphun plant 2 received an award for excellent Safety, Occupational Health and Environment in the workplace at country level in the first year, given by the Ministry of Labour. This shows the importance and cooperation between employers and employees in developing the labor relations and welfare system to improve the quality of life of our employees.

# Corporate Social Responsibility

In addition, Hana Ayutthaya received an award for excellent Safety, Occupational Health and Environment in the workplace at the provincial level in the first year, given by the Department of Labor Protection and Welfare Ministry of Labour. This award demonstrates that the Company worked toward occupational health, safety and the environment level that meets international standards and in accordance with relevant laws.



Hana Lamphun received the certification for the for “The National Award for Safe, No Disease, and Happy Workplace” from the Department of Disease Control, the Ministry of Public Health in 2018 and valid until 30 September 2020. This project has extensive benefits for the Company, its employees and society as healthy employees are productive and increase the efficiency of the work whereas improve the organization quality and reduce the burden on the government as well as generate income for the government in the form of more taxes. As a result, it is good for the economy and society as a whole.

**Recreational activities for employees:** The Company realizes the importance of employees by arranging various recreational activities as part of the Company’s strategy to develop and build relationships between management and employees, as well as creating a “family” culture within the organization which allows employees to enjoy their work. In 2018, the Company and its subsidiaries provided a variety of recreational activities for employees such as sport day, team building, birthday party, Songkran party, Mother’s Day and other major festivals of each Hana location, etc.





# Corporate Social Responsibility



The Company also held a “Teacher’s Day” to honor employees who dedicated their times and efforts being a volunteer teacher or lecturer to train staff. In 2018, there were totally 57 internal instructors joining the knowledge sharing program.



# Corporate Social Responsibility

## 6. Customer Responsiveness

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

- ISO 9001 quality management system where the Company can demonstrate procedures to consistently provide products that meets customer, applicable statutory and regulatory requirements.
- ISO/TS 16949 quality system for automotive production which focuses on the technical production of high quality automotive parts.
- ISO 13485 quality system used in the medical device industry which is a quality system that mostly focuses on the safety of products.

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

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

**National quality award:** Our employees participated in group activities for Thailand Quality Prize organized by Technology Promotion Association (Thailand-Japan). Hana Microelectronics Public Co., Ltd. received various awards from 2009 to 2018. In 2018, the Company received the diamond award for the Manufacturing QCC Prize, 6 golden awards for Junior Manufacturing QCC Prize, and one silver award for Manufacturing QCC Prize: totally 8 awards. The group activity program aims at employees' involvement at all levels to participate in continuous quality improvement as an approach to find problems and ways to improve the quality of products and production processes so enable the enhancement of productivity and quality as well as create a high level of motivation and enthusiasm of our workforce.





# Corporate Social Responsibility

## 7. Environmental Care

**Environmental management:** As Hana has its manufacturing sites located in industrial estates, there are a number of control and management systems and standards to prevent pollution and impact to the environment and community. The Company also has been certified for environmental management system ISO 14001 since 1999. The Company operates its business in compliance with the requirements of industrial and environmental legislation and applicable laws. There is the environmental committee responsible for overseeing the environmental management and the effective implementation.

**Use of resource efficiency:** In 2018, the Company implemented the programs to efficiently utilize the resources, reduce and prevent pollution to the environment and the community as follows:

**Electricity:** The Company invested in various projects to reduce energy consumption such as installation of heating coils in Fresh Air Unit to recover waste heat from, cleaning machines, improve energy management of chiller systems, improve compress air pipes to reduce pressure drop, etc. As a result, the Company can save more than 500,000 kilowatt-hours per year and reduce CO2 emissions over 300 tonnes per year, which is worth more than 2.6 million baht per year for the reduction of electricity consumption.

Hana Ayutthaya, a subsidiary, has continued implementing energy efficiency improvement programs by joining the energy conservation project with the Department of Alternative Energy Development and Efficiency Ministry of Energy. This includes adjusting the cold water temperature, repairing the Auto Drain system of compressed air systems and closing cooling tower's fans. The financial investments include changing the water cooler, installation of motor speed control device of cooling pump, installing solar panels for use with outdoor lighting resulting in energy savings of more than 3.8 million kilowatt-hours per year, reducing the amount of CO2 emissions by more than 2,300 tonnes per year which reduced electricity consumption by more than 12 million baht per year.

**Water quality:** The operation of wastewater system is monitored on a daily basis to ensure that the wastewater treatment is under control and better than the government standards. The waste water from the production process was treated and filtered to increase the recycled water usage by 43.68% in 2018 enabling the water savings of 120,000 cubic meters per year, worth 3.1 million baht per year.

Hana Ayutthaya has implemented water saving program continuously with the project to increase the ability to recycle waste water which can reduce the cost of water supply by more than 600,000 baht per year.

**Air quality:** The control of air emissions are in line with the standards and related laws. The Company monitors and does preventive maintenance of equipment related to various air pollution controls and performs measurement of air quality in the workplace. From the implementation, the air quality expelled from our factory is better than the standard required in all indicators.

**Noise level:** The Company maintains machinery and equipment in good condition and provides personal protective equipment (such as ear plugs, ear muffs, etc.) to employees who work in a noisy environment. In working areas where noise levels exceed 85 decibels, the hearing health check-up for those employees have been provided periodically.

**Illumination measurement:** Insufficient or excessive illumination could cause the employees' fatigue. The Company has provided the assessment and measurement of the intensity of the light on a periodic basis as to determine whether improvement measures are needed to protect employees.

**Heat stress measurement:** The Company annually measures to identify whether those employees who may be at risk from heat stress are suffering from any heat related illnesses. The heat stress measurement has been in line with the standard requirement.

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**Waste management:** The Company has implemented the separation of waste into three categories: general waste, recycle waste and hazardous waste. The waste disposition is managed according to legal standards of the Department of Industrial Works.

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



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



In 2018, Hana Ayuttaya received 2 outstanding energy management awards, consisting of the Energy Conservation Building Alliance Project and the project for the electrical energy conservation consultation according to the Energy Conservation Plan year 2015 - 2036 from the Ministry of Energy.

Our Lamphun and Ayutthaya factories have been certified as “Green Industry Level 3” or “Green System” using the Environmental Management System which includes monitoring, evaluation and improvement. This project is a part of energy conservation of the Ministry of Industry which Hana participates in order to operate its business in an environmentally friendly manner. The Company aims to become the Green Industry Level 4 in the near future. The following are the outcomes that the Company would benefit from being the Green Industry.

# Corporate Social Responsibility

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

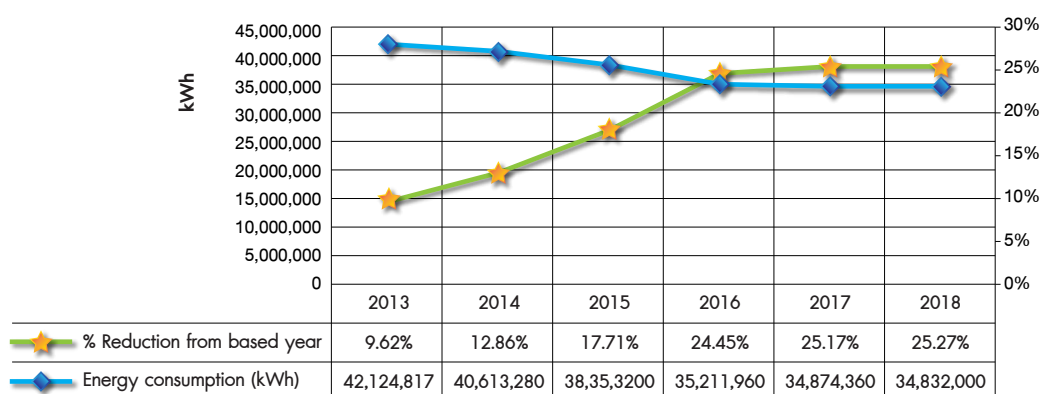
In addition, the Company was certified as an excellent for the project to promote public participation in the supervision of factories in the Industrial Estate (White Flag, Green Star 2018) by applying the principles of good governance, environment and social responsibility (CSR).

In summary, Hana Microelectronics Public Co., Ltd. consumed energy and released carbon dioxide in 2018 compared to prior years as follows.

Key energy measurement	2018	2017	2016	2015	Reference
Electricity Consumption/ Revenue (kWh/MB)	5,386.90	5,752.62	5,821.49	5,470.58	Total electricity consumption divided by million baht of revenue
CO2 Emission/Revenue (Kg CO2e/MB)	2,811.96	3,002.87	3,265.85	3,068.99	Total CO2 emissions divided by million baht of revenue
Recycled Water Consumption (% of total water consumption)	43.68%	44.53%	41.92%	40%	
Environmental Issues	None	None	None	None	

From 2013 to 2018, the Company has implemented energy saving programs and continued to implement energy conservation measures. As a result, the Company electricity consumption is in the downward trend as follows.

**Energy Consumption Year 2013 - 2018**



# Corporate Social Responsibility

**Future energy conservation execution:** In September 2018, Hana Microelectronics Public Co., Ltd. executed two long term Power Purchase Agreements with Constant Energy's subsidiary in Thailand (Solar Rooftop CE1 Co., Ltd.) to install solar panels on the roofs of the two factories of Hana in Lamphun Province. Engineering of the solar PV plants has already started, and obtaining the construction permits and licensing process is underway. We plan to have the opening ceremony in Lamphun for the commencement of the two projects in 2019. The two plants will have total 2 MW capacity. The renewable power generation will result in a reduction of costs, combined with a reduction of CO2 emissions of 2,100 tonnes per year.

This energy conservation project will benefit Hana and society as follows.

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



**Complaint procedures:** The Company assigned environmental supervisors and operators, to receive training and registration as required by law, to communicate information with the community and residents living around. The Company also has the procedure for complaints and resolving complaints arising from the operations of the Company. In 2018, the Company has no major environmental complaints from the employees or the community.



# Corporate Social Responsibility

## 8. Social and Community Development

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

**Career development and income generation for the community:** "Mushroom greenhouse for community" is a project whereby Hana Lamphun built small-scale mushroom greenhouse farm from its unused equipment and provided knowledge on farming system to the community as a learning resource for interested persons to participate and make a part time income from it, or run it as a community food project.



**Educational support:** Hana aims to contribute to the development of society by providing educational support to the children and young people who will lead the next generation in growing up with their full potential and to achieve career planning and the national development driven.

- **Knowledge sharing** – Hana Lamphun hosted the student visit program for academic institutions such as Maejo University, Chulalongkorn University, Chiangmai University, Payao University and many other universities to broaden their understanding of industrial knowledge, the view of production planning and a factory tour for students to observe the real workplace. Nearly 474 students received the hands-on experiences from this project. Hana Lamphun also shared knowledge of Quality Control Cycles to various universities including being the outside instructor for seminars held by other interested organizations.



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- **Support the academic needs** - The Company provided scholarships and donated books, school supplies, sports equipment, food and cloth for students from local elementary school to college ages in Lamphun, Chiangmai, Chiangrai, Mae Hong Son, Ayuthaya, Koh Kong in Cambodia and Jiaxing in China.



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

- The Company held the Children's Day event annually to enhance the children's learning skills and gain new experiences including encourage assertiveness in children. With the creative activities along with plenty of prizes, there were 1,018 children and parents enjoying in the National Children's Day event held by the Company in 2018.
- To help society with activities for youths, the Company annually arranged a football clinic to teach 164 students nearby with the purpose to help reduce problems of some children's challenging behaviors and reduce social problems.
- To enhance safety and environmental awareness for the youth, the Company provided helmets to children and emphasized safety discipline when riding motorcycles.
- To encourage a spirit of collaboration aiming to honor Mother's day by joining a reforestation program
- To support the volunteer projects of the Industrial Estate, the Company's staff joined "Cycling for environment 2018" project. The activities included cycling and a financial donation to build a natural rock dam for a community.
- To support the Industrial Estate project, the Company provided financial donation and medical equipment for patients in local communities.
- In co-operation with the Industrial Estate, the Company's staff helped to buy local agricultural products with suffered from low prices.

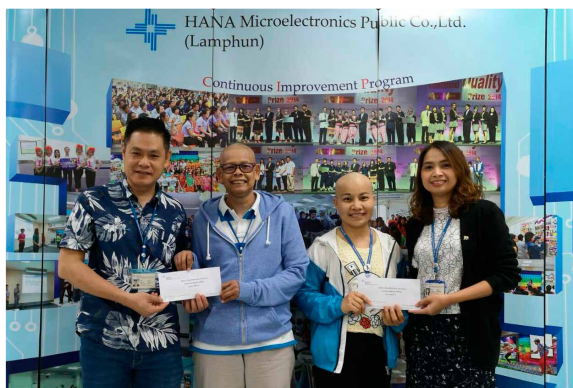


# Corporate Social Responsibility



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

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

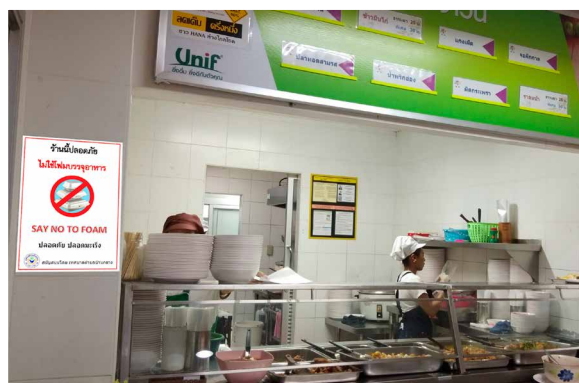




# Corporate Social Responsibility

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

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



**Zero-waste projects** - Hana Ayutthaya made a donation for “Green Industry Campaign” organized by Bo Sai Rom Yen community, Ayutthaya to provide waste segregation equipment for the waste recycling bank project. In addition, the Company also made the donation to Prasat Thong Withthaya School, Ayutthaya to set up a recycling bank in the school. These waste-free activities will not only reduce the amount of trash generated and reduce waste-collection costs but also teach students real-life concepts of environmental stewardship by finding ways to reduce and reuse waste.





# Corporate Social Responsibility



**Donate cloth bags to the needy patients** - Hana Lamphun together with staff donated cloth bags to hospitals in Phrae province to be used to replace plastic bags for patients in order to help protect the environment as 1 bag can be used up to 130 times.

**Old bra donation project** - Hana Lamphun employees supported the campaign to save the world in the form of “Old Bra We Request” originated by Thai Wacoal Public Company Limited by donating old bras which will be recycled into fuel for cement industry to help reduce environmental pollution.

**Fish release activities** - Hana Lamphun supported employees to organize activities to release various kinds of fishes into the river to preserve biodiversity.



- **Blood donation:** Hana Employees joined with the Thai Red Cross for blood donation. In 2018, there were 1,896 employees donated blood more than 693,250 milliliters.



# Corporate Social Responsibility

- **Underprivileged and disabled support:** The Company seeks to contribute to improve the quality of life and reduce inequities for the underprivileged in society. The Company and its subsidiaries have allocated its budget and held CSR activities with employees with the total donation more than 1 million baht to the below charities that have been reviewed and rated by Giving Back Association.

**Concordia Welfare & Education Foundation (CWEFT)** – Hana HQ made a donation to CWEFT which works with communities, schools, and other organizations, including government and non-government agencies to protect, promote and assist children, women, and families in need through its human care and educational projects.

**The SET Foundation** – Hana Ayuttaya made a donation to The SET Foundation for 30 scholarships at Takfa Technology and Management Collage.



**Universal Foundation for Persons with Disability-** Hana Lamphun was awarded Outstanding Organization for Career Development Promotion Award by Universal Foundation for Persons with Disability.

**Christian Care Foundation for Children with Disabilities in Thailand** – Hana Ayuthaya donated computers to support rehabilitation and educational projects of abandoned children with disability.



**Association of Persons with Physical Disability International** – Hana Ayuthaya made the donation to purchase wheelchairs and tricycles which will be distributed to needy disabled persons all over the country so that they can have better quality of life.



# Corporate Social Responsibility

**Support medical research and development:** Hana HQ supported the fund raising of CU Cancer Immunotherapy Fund for the research program to develop immunotherapy treatment for cancer by Chulalongkorn University's Systems Biology Center.



**Other social activities:** Hana HQ supported the Charity Bowling Competition arranged by National Council on Social Welfare of Thailand (NCSWT) to donate funds to the project of "The Royal Fund for helping poor children for education in Her Majesty's Queen".

In addition, Hana jointly with employees for other social activities such as donated dried food, rice, and cash to the temples located nearby the factories, and provided financial support to newborn baby items to female prisoners and their newborn children in Lamphun provincial prison, and joined with the Department of Skill Development Lamphun and Provincial Administration Organization to provide financial support and food for flood-affected community in Laos.

## 9. Innovation and its Dissemination

The Company has invested in Manufacturing Execution System to modify the traditional manufacturing process and automate production processes which can increase the competitiveness advantage of the Company by improving product quality, increasing operating efficiency, responding to higher customer requirements, managing labour issues in regards to both labour costs and labour shortages, as well as reducing waste and environmental impact.

**Geared towards corporate excellence by Kaizen:** From joining the competition with Thailand Kaizen Award in 2018 which was organized by the Technology Promotion Association Thailand - Japan, Hana Lamphun won 6 awards from the contest with 1 diamond award from Automation Kaizen, 5 golden awards from Automation Kaizen and Project Kaizen. Hana AYT also received a golden award for Automation Kaizen, Genba Kaizen and Project Kaizen. The factory automation projects applying Kaizen have been successfully implemented from developing the thinking process, brainstorming to increase the capacity and efficiency of the production process, and brining into the practice of employees. With the development of innovative applications using Kaizen successfully, this could raise the Company's operations to a higher standard and strengthen the Company's competitiveness.



# Audit Committee Report

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

In performing its oversight responsibilities, the Audit Committee held 4 meetings during 2018. The meeting attendance of each committee is as follows.

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

In 2018, the Audit Committee has performed its duties and responsibilities assigned by the Board of Directors and the Charter of the Audit Committee as follows.

- Review the financial statements of the Company and its subsidiaries to ensure the compliance with generally accepted accounting principles, and the disclosure of the notes to the financial statements in accordance with the financial reporting standards. The Audit Committee agreed with the auditors that the financial performance and cash flows of the Company and its subsidiaries for financial year ending 31 December 2018 presented substantial fairly and disclose with generally accepted accounting principles and financial reporting standards. Such disclosure has also made adequately and timely manner.
- Review the adequacy and efficiency of the internal control system by evaluating the internal controls, approving the annual audit plan, reviewing the audit reporting, as well as considering the risk assessment and risk control measures. From the review, the Audit Committee found no deficiency and concluded that the Company has adequate internal control and risk management systems which are appropriate to the business.
- Review the connected transactions to ensure no possible conflict of interests and in compliance with the Securities and Exchange Acts. The Company also has the policy that a director and an executive shall report his interest or a related person's interest which may cause conflicts of interest and the policy to require the board to approve the major transactions. In 2018, the Company's business transactions with related parties arose in the ordinary course of business under the commercial terms and bases agreed upon between the Company and those related parties. There was no connected transactions give rise to potential conflict of interests.
- Review to ensure compliance with rules and regulations of the Securities and Exchange Commission and applicable regulatory requirements and the board policies. The Audit Committee concludes that the Company has complied with the applicable laws, regulations and established policies.



# Audit Committee Report

- Recommend the appointment of the external auditors and their remuneration by giving due consideration to their experience, knowledge, ability, reliability, staff and workload, as well as the independence of auditors in performing such duties. Such auditors must be approved by the Securities and Exchange Commission (SEC). The Audit Committee has proposed to the board to seek further approval from the shareholders' meeting. For financial year ending 31 December 2018, the Audit Committee recommended to appoint Ms. Kamontip Lertwitworatep and/or Mrs. Sarinda Hirunprasurtwutti and/or Mr. Wichart Lokatekrawee of EY Office Limited as the auditors of Hana Microelectronics Public Co., Ltd. for a total remuneration of Baht 2,270,000.

The Audit Committee concludes its satisfaction with the accuracy, completeness and creditability of 2018 financial statements' preparation and reporting, the adequacy of internal control systems and risk management, the compliance with applicable laws and regulations including reasonable related party transactions. As a result, the Audit Committee concluded no significant deficiency or irregularity.



A handwritten signature in black ink on a yellow background.

Mr. John Thompson  
Chairman of Audit Committee

# Nomination Committee Report

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

In 2018, the Committee held 3 meetings and the meeting attendance of each director is as follows.

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

In respect of the candidate nominations for new director appointments in the shareholders' meeting in 2018, the Company invited shareholders to propose candidates for election to the Board. The policies and procedures to allow shareholders to propose candidates for the election of the Board are posted on the Company's website. However, there were no proposed candidates to the Committee from the shareholders in previous year. Therefore, the Nomination Committee reviewed those directors whose term expired by rotation in accordance with the Company's Articles of Association. The Committee has considered that those directors can continue to make further contribution to the Board and the Company.

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



A handwritten signature in black ink on a yellow background.

Mr. Yingsak Jenratha  
Chairman of Nomination Committee

# Corporate Governance Committee Report

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

In 2018, the Committee held 1 meeting and the meeting attendance of each committee is as follows.

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

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

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

From our continuous implementation and improvement of good corporate governance, the Company was assessed with "excellent" recognition level (5 stars) on corporate governance of Thai listed companies. Scored 100 points in the evaluation of the quality of Annual General Meetings of Shareholders for the year 2018 (AGM checklist) of listed companies by the Thai Investors Association.

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



A stylized, handwritten signature in black ink, appearing to read 'T. Weir'.

Mr. Terrence Philip Weir  
Chairman of Corporate Governance Committee

# Management Discussion and Analysis

## Overall Group Performance

Hana Microelectronics Group 'Hana' Sales Revenue increased 3% year on year, at THB 22.3 billion in year 2018 from THB 21.6 billion in year 2017. Sales Revenue in USD terms increased by 8% to USD 689 million in 2018 from USD 635m in 2017. Operating profits increased 1% to THB 2,309 million Baht in 2018 from THB 2,290 million Baht in 2017. Operating profits increased 6% in USD terms to USD 71 million in 2018 from USD 67 million in 2017.

Net Profit decreased by 18% to THB 2,375 million in 2018 from THB 2,888 million in 2017 due to THB 531 million positive change in foreign exchange gain (loss) in 2017.

## Past Performance Analysis

### Revenue Analysis

Group Sales increased 3% in 2018 at THB 22,264 million from 2017 at THB 21,551 million with markets continued strength throughout the year. USD sales were 8% higher in 2018 at USD 689 million up from USD 635 million in 2017 as the average THB/USD exchange rate strengthened 5% to THB/USD 32.31 in 2018 from THB/USD 33.93 in 2017.

The Microelectronics divisions' sales revenue increased 13% [+7% THB] in 2018 over 2017. The microelectronics operation in Lamphun sales increased 16% [+10% in THB terms] and JXG increased by 7% [+2% in THB terms] in 2018. In 2018 IC assembly sales overall increased by 5% in USD terms [+0% in THB terms]. Specifically, IC AYT sales increased 6% [+1% in THB terms], and IC JXG USD sales decreased by 3% [-8% in THB terms]. Hana Technologies "HTI", (formerly named Hana Microdisplay Technologies) sales decreased 5% [-10% THB] for the year.

The annual sales split was :

	2018	2017	2016
PCBA (Thailand)	40%	38%	38%
PCBA (China)	17%	17%	18%
PCBA (Cambodia)	0%	0%	0%
IC (Thailand)	33%	34%	34%
IC (China)	5%	6%	5%
HTI (USA)	5%	5%	5%
	100%	100%	100%

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

Gross Profit decreased by THB 11 million with the gross margin being 14% in 2018 down 1 percentage point from 15% in 2017, due to stronger THB/USD exchange rate.



# Management Discussion and Analysis

## Operating Profit Analysis

The Operating profit margin decreased by 1 percentage point to 10% in 2018 from 11% in 2017. SGA expenses increased by 4% [THB 50 million] due to R&D expense increase.

## Payout Analysis

For the year 2018 the Company paid an interim dividend of THB 805 million in Q4/18.

For the year 2017 the Company paid full dividends of THB 1,610 million (THB 2.00/share). An interim dividend paid of THB 805 million in Q4/17 and the final dividend of THB 805 million in Q2/18.

For the year 2016 the Company paid full dividends of THB 1,610 million (THB 2.00/share). An interim dividend paid of THB 805 million in Q4/16 and the final dividend of THB 805 million in Q2/17.

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

## Financial Status

The group currently has no interest bearing debt. Cash reserves and financial investments at the 31<sup>st</sup> December 2018 were THB 8.7 billion down from 31st December 2017 were THB 9.7 billion.

## Asset Quality

### Accounts Receivable

Most of customers are well known and have good reputation in the IC, and electronics industry. Provision is made of amounts outstanding over 90 days and amounts which the management believe may be doubtful. Accounts receivable were 63 days in 2018, 63 days in 2017 and 61 days in 2016 .

(Thousand Baht)

Trade Receivables	2018	2017	2016
Less than 3 months	3,668,482	3,713,024	3,404,803
3 - 6 months	34,940	14,756	18,549
6 - 12 months	7,737	681	26,032
More than 12 months	1,480	9,130	4,443
Total accounts receivable - other companies	3,712,639	3,737,591	3,453,827
Less : Allowance for doubtful accounts	(21,556)	(11,159)	(19,855)
	3,691,083	3,726,432	3,433,972

# Management Discussion and Analysis

## Inventory

In general, Hana's production is based on clients' order, consequently, the majority of inventory are raw materials, expendable tools and work in process with little finished goods pending for customer delivery.

The group companies normally write-off out-of-date inventory, and make provision for aged inventory and depletion in the value of fixed assets, if material, each quarter.

Inventory days were 89 days in 2018, 77 days in 2017 and 73 days in 2016.

## Liquidity

The group has THB 8.7 billion in cash and financial investments with no interest bearing debt. Liquidity ratios are high at over 3 times current liabilities. Operating Cashflow (EBITDA) was THB 3,420 million in 2018 1% higher than THB 3,374 million in 2017.

EBITDA was THB 3.4 billion in 2018 and 3.4 billion in 2017 and THB 3.1 billion in 2016.

Cash and financial investments in 2018 decreased by THB 1.0 billion to THB 8.7 billion, due to EBITDA 3.4 billion less final dividend THB 0.8 billion 2017 paid in Q218, interim dividend Q418 THB 0.8 billion, capital expenditure THB 1.9 billion, other items THB -0.9 billion.

Cash and financial investments in 2017 decreased by THB 0.2 billion to THB 9.7 billion, due to EBITDA 3.4 billion less final dividend THB 0.8 billion 2016 paid in Q217, interim dividend Q417 THB 0.8 billion, capital expenditure THB 1.1 billion, other items THB -0.9 billion.

Cash and financial investments in 2016 increased by THB 0.8 billion to THB 9.9 billion, due to EBITDA 3.1 billion less final dividend THB 0.8 billion 2015 paid in Q216, interim dividend Q416 THB 0.8 billion, capital expenditure THB 0.8 billion, other items THB +0.1 billion.

## Capital Expenditure

Net Capital Expenditure was THB 2,333 million in 2018, THB 1,111 million in 2017 and THB 801 million in 2016. Capital Expenditure was higher in 2018 due to the higher capital expenditure from Ayutthaya plant compared t recent years due to the strength in the semiconductor industry in 2018.

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

## Source of Financial Capital

As the group as no interest bearing debt and operating working capital is positive the groups funding is from the shareholders equity.

# Management Discussion and Analysis

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

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

In turn, customer demand is affected by world economic growth and the customer's sales growth.

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

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

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

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

## Foreign Exchange Rates

The THB/USD currency movements reflected the economic trends in emerging markets and commodities during period. The average rate for 2018 of THB/USD 32.31 was 5% stronger than the THB/USD 33.93 in 2017 which was 4% stronger than the THB/USD 35.30 in 2016.

## Exceptional Items

There were no Exceptional Items in 2018, 2017 or 2016.

## Subsequent Event

None

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

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

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

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

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

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

### a) Business Risk

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

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

### b) Production Risk

The production risks are –

- Changes in manufacturing technology making existing equipment obsolete.

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

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

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



# Risk Factors

- The Companies' ability to source suitably skilled staff sufficient direct labour.

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

- Material Supply Chain risks. Inability of our suppliers to deliver materials on time and in accordance with specification.

To minimize supply chain interruption, each division as experienced purchasing staff who approved by the customers for each product produced, maintain multiple sources for each raw material.

## c) Management Risk

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

The Company minimizes management risk through not having key man issues and sufficient management depth to be able to continue to operate the Company in the event of management turnover. The Company also has a policy for that all senior management do not travel on the same aircraft where possible.

## d) Financial Risk

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

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

To reduce the risk of volatile exchange rate, out of the groups foreign exchange exposure, USD 140 million is hedged, Foreign exchange contracts are used to buy THB and Sell USD on a rolling 3 or 6 months basis.

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

## e) Information Security Risk

The Company could be affected by cyberattacks such as hardware, systems, network, customer data and intellectual property that can cause damage to our business, affect our bottom line as well as our business' standing and customer trust. Our Hana Ayutthaya is preparing to certify the international standard ISO 27001 that shall provide the specifications of a best-practice information security management system (ISMS) which is a risk-based approach to corporate information security risk management that addresses people, processes and technology.

## 2. Risk Factor which effect to shareholders' investment

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

# Report of the Board of Directors' Responsibilities for Financial Statements

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

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

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

The Board is of the opinion that the financial statements of Hana Microelectronics Public Company Limited and its subsidiaries for the year ended December 2018 are materially accurate, complete, and reliable.



# Independent Auditor's Report

## To the Shareholders of Hana Microelectronics Public Company Limited

### Opinion

I have audited the accompanying consolidated financial statements of Hana Microelectronics Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2018, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of Hana Microelectronics Public Company Limited for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Hana Microelectronics Public Company Limited and its subsidiaries and of Hana Microelectronics Public Company Limited as at 31 December 2018, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

### Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

### Key Audit Matters

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

I have fulfilled the responsibilities described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.

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

#### *Revenue recognition*

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



# Independent Auditor's Report

I examined the revenue recognition of the Group by

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

## *Inventories*

Estimating the net realisable value of inventory, as disclosed in the related accounting policies in the Note 4.4 and Note 5.1 to the financial statements, is one of an area of significant management judgement, particularly with regard to the estimation of allowance for diminution in the value of slow-moving and obsolete inventory. This requires detailed analysis of the product life cycle, the competitive environment, economic circumstances and the situation within the high-technology industry. There is a risk with respect to the amount of provision set aside for diminution in the value of inventory.

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

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

## *Provision for long-term employee benefits*

The valuation of long-term employee benefit obligations is one of a significant accounting estimate to the financial statements because the Group has a large number of employees and has defined benefit plans as discussed in the related accounting policies in the Note 4.12 and Note 5.3 to the financial statements. In addition, the calculation of long-term employee benefit obligations requires the management to select the calculation method and exercise a high degree of judgement in determining appropriate assumptions such as discount rates, future salary increases, mortality rates and staff turnover rates. Due to the long-term nature of these plans, such estimates are subject to significant uncertainty. There is therefore a risk with respect to the amounts of the provision for long-term employee benefits.



# Independent Auditor's Report

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

## Other Information

Management is responsible for the other information. The other information comprises the information included in annual report of the Group, but does not include the financial statements and my auditor's report thereon. The annual report of the Group is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the annual report of the Group, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance for correction of the misstatement.

## Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

# Independent Auditor's Report

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



**Kamontip Lertwitworatep**

Certified Public Accountant (Thailand) No. 4377

EY Office Limited

Bangkok: 28 February 2019

# Statement of financial position

Hana Microelectronics Public Company Limited and its subsidiaries

As at 31 December 2018

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
<b>Assets</b>					
<b>Current assets</b>					
Cash and cash equivalents	6	4,081,336,162	4,756,538,170	237,904,042	402,022,774
Short-term investments	8	3,985,333,619	4,517,582,271	-	250,000,000
Current portion of long-term fixed deposits					
with financial institution	12	480,072,336	465,390,797	-	-
Trade and other receivables	7, 9	3,831,672,196	3,904,177,600	1,523,937,147	1,320,169,690
Inventories	10	5,222,839,582	4,082,873,656	2,459,278,112	1,746,911,653
Other current assets		155,141,408	166,895,567	50,433,780	21,738,900
<b>Total current assets</b>		<b>17,756,395,303</b>	<b>17,893,458,061</b>	<b>4,271,553,081</b>	<b>3,740,843,017</b>
<b>Non-current assets</b>					
Investments in subsidiary companies	11	-	-	3,583,449,338	3,583,449,338
Other long-term investments	13	146,121,100	65,458,800	97,000	97,000
Investment property	14	72,303,750	72,303,750	72,303,750	72,303,750
Property, plant and equipment	15	7,179,238,446	6,065,872,244	2,637,492,387	2,632,563,156
Land leasehold rights	16	127,127,511	130,882,070	-	-
Intangible assets	17	51,507,746	49,942,131	34,666,062	32,219,654
Deferred tax assets	23	13,071,409	26,709,952	2,065,930	1,391,494
Other non-current assets		22,547,441	98,471,005	10,000	3,423,113
<b>Total non-current assets</b>		<b>7,611,917,403</b>	<b>6,509,639,952</b>	<b>6,330,084,467</b>	<b>6,325,447,505</b>
<b>Total assets</b>		<b>25,368,312,706</b>	<b>24,403,098,013</b>	<b>10,601,637,548</b>	<b>10,066,290,522</b>

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

# Statement of financial position (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

As at 31 December 2018

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
<b>Liabilities and shareholders' equity</b>					
<b>Current liabilities</b>					
Trade and other payables	7, 18	3,421,408,524	2,920,964,877	1,332,899,464	1,080,012,337
Short-term provisions	19	324,498,000	326,809,000	-	-
Income tax payable		37,278,272	40,486,036	2,400,609	2,103,049
Other current liabilities		130,407,869	97,658,235	24,918,884	22,001,075
<b>Total current liabilities</b>		<b>3,913,592,665</b>	<b>3,385,918,148</b>	<b>1,360,218,957</b>	<b>1,104,116,461</b>
<b>Non-current liabilities</b>					
Provision for long-term employee benefits	20	371,589,984	327,301,816	142,704,747	128,110,137
<b>Total non-current liabilities</b>		<b>371,589,984</b>	<b>327,301,816</b>	<b>142,704,747</b>	<b>128,110,137</b>
<b>Total liabilities</b>		<b>4,285,182,649</b>	<b>3,713,219,964</b>	<b>1,502,923,704</b>	<b>1,232,226,598</b>
<b>Shareholders' equity</b>					
<b>Share capital</b>					
Registered					
974,403,900 ordinary shares of Baht 1 each		974,403,900	974,403,900	974,403,900	974,403,900
Issued and fully paid-up					
804,878,860 ordinary shares of Baht 1 each		804,878,860	804,878,860	804,878,860	804,878,860
Share premium		1,723,218,982	1,723,218,982	1,723,218,982	1,723,218,982
<b>Retained earnings</b>					
Appropriated - statutory reserve	21	456,462,666	443,691,136	100,000,000	100,000,000
Unappropriated		18,237,930,334	17,504,229,412	6,470,616,002	6,205,966,082
Other components of shareholders' equity		(139,360,785)	213,859,659	-	-
<b>Total shareholders' equity</b>		<b>21,083,130,057</b>	<b>20,689,878,049</b>	<b>9,098,713,844</b>	<b>8,834,063,924</b>
<b>Total liabilities and shareholders' equity</b>		<b>25,368,312,706</b>	<b>24,403,098,013</b>	<b>10,601,637,548</b>	<b>10,066,290,522</b>

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



# Income statement

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
<b>Revenues</b>					
Sales	25, 26	22,264,260,113	21,550,861,024	8,970,635,269	8,199,161,086
Interest income		196,114,572	206,196,691	4,983,551	7,543,227
Dividend income	11	2,014,305	57,375	892,563,000	930,057,375
Gain on exchange		15,125,213	530,633,995	76,455,347	-
Other income		375,334,838	295,472,840	43,435,115	39,437,151
<b>Total revenues</b>		<b>22,852,849,041</b>	<b>22,583,221,925</b>	<b>9,988,072,282</b>	<b>9,176,198,839</b>
<b>Expenses</b>	22				
Cost of sales		19,060,852,408	18,336,460,489	7,720,777,397	6,922,889,564
Selling and distribution expenses		157,596,459	156,102,532	38,217,959	38,014,922
Administrative expenses		1,111,889,106	1,063,670,366	339,020,090	321,149,197
Loss on exchange		-	-	-	8,939,365
<b>Total expenses</b>		<b>20,330,337,973</b>	<b>19,556,233,387</b>	<b>8,098,015,446</b>	<b>7,290,993,048</b>
<b>Profit before finance cost and income tax expenses</b>		<b>2,522,511,068</b>	<b>3,026,988,538</b>	<b>1,890,056,836</b>	<b>1,885,205,791</b>
Finance cost		(6,751,744)	(7,283,859)	(2,193,730)	(2,087,076)
<b>Profit before income tax expenses</b>		<b>2,515,759,324</b>	<b>3,019,704,679</b>	<b>1,887,863,106</b>	<b>1,883,118,715</b>
Income tax expenses	23	(140,536,726)	(131,974,049)	(6,035,764)	(9,382,552)
<b>Profit for the year</b>		<b>2,375,222,598</b>	<b>2,887,730,630</b>	<b>1,881,827,342</b>	<b>1,873,736,163</b>
<b>Profit attributable to:</b>					
Equity holders of the Company		2,375,222,598	2,887,730,630	1,881,827,342	1,873,736,163
<b>Earnings per share</b>	24				
Basic earnings per share					
Profit attributable to equity holders of the Company		2.95	3.59	2.34	2.33
Number of weighted average ordinary shares (shares)		804,878,860	804,878,860	804,878,860	804,878,860

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

# Statement of comprehensive income

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
Profit for the year		2,375,222,598	2,887,730,630	1,881,827,342	1,873,736,163
Other comprehensive income:					
Other comprehensive income to be reclassified to profit or loss in subsequent periods:					
Gain (loss) on change in value of available-for-sale investments	8.2	(145,926,981)	109,659,766	-	-
Exchange differences on translation of financial statements in foreign currency - net of income tax	23	(207,293,463)	(812,648,097)	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods - net of income tax		(353,220,444)	(702,988,331)	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods					
Actuarial gain (loss) - net of income tax	20, 23	(18,992,426)	153,128,500	(7,419,702)	122,547,214
Other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		(18,992,426)	153,128,500	(7,419,702)	122,547,214
Other comprehensive income for the year		(372,212,870)	(549,859,831)	(7,419,702)	122,547,214
Total comprehensive income for the year		2,003,009,728	2,337,870,799	1,874,407,640	1,996,283,377
Total comprehensive income attributable to:					
Equity holders of the Company		2,003,009,728	2,337,870,799	1,874,407,640	1,996,283,377

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

# Statement of changes in shareholders' equity

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

Note	Consolidated financial statements						
	Issued and paid up share capital	Share premium	Retained earnings		Other components of shareholders' equity		
					Other comprehensive income		Total other components of shareholders' equity
			Appropriated - Statutory reserve	Unappropriated	Surplus (deficit) on changes in value of available-for-sale investments	Exchange differences on translation of financial statements in foreign currency	
Balance as at 31 December 2016	804,878,860	1,723,218,982	428,283,816	16,088,535,322	104,908,742	811,939,248	19,961,764,970
Profit for the year	-	-	-	2,887,730,630	-	-	2,887,730,630
Other comprehensive income for the year	-	-	-	153,128,500	109,659,766	(812,648,097)	(549,859,831)
Total comprehensive income for the year	-	-	-	3,040,859,130	109,659,766	(812,648,097)	2,337,870,799
Dividend paid	-	-	-	(1,609,757,720)	-	-	(1,609,757,720)
Unappropriated retained earnings transferred to statutory reserve	-	-	15,407,320	(15,407,320)	-	-	-
Balance as at 31 December 2017	804,878,860	1,723,218,982	443,691,136	17,504,229,412	214,568,508	(708,849)	20,689,878,049
Balance as at 31 December 2017	804,878,860	1,723,218,982	443,691,136	17,504,229,412	214,568,508	(708,849)	20,689,878,049
Profit for the year	-	-	-	2,375,222,598	-	-	2,375,222,598
Other comprehensive income for the year	-	-	-	(18,992,426)	(145,926,981)	(207,293,463)	(372,212,870)
Total comprehensive income for the year	-	-	-	2,356,230,172	(145,926,981)	(207,293,463)	2,003,009,728
Dividend paid	-	-	-	(1,609,757,720)	-	-	(1,609,757,720)
Unappropriated retained earnings transferred to statutory reserve	-	-	12,771,530	(12,771,530)	-	-	-
Balance as at 31 December 2018	804,878,860	1,723,218,982	456,462,666	18,237,930,334	68,641,527	(208,002,312)	21,083,130,057

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

# Statement of changes in shareholders' equity (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

Note	Separate financial statements				
	Issued and paid up share capital	Share premium	Retained earnings	Unappropriated	Total shareholders' equity
			Appropriated Statutory reserve		
Balance as at 31 December 2016	804,878,860	1,723,218,982	100,000,000	5,819,440,425	8,447,538,267
Profit for the year	-	-	-	1,873,736,163	1,873,736,163
Other comprehensive income for the year	-	-	-	122,547,214	122,547,214
Total comprehensive income for the year	-	-	-	1,996,283,377	1,996,283,377
Dividend paid	-	-	-	(1,609,757,720)	(1,609,757,720)
Balance as at 31 December 2017	804,878,860	1,723,218,982	100,000,000	6,205,966,082	8,834,063,924
Balance as at 31 December 2017	804,878,860	1,723,218,982	100,000,000	6,205,966,082	8,834,063,924
Profit for the year	-	-	-	1,881,827,342	1,881,827,342
Other comprehensive income for the year	-	-	-	(7,419,702)	(7,419,702)
Total comprehensive income for the year	-	-	-	1,874,407,640	1,874,407,640
Dividend paid	-	-	-	(1,609,757,720)	(1,609,757,720)
Balance as at 31 December 2018	804,878,860	1,723,218,982	100,000,000	6,470,616,002	9,098,713,844

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



# Statement of cash flows

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
<b>Cash flows from operating activities</b>				
Profit before tax	2,515,759,324	3,019,704,679	1,887,863,106	1,883,118,715
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Depreciation	1,097,447,509	1,072,032,273	380,613,735	357,656,106
Amortisation expenses	13,181,599	11,442,158	4,679,701	3,687,921
Allowance for doubtful accounts (reversal)	10,396,743	(8,696,268)	-	-
Reduction of inventories to net realisable value	42,690,044	45,284,685	32,781,543	37,996,307
Write-off obsolete and damaged inventories	(15,828,268)	(114,277,206)	(15,828,268)	(108,015,728)
Dividend income from subsidiary companies	-	-	(892,500,000)	(930,000,000)
Dividend income from other company	(2,014,305)	(57,375)	(63,000)	(57,375)
Loss (gain) on disposals/write-off equipment and intangible assets	25,536,081	11,948,498	(6,937,355)	(2,417,331)
Reduction of allowance for impairment loss on assets	(20,875)	(410,593)	(20,875)	(210,789)
Provision for vacation	4,019,058	1,801,716	2,112,040	886,198
Provision for long-term employee benefits	33,089,806	36,056,371	12,316,616	15,852,354
Gain on sales/redemption of short-term investments	(7,304,835)	(17,318,264)	-	-
Revaluation gain on investments in securities held for trading	(12,493,870)	(3,064,128)	-	-
Unrealised loss (gain) on exchange	18,515,850	8,963,507	18,961,559	(12,587,586)
Unrealised gain on forward contracts	(50,138,831)	(151,262,346)	-	-
Interest income from short-term investments	(134,156,492)	(177,177,255)	-	-
Profit from operating activities before changes in operating assets and liabilities	3,538,678,538	3,734,970,452	1,423,978,802	1,245,908,792

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

# Statement of cash flows (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Operating assets (increase) decrease				
Trade and other receivables	2,933,095	(317,305,371)	(216,935,389)	(18,209,604)
Inventories	(1,166,827,701)	(362,755,614)	(729,319,734)	(391,547,887)
Other current assets	62,434,855	(2,537,879)	(28,572,931)	11,464,796
Operating liabilities increase (decrease)				
Trade and other payables	152,498,034	99,205,173	278,711,922	(29,996,203)
Other current liabilities	28,716,953	2,630,019	805,770	(23,587)
Cash from operating activities	2,618,433,774	3,154,206,780	728,668,440	817,596,307
Cash paid for long-term employee benefits	(7,855,331)	(9,720,611)	(5,202,967)	(4,324,547)
Cash paid for income tax	(130,616,291)	(130,490,629)	(6,351,382)	(12,720,220)
<b>Net cash from operating activities</b>	<b>2,479,962,152</b>	<b>3,013,995,540</b>	<b>717,114,091</b>	<b>800,551,540</b>
<b>Cash flows from investing activities</b>				
Increase in fixed deposits with financial institutions	(14,681,539)	(173,940,176)	-	-
Decrease (increase) in short-term investments	2,122,148	(1,451,532,088)	250,000,000	(250,000,000)
Interest income from short-term investments	169,107,185	176,676,517	-	-
Proceeds from sales/redemption of short-term investments	403,998,228	356,926,391	-	-
Dividend income from subsidiary companies	-	-	892,500,000	930,000,000
Dividend income from other company	2,014,305	57,375	63,000	57,375
Acquisitions of property, plant and equipment and intangible assets	(1,908,216,736)	(942,916,441)	(426,827,030)	(436,813,504)
Proceeds from disposals of equipment	11,696,932	16,476,958	9,375,814	7,404,390
Increase in other long-term investments	(80,662,300)	(65,361,800)	-	-
Decrease (increase) in other non-current assets	75,923,564	(86,697,099)	3,413,113	(3,413,113)
Cash paid for withholding tax	-	(12,550,322)	-	-
<b>Net cash from (used in) investing activities</b>	<b>(1,338,698,213)</b>	<b>(2,182,860,685)</b>	<b>728,524,897</b>	<b>247,235,148</b>

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

# Statement of cash flows (continued)

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Cash flows from financing activities				
Dividend paid	(1,609,757,720)	(1,609,757,720)	(1,609,757,720)	(1,609,757,720)
Net cash used in financing activities	(1,609,757,720)	(1,609,757,720)	(1,609,757,720)	(1,609,757,720)
Decrease in cash and cash equivalents	(468,493,781)	(778,622,865)	(164,118,732)	(561,971,032)
Translation adjustment	(206,708,227)	(812,433,707)	-	-
Net decrease in cash and cash equivalents	(675,202,008)	(1,591,056,572)	(164,118,732)	(561,971,032)
Cash and cash equivalents at beginning of year	4,756,538,170	6,347,594,742	402,022,774	963,993,806
Cash and cash equivalents at end of year (Note 6)	4,081,336,162	4,756,538,170	237,904,042	402,022,774
Supplemental cash flow information				
Non-cash related transactions from investing activities				
Net increase (decrease) in accounts payable				
for purchase of plant and equipment	350,801,768	83,045,401	(31,740,371)	30,984,769
Accrued interest receivable	(34,950,693)	(9,361,497)	-	-
Revaluation gain (loss) from changes in fair value of investments	(145,926,981)	109,659,766	-	-

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

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 1. General information

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

## 2. Basis of preparation

2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development dated 11 October 2016, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

### 2.2 Basis of consolidation

a) The consolidated financial statements include the financial statements of Hana Microelectronics Public Company Limited (“the Company”) and the following subsidiary companies (“the subsidiaries”):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2018	2017
			Percent	Percent
Held by the Company				
Hana Semiconductor (BKK) Company Limited	Holding company	Thailand	100	100
Omac Sales Limited	Purchasing of electronic components and equipment	Hong Kong	100	100
Hana Microelectronics International Company Limited	Holding company	British Virgin Islands	100	100
Hana Microelectronics Investments Company Limited	Holding company	British Virgin Islands	100	100
Hana Technologies Group Limited	Holding company	Cayman Islands	100	100
Hana Microelectronics (Cambodia) Company Limited	Manufacture and trading of electronic components	Cambodia	100	100
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	58	58
Held through the subsidiary companies				
Hana Semiconductor International Limited	Trading of electronic components	British Virgin Islands	100	100
Hana Semiconductor Holdings Limited	Holding company	British Virgin Islands	100	100
Hana Technologies Investments Limited	Holding company	Cayman Islands	100	100
Hana Technologies, Inc. (formerly known as "Hana Microdisplay Technologies, Inc.")	Manufacture and trading of electronic components	USA	100	100
Hana Microelectronics, Inc.	Agent and customer services	USA	100	100
Hana Microelectronics Enterprises Company Limited	Holding company	British Virgin Islands	100	100
Hana Macao Commercial Offshore Limited	Customer services	Macao	100	100
Hana Microelectronics (Jiaxing) Company Limited	Manufacture and trading of electronic components	China	100	100
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	42	42
Power Master Semiconductor Company Limited	Manufacture and trading of electronic components	South Korea	100	100



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

- b) The Company is deemed to have control over an investee or subsidiaries if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- c) Subsidiaries are fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.
- d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.
- e) The assets and liabilities in the financial statements of overseas subsidiary companies are translated into Thai Baht using the exchange rate prevailing on the end of reporting period, and revenues and expenses translated using monthly average exchange rates. The resulting differences are shown under the caption of "Exchange differences on translation of financial statements in foreign currency" in the statements of changes in shareholders' equity.
- f) Material balances and transactions between the Company and its subsidiary companies have been eliminated from the consolidated financial statements.

2.3 The separate financial statements present investments in subsidiaries under the cost method.

## 3. New financial reporting standards

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

During the year, the Company and its subsidiaries have adopted 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 adoption of these financial reporting standards does not have any significant impact on the Company's and its subsidiaries' financial statements.

### (b) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2019

The Federation of Accounting Professions issued a number of revised and new financial reporting standards and interpretations (revised 2018), which are effective for fiscal years beginning on or after 1 January 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The management of the Company and its subsidiaries believe that most of the revised financial reporting standards will not have any significant impact on the financial statements when they are initially applied. However, the new standard involves changes to key principles, as summarised below.

#### TFRS 15 Revenue from Contracts with Customers

TFRS 15 supersedes the following accounting standards together with related Interpretations.

TAS 11 (revised 2017)	Construction contracts
TAS 18 (revised 2017)	Revenue
TSIC 31 (revised 2017)	Revenue - Barter Transactions Involving Advertising Services

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

TFRIC 13 (revised 2017)

TFRIC 15 (revised 2017)

TFRIC 18 (revised 2017)

Customer Loyalty Programmes

Agreements for the Construction of Real Estate

Transfers of Assets from Customers

Entities are to apply TFRS 15 to all contracts with customers unless those contracts fall within the scope of other standards. The standard establishes a five-step model to account for revenue arising from contracts with customers, with revenue being recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The standard requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model.

The management of the Company and its subsidiaries expects that the adoption of this accounting standard to result in the adjustment of sales transactions with freight/insurance. The Company and its subsidiaries consider freight/insurance to be distinct service which shall be accounted for separately from the sales of goods as the control of goods is transferred to the customer before the freight/insurance service is performed. The Company and its subsidiaries will recognise the corresponding revenue when the freight/insurance service has been performed. Previously, revenue from sales of goods and freight/insurance service was recognised in full upon the risk and rewards of ownership of the goods have passed to customer.

## (c) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2020

During the current year, the Federation of Accounting Professions issued the set of TFRSs related to financial instruments consists of five accounting standards and interpretations, as follows:

Financial Reporting Standards:

TFRS 7

Financial Instruments: Disclosures

TFRS 9

Financial Instruments

Accounting Standard:

TAS 32

Financial Instruments: Presentation

Financial Reporting Standard Interpretations:

TFRIC 16

Hedges of a Net Investment in a Foreign Operation

TFRIC 19

Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortised cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. When the TFRSs related to financial instruments are effective, some accounting standards, interpretations and guidance which are currently effective will be cancelled.

The management of the Company and its subsidiaries is currently evaluating the impact of these standards to the financial statements in the year when they are adopted.

## 4. Significant accounting policies

### 4.1 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.

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## *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.

### **4.2 Cash and cash equivalents**

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

### **4.3 Trade accounts receivable**

Trade accounts receivable are stated at the net realisable value. Allowance for doubtful accounts is provided for the estimated losses that may be incurred in collection of receivables. The allowance is generally based on collection experiences and analysis of debt aging.

### **4.4 Inventories**

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

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

### **4.5 Investments**

- a) Investments in securities held for trading of a subsidiary are stated at fair value. Changes in fair value of these securities are recorded in the income statement.
- b) Investments in available-for-sale securities are stated at fair value. Changes in the fair value of these securities are recorded in other comprehensive income, and will be recorded in the income statement when securities are sold.
- c) Investments in debt securities, both due within one year and expected to be held to maturity, are recorded at amortised cost. The premium/discount on debt securities is amortised/accreted by the effective rate method with the amortised/accreted amount presented as an adjustment to the interest income.
- d) Investments in non-marketable equity securities, which the subsidiary classifies as other investments, are stated at cost net of allowance for impairment loss.
- e) Investments in subsidiaries are accounted for in the separate financial statements using the cost method.

The fair value of marketable securities is based on the latest bid price of the last working day of the year as quoted on the Stock Exchanges in which the securities are issued. The fair value of debt instruments is determined based on quoted market price in the debt instruments markets.

The weighted average method is used for computation of the cost of investments.

In the event the Company and its subsidiaries reclassify investments from one type to another, such investments will be readjusted to their fair value as at the reclassification date. The difference between the carrying amount of the investments and the fair value on the date of reclassification are recorded in profit or loss or recorded as other components of shareholders' equity, depending on the type of investment which is reclassified.

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

On disposal of an investment, the difference between net disposal proceeds and the carrying amount of the investment is recognised as income or expenses in the income statement.

## 4.6 Investment properties

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and allowance for loss on impairment (if any).

No depreciation is provided on investment property in land.

## 4.7 Property, plant and equipment and depreciation

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

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

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

Depreciation is included in determining income.

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

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in the income statement when the asset is derecognised.

## 4.8 Intangible assets

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

Intangible assets with finite lives are amortised on a systematic basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to the income statement.

The useful lives of the intangible assets are 5 - 10 years.

## 4.9 Related party transactions

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

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



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 4.10 Foreign currencies

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

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.

## 4.11 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.

An impairment loss is recognised in the income statement.

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

## 4.12 Employee benefits

### *Short-term employee benefits*

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

### *Post-employment benefits*

#### *Defined contribution plans*

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

#### *Defined benefit plans*

The Company and its subsidiaries have obligations in respect of the severance payments they 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 based on actuarial techniques, using the projected unit credit method.

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

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## *Provision for vacation*

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

## **4.13 Provisions**

Provisions are recognised when the Company and the 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.

### **Provision for product warranty**

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

## **4.14 Income tax**

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

### **Current tax**

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

### **Deferred tax**

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The 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.

## **4.15 Derivatives**

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

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

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 4.16 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 techniques that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

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

- Level 1 - Use of quoted market prices in an active market for such assets or liabilities
- Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly
- Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the 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.

## 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:

### 5.1 Allowance for diminution in inventory value

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

### 5.2 Property plant and equipment and depreciation

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

In addition, the management is required to review property, plant and equipment for impairment on a periodical basis and record impairment losses in the period when it is determined that their recoverable amount is lower than the carrying cost. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

### 5.3 Post-employment benefits under defined benefit plans

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

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 5.4 Fair value of financial instruments

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

## 6. Cash and cash equivalents

Cash and cash equivalents as at 31 December 2018 and 2017 as reflected in the statements of financial position and cash flows consist of the following:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Cash	2,306	1,270	246	287
Bank deposits	2,114,985	3,374,647	237,658	401,736
Fixed deposits with maturity not over 3 months	1,964,045	1,380,621	-	-
Total cash and cash equivalents	4,081,336	4,756,538	237,904	402,023

As at 31 December 2018, bank deposits in savings accounts and fixed deposits carried interests between 0.001 and 0.700 percent per annum (2017: 0.001 and 2.000 percent per annum).

## 7. Related party transactions

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

(Unit: Million Baht)

	Separate financial statements		Transfer pricing policy
	2018	2017	
<u>Transactions with subsidiary companies</u> (eliminated from the consolidated financial statements)			
Sales of goods	146	184	Prices agreed between the parties due to the uniqueness of products sold to each customer
Dividend income	892	930	Declared rate
Purchase of materials	259	151	Cost plus mark up
Service fee expenses	9	9	Rates stipulated in the agreement



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

As at 31 December 2018 and 2017, the balances of the accounts between the Company and those related parties are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Trade and other receivables (Note 9)				
Trade receivables - related parties				
Subsidiary companies	-	-	23,706	7,658
Total trade receivables - related parties	-	-	23,706	7,658
Other receivables - related parties				
Related company (by way of common directors)	-	76	-	-
Total other receivables - related parties	-	76	-	-
Total trade and other receivables	-	76	23,706	7,658
Trade and other payables (Note 18)				
Trade payables - related parties				
Subsidiary companies	-	-	329,110	241,780
Total trade payables - related parties	-	-	329,110	241,780
Total trade and other payables	-	-	329,110	241,780

## Directors and management's benefits

During the years ended 31 December 2018 and 2017, the Company and its subsidiaries had employee benefit expenses payable to their directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Short-term employee benefits	98.3	88.4	14.8	13.6
Post-employment benefits	1.6	1.4	0.7	0.7
Total	99.9	89.8	15.5	14.3

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 8. Short-term Investments

(Unit: Thousand Baht)

	Consolidated financial statements			
	2018		2017	
	Cost/ Carrying value	Fair value	Cost/ Carrying value	Fair value
<b>Securities held for trading (Note 8.1)</b>				
Overseas marketable equity securities	973,495	999,753	163,405	177,102
Unsecured subordinated notes	-	-	24,162	24,230
<b>Total</b>	<b>973,495</b>	<b>999,753</b>	<b>187,567</b>	<b>201,332</b>
Add: Gain on changes in fair value of investments	26,258		13,765	
Investments in securities held for trading	999,753		201,332	
<b>Available-for-sale securities (Note 8.2)</b>				
Overseas marketable corporate bonds	1,123,441	1,198,459	1,263,322	1,423,490
Local quoted bonds	-	-	32,683	34,270
Overseas quoted bonds	678,792	672,416	783,357	836,171
<b>Total</b>	<b>1,802,233</b>	<b>1,870,875</b>	<b>2,079,362</b>	<b>2,293,931</b>
Add: Gain on changes in fair value of investments	68,642		214,569	
Investments in available-for-sale securities	1,870,875		2,293,931	
<b>Fixed deposits with financial institutions</b>				
Fixed deposits within 1 year	1,114,706	1,114,706	2,022,319	2,022,319
Fixed deposits with financial institutions	1,114,706	1,114,706	2,022,319	2,022,319
<b>Total short-term investments</b>	<b>3,985,334</b>	<b>3,985,334</b>	<b>4,517,582</b>	<b>4,517,582</b>

(Unit: Thousand Baht)

	Separate financial statements			
	2018		2017	
	Cost/ Carrying value	Fair value	Cost/ Carrying value	Fair value
<b>Fixed deposits with financial institution</b>				
Fixed deposits within 1 year	-	-	250,000	250,000
Fixed deposits with financial institution	-	-	250,000	250,000
<b>Total short-term investments</b>	<b>-</b>	<b>-</b>	<b>250,000</b>	<b>250,000</b>

As at 31 December 2018, fixed deposits with financial institutions carried interest between 1.82 and 3.05 percent per annum (2017: 0.15 and 1.82 percent per annum).

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries  
For the year ended 31 December 2018

## 8.1 Securities held for trading

Movements of investments in securities held for trading for the year ended 31 December 2018 and 2017 are summarised below.

(Unit: Thousand Baht)

	As at 31 December 2018						
	Consolidated financial statements						
	Cost as at 31 December 2017	Purchase	Proceeds from sales of investments	Loss on sales of investments	Translation adjustment	Cost as at 31 December 2018	Fair value as at 31 December 2018
Overseas marketable equity securities							
Mutual funds	98,043	-	-	-	(693)	97,350	104,337
Investment trusts	65,362	-	-	-	(462)	64,900	73,710
Supply chain finance funds	-	820,563	-	-	(9,318)	811,245	821,706
Total	163,405	820,563	-	-	(10,473)	973,495	999,753
Unsecured subordinated notes	24,162	-	(23,380)	(260)	(522)	-	-
Total investments in securities held for trading	187,567	820,563	(23,380)	(260)	(10,995)	973,495	999,753

(Unit: Thousand Baht)

	As at 31 December 2017						
	Consolidated financial statements						
	Cost as at 31 December 2016	Purchase	Proceeds from sales of investments	Loss on sales of investments	Translation adjustment	Cost as at 31 December 2017	Fair value as at 31 December 2017
Overseas marketable equity securities							
Mutual funds	107,492	-	-	-	(9,449)	98,043	102,896
Investment trusts	71,661	-	-	-	(6,299)	65,362	74,206
Total	179,153	-	-	-	(15,748)	163,405	177,102
Unsecured subordinated notes	24,474	-	-	-	(312)	24,162	24,230
Total investments in securities held for trading	203,627	-	-	-	(16,060)	187,567	201,332

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries  
For the year ended 31 December 2018

As at 31 December 2018, the subsidiary had assessed the fair value of the above securities held for trading by referring to the value quoted by the banks which are comparable to quoted prices, the result of which was a revaluation surplus on the fair value of USD 0.8 million or equivalent to approximately Baht 26.26 million (2017: surplus of USD 0.42 million or equivalent to approximately Baht 13.77 million). The gain on change in the fair value of approximately Baht 12.49 million (2017: Baht 3.06 million) was recognised in the income statements.

## 8.2 Available-for-sale securities

Movements of investments in available-for-sale securities for the year ended 31 December 2018 and 2017 are summarised below.

	As at 31 December 2018						
	Consolidated financial statements						(Unit: Thousand Baht)
	Cost as at 31 December 2017	Purchase	Proceeds from sales/ redemption of investments	Gain (loss) on sales/ redemption of investments	Translation adjustment	Cost as at 31 December 2018	Fair value as at 31 December 2018
Overseas marketable corporate bonds	1,263,322	94,040	(215,053)	(325)	(18,543)	1,123,441	1,198,459
Local quoted bonds	32,683	-	(32,891)	66	142	-	-
Overseas quoted bonds	783,357	30,264	(132,674)	7,268	(9,423)	678,792	672,416
Total investments in available-for-sale securities	2,079,362	124,304	(380,618)	7,009	(27,824)	1,802,233	1,870,875

	As at 31 December 2017						
	Consolidated financial statements						(Unit: Thousand Baht)
	Cost as at 31 December 2016	Purchase	Proceeds from sales/ redemption of investments	Gain on sales/ redemption of investments	Translation adjustment	Cost as at 31 December 2017	Fair value as at 31 December 2017
Overseas marketable corporate bonds	1,349,300	132,398	(86,786)	11,716	(143,306)	1,263,322	1,423,490
Local quoted bonds	35,834	-	-	-	(3,151)	32,683	34,270
Overseas quoted bonds	1,064,461	-	(265,257)	5,572	(21,419)	783,357	836,171
Total investments in available-for-sale securities	2,449,595	132,398	(352,043)	17,288	(167,876)	2,079,362	2,293,931



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

As at 31 December 2018, the subsidiary had assessed the fair value of the bonds by referring to the values quoted by the five overseas banks which are comparable to quoted prices, the result of which was a revaluation surplus on the fair value of USD 2.12 million or equivalent to approximately Baht 68.64 million (2017: surplus of USD 6.57 million or equivalent to approximately Baht 214.57 million). The loss on change in the fair value of approximately Baht 145.93 million (2017: gain of approximately Baht 109.66 million) was recognised in other comprehensive income in the statements of comprehensive income.

## 9. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Age of receivable				
Trade receivables - subsidiary companies				
Not yet due	-	-	6,681	265
Past due				
Up to 3 months	-	-	14,911	628
3 - 6 months	-	-	2,075	138
6 - 12 months	-	-	-	1,304
Over 12 months	-	-	39	5,323
Total trade receivables - subsidiary companies (Note 7)	-	-	23,706	7,658
Trade receivables - unrelated parties				
Not yet due	2,869,463	3,065,095	979,957	1,010,684
Past due				
Up to 3 months	799,019	647,929	477,417	290,552
3 - 6 months	34,940	14,756	22,995	2,728
6 - 12 months	7,737	681	3,103	94
Over 12 months	1,480	9,130	94	99
Total trade receivables - unrelated parties	3,712,639	3,737,591	1,483,566	1,304,157
Less: Allowance for doubtful accounts	(21,556)	(11,159)	-	-
Total trade receivables - unrelated parties - net	3,691,083	3,726,432	1,483,566	1,304,157
Total trade receivables - net	3,691,083	3,726,432	1,507,272	1,311,815
Input tax receivables	52,878	55,970	6,344	2,947
Other receivables - related parties (Note 7)	-	76	-	-
Other receivables - unrelated parties	87,711	121,700	10,321	5,408
Total other receivables	140,589	177,746	16,665	8,355
Trade and other receivables - net	3,831,672	3,904,178	1,523,937	1,320,170

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 10. Inventories

(Unit: Thousand Baht)

	Consolidated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2018	2017	2018	2017	2018	2017
Finished goods	693,925	746,088	(40,930)	(15,467)	652,995	730,621
Work in process	747,397	450,073	(14,576)	(3,366)	732,821	446,707
Raw materials	3,882,045	2,991,451	(115,911)	(125,722)	3,766,134	2,865,729
Goods in transit	70,890	39,817	-	-	70,890	39,817
Total	5,394,257	4,227,429	(171,417)	(144,555)	5,222,840	4,082,874

(Unit: Thousand Baht)

	Separate financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2018	2017	2018	2017	2018	2017
Finished goods	443,181	448,286	(26,549)	(14,013)	416,632	434,273
Work in process	321,337	160,111	-	-	321,337	160,111
Raw materials	1,737,657	1,207,900	(62,484)	(58,066)	1,675,173	1,149,834
Goods in transit	46,136	2,694	-	-	46,136	2,694
Total	2,548,311	1,818,991	(89,033)	(72,079)	2,459,278	1,746,912

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Balance at the beginning of the year	(144,555)	(213,547)	(72,079)	(142,099)
Add: Increase during the year	(59,884)	(116,783)	(46,769)	(87,254)
Less: Write off obsolete and damaged inventories during the year	15,828	114,277	15,828	108,016
Less: Reversal during the year	16,592	69,228	13,987	49,258
Add: Translation adjustment	602	2,270	-	-
Balance at the ending of the year	(171,417)	(144,555)	(89,033)	(72,079)

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 11. Investments in subsidiary companies

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

(Unit: Thousand Baht)

Company's name	Paid up capital		Shareholding percentage		Cost		Dividend during the year	
	2018	2017	2018 Percent	2017 Percent	2018	2017	2018	2017
Hana Semiconductor (Ayutthaya) Company Limited	1,200,000	1,200,000	58	58	2,142,910	2,142,910	630,000	630,000
Hana Semiconductor (BKK) Company Limited	1,000,000	1,000,000	100	100	1,011,100	1,011,100	262,500	300,000
Omac Sales Limited	325	325	100	100	273,492	273,492	-	-
Hana Microelectronics (Cambodia) Company Limited	155,947	155,947	100	100	155,947	155,947	-	-
Hana Microelectronics International Company Limited	-	-	100	100	-	-	-	-
Hana Microelectronics Investment Company Limited	-	-	100	100	-	-	-	-
Hana Technologies Group Limited	-	-	100	100	-	-	-	-
Total investments in subsidiary companies					3,583,449	3,583,449	892,500	930,000

In July 2017, Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, has invested in 200,000 shares of Power Master Semiconductor Company Limited, a newly established company located in South Korea and principally engaged in semiconductor business. The investment of USD 0.09 million or equivalent to Baht 2.91 million, represents 20% of the investee's registered capital and 100% of the issued and paid-up capital.

## 12. Long-term fixed deposits with financial institution

As at 31 December 2018, an overseas subsidiary had long-term fixed deposits with financial institution of China Yuan 101.6 million or equivalent to Baht 480.1 million, which are portion due within one year by March and April 2019, carrying interest between 2.10 and 2.24 percent per annum (2017: China Yuan 92.8 million or equivalent to Baht 465.4 million, which are portion due within one year by March and April 2018, carrying interest between 2.10 and 4.55 percent per annum).

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 13. Other long-term investments

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	Cost/Amortised cost		Cost/Amortised cost	
	2018	2017	2018	2017
<b>Other long-term investments</b>				
Available-for-sale securities				
Local marketable equity securities	97	97	97	97
	97	97	97	97
Held-to-maturity debt securities				
Overseas debt securities	64,900	65,362	-	-
	64,900	65,362	-	-
Other investments				
Preferred shares issued by an overseas company	78,080	-	-	-
Overseas equity securities	9,735	9,804	-	-
Total	87,815	9,804	-	-
Less: Allowance for impairment loss	(9,735)	(9,804)	-	-
Translation adjustment	3,044	-	-	-
	81,124	-	-	-
<b>Total other long-term investments - net</b>	<b>146,121</b>	<b>65,459</b>	<b>97</b>	<b>97</b>

During the third quarter of 2017, Hana Microelectronics International Company Limited, an overseas subsidiary company, has invested in a 3-year fund linked capital return note issued by an overseas bank amounting to USD 2 million or equivalent to Baht 64.90 million, with maturity date on 14 July 2020. The parties mutually agreed that the subsidiary will receive the principal amount of USD 2 million at the maturity date and gain from rise of fund price, between the reference price at initial valuation date and the final closing index of the fund upon maturity date at the agreed rate in a case that the closing index of the fund upon maturity date is higher than the initial reference price. This investment is classified as investment in held-to-maturity debt securities.

During the first quarter of 2018, Hana Microelectronics Investment Company Limited, an overseas subsidiary company, has invested in 1,250,000 preferred shares of MAPS, Inc., a company incorporated in South Korea and principally engaged in semiconductor business, amounting to USD 2.5 million or equivalent to Baht 78.08 million, representing 8.7% of issued and paid-up capital of that company.

## 14. Investment property

The net book value of investment property, representing land, as at 31 December 2018 and 2017 is presented below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Cost	72,304	72,304	72,304	72,304
Net book value	72,304	72,304	72,304	72,304

As at 31 December 2018, the fair value of the investment property based on market price amounted to approximately Baht 96 million (2017: Baht 96 million).



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries  
For the year ended 31 December 2018

## 15. Property, plant and equipment

(Unit: Thousand Baht)

	Consolidated financial statements								
	Land	Buildings	Leasehold improvement	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation	Total
Cost									
As at 1 January 2017	356,248	3,620,987	106,938	858,878	12,508,779	589,634	54,869	160,090	18,256,423
Additions	-	4,990	14,998	19,967	485,370	32,201	6,760	547,149	1,111,435
Disposals	-	(17)	-	-	(278,786)	(10,412)	(7,272)	-	(296,487)
Transfer in (out)	-	2,832	-	39,075	367,889	6,729	-	(416,525)	
Translation adjustment	-	(54,455)	(5,073)	-	(102,394)	(3,252)	(446)	(16,498)	(182,118)
As at 31 December 2017	356,248	3,574,337	116,863	917,920	12,980,858	614,900	53,911	274,216	18,889,253
Additions	-	65,839	14,262	16,865	1,515,514	30,963	8,223	680,967	2,332,633
Disposals	-	(7,975)	(1,451)	(3,742)	(341,049)	(10,244)	(1,450)	-	(365,911)
Transfer in (out)	-	50,927	-	61,638	435,874	32,789	-	(581,228)	-
Translation adjustment	-	(41,592)	(5,369)	-	(150,928)	(3,337)	(719)	(2,803)	(204,748)
As at 31 December 2018	356,248	3,641,536	124,305	992,681	14,440,269	665,071	59,965	371,152	20,651,227
Accumulated depreciation									
As at 1 January 2017	-	1,402,186	78,240	635,364	9,376,994	506,910	31,791	-	12,031,485
Depreciation for the year	-	175,565	8,473	49,468	791,277	40,012	7,237	-	1,072,032
Accumulated depreciation for disposed assets	-	(17)	-	-	(252,099)	(9,264)	(6,680)	-	(268,060)
Translation adjustment	-	(12,127)	(4,177)	-	(67,424)	(2,706)	(210)	-	(86,644)
As at 31 December 2017	-	1,565,607	82,536	684,832	9,848,748	534,952	32,138	-	12,748,813
Depreciation for the year	-	161,303	14,553	49,793	822,366	42,198	7,235	-	1,097,448
Accumulated depreciation for disposed assets	-	(4,386)	(1,451)	(2,868)	(302,524)	(9,553)	(1,450)	-	(322,232)
Translation adjustment	-	(21,029)	(3,563)	-	(98,538)	(2,634)	(495)	-	(126,259)
As at 31 December 2018	-	1,701,495	92,075	731,757	10,270,052	564,963	37,428	-	13,397,770
Allowance for impairment loss									
As at 1 January 2017	-	-	-	763	78,669	17	-	-	79,449
Decrease during the year	-	-	-	-	(411)	-	-	-	(411)
Translation adjustment	-	-	-	-	(4,470)	-	-	-	(4,470)
As at 31 December 2017	-	-	-	763	73,788	17	-	-	74,568
Decrease during the year	-	-	-	-	(21)	-	-	-	(21)
Translation adjustment	-	-	-	-	(328)	-	-	-	(328)
As at 31 December 2018	-	-	-	763	73,439	17	-	-	74,219
Net book value									
As at 31 December 2017	356,248	2,008,730	34,327	232,325	3,058,322	79,931	21,773	274,216	6,065,872
As at 31 December 2018	356,248	1,940,041	32,230	260,161	4,096,778	100,091	22,537	371,152	7,179,238

### Depreciation for the year

2017 (Baht 877 million included in manufacturing cost, and the balance in administrative expenses)

2018 (Baht 898 million included in manufacturing cost, and the balance in administrative expenses)

1,072,032  
1,097,448

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Thousand Baht)

	Separate financial statements							
	Land	Buildings	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation	Total
Cost								
As at 1 January 2017	249,865	1,815,390	369,616	3,008,303	191,027	21,670	40,692	5,696,563
Additions	-	3,540	19,967	23,074	10,350	-	399,937	456,868
Disposals	-	(16)	-	(55,573)	(265)	(3,600)	-	(59,454)
Transfer in (out)	-	-	20,965	273,125	10	-	(294,100)	-
As at 31 December 2017	249,865	1,818,914	410,548	3,248,929	201,122	18,070	146,529	6,093,977
Additions	-	53	15,726	28,748	10,151	-	333,303	387,981
Disposals	-	-	-	(95,741)	(1,827)	-	-	(97,568)
Transfer in (out)	-	-	3,211	266,196	10,315	-	(279,722)	-
As at 31 December 2018	249,865	1,818,967	429,485	3,448,132	219,761	18,070	200,110	6,384,390
Accumulated depreciation								
As at 1 January 2017	-	624,671	200,834	2,158,867	155,574	13,322	-	3,153,268
Depreciation for the year	-	85,814	31,307	223,740	14,655	2,140	-	357,656
Accumulated depreciation for disposed assets	-	(16)	-	(51,188)	(256)	(3,008)	-	(54,468)
As at 31 December 2017	-	710,469	232,141	2,331,419	169,973	12,454	-	3,456,456
Depreciation for the year	-	85,833	30,130	246,764	16,067	1,820	-	380,614
Accumulated depreciation for disposed assets	-	-	-	(93,334)	(1,775)	-	-	(95,109)
As at 31 December 2018	-	796,302	262,271	2,484,849	184,265	14,274	-	3,741,961
Allowance for impairment loss								
As at 1 January 2017	-	-	613	4,555	-	-	-	5,168
Decrease during the year	-	-	-	(210)	-	-	-	(210)
As at 31 December 2017	-	-	613	4,345	-	-	-	4,958
Decrease during the year	-	-	-	(21)	-	-	-	(21)
As at 31 December 2018	-	-	613	4,324	-	-	-	4,937
Net book value								
As at 31 December 2017	249,865	1,108,445	177,794	913,165	31,149	5,616	146,529	2,632,563
As at 31 December 2018	249,865	1,022,665	166,601	958,959	35,496	3,796	200,110	2,637,492

## Depreciation for the year

2017 (Baht 223 million included in manufacturing cost, and the balance in administrative expenses)

2018 (Baht 246 million included in manufacturing cost, and the balance in administrative expenses)

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

As at 31 December 2018, certain plant and equipment items have been fully depreciated but are still in use. The gross carrying amount, before deducting accumulated depreciation and allowance for impairment loss, of those assets amounted to approximately Baht 10,064 million (2017: Baht 8,990 million) and for the Company amounted to approximately Baht 2,080 million (2017: Baht 1,977 million).

## 16. Land leasehold rights

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

(Unit: Thousand Baht)

	Consolidated financial statements	
	2018	2017
Cost	153,418	153,418
Less: Accumulated amortisation	(14,809)	(11,991)
Translation adjustment	(11,481)	(10,545)
Net book value	127,128	130,882
Amortisation for the year	2,818	2,946

## 17. Intangible assets

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

(Unit: Thousand Baht)

	Consolidated financial statements	Separate financial statements
<b>Cost</b>		
As at 1 January 2017	84,611	34,345
Additions	18,475	10,930
Translation adjustment	(533)	-
As at 31 December 2017	102,553	45,275
Additions	12,575	7,126
Translation adjustment	(1,647)	-
As at 31 December 2018	113,481	52,401
<b>Accumulated amortisation</b>		
As at 1 January 2017	44,496	9,367
Amortisation for the year	8,495	3,688
Translation adjustment	(380)	-
As at 31 December 2017	52,611	13,055
Amortisation for the year	10,364	4,680
Translation adjustment	(1,002)	-
As at 31 December 2018	61,973	17,735
<b>Net book value</b>		
As at 31 December 2017	49,942	32,220
As at 31 December 2018	51,508	34,666
<b>Amortisation for the year</b>		
2017	8,495	3,688
2018	10,364	4,680

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 18. Trade and other payables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Trade payables - subsidiary companies (Note 7)	-	-	329,110	241,780
Trade payables - unrelated parties	2,466,170	2,242,642	928,615	733,413
Advance received from customers	159,149	175,969	16,165	16,956
Other payables for purchase of machinery	496,279	145,477	27,831	59,571
Accrued expenses	299,811	356,877	31,178	28,292
Total trade and other payables	3,421,409	2,920,965	1,332,899	1,080,012

## 19. Short-term provisions

(Unit: Thousand Baht)

	Consolidated financial statements	
	Provision for product warranty	Total
As at 1 January 2017	358,307	358,307
Translation adjustment	(31,498)	(31,498)
As at 31 December 2017	326,809	326,809
Translation adjustment	(2,311)	(2,311)
As at 31 December 2018	324,498	324,498

## 20. Provision for long-term employee benefits

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Provision for long-term employee benefits at beginning of year	327,302	454,880	128,110	239,914
Included in profit or loss:				
Current service cost	24,203	21,759	8,991	8,478
Interest cost	8,887	14,297	3,326	7,375
Included in other comprehensive income:				
Actuarial (gain) loss arising from				
Demographic assumptions changes	(260,319)	(204,340)	(266,632)	(162,696)
Financial assumptions changes	(40,143)	34,815	(42,578)	21,098
Experience adjustments	319,515	15,612	316,691	18,266
Benefits paid during the year	(7,855)	(9,721)	(5,203)	(4,325)
Provision for long-term employee benefits at end of year	371,590	327,302	142,705	128,110



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Cost of sales	5,430	6,176	2,765	3,127
Selling and administrative expenses	27,660	29,880	9,552	12,726
Total expenses recognised in the income statements	33,090	36,056	12,317	15,853

The Company and its subsidiary expect to pay Baht 27.1 million of long-term employee benefits during the next year (the Company only: Baht 19.8 million) (2017: Baht 11.9 million, the Company only: Baht 9.1 million).

As at 31 December 2018, the weighted average duration of the liabilities for long-term employee benefit is 13 years (the Company only: 14 years) (2017: 14 years, the Company only: 14 years).

Significant actuarial assumptions are summarised below:

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
	(% per annum)	(% per annum)	(% per annum)	(% per annum)
Discount rate	2.8	2.9	2.8	2.9
Future salary increase rate (depending on age)	5.0	5.0	5.0	5.0
Staff turnover rate	8.3 - 40.1	9.3 - 38.8	8.3 - 28.6	9.3 - 30.4

The results of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at 31 December 2018 and 2017 are summarised below.

(Unit: Million Baht)

	31 December 2018			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(43)	52	(17)	21
Salary increase rate	51	(43)	20	(17)
	Increase 5%	Decrease 5%	Increase 5%	Decrease 5%
Turnover rate	(99)	157	(61)	110

(Unit: Million Baht)

	31 December 2017			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(40)	48	(16)	19
Salary increase rate	47	(40)	19	(16)
	Increase 5%	Decrease 5%	Increase 5%	Decrease 5%
Turnover rate	(79)	116	(48)	78

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

On 13 December 2018, The National Legislative Assembly passed a resolution approving the draft of a new Labour Protection Act, which is in the process being published in the Royal Gazette. The new Labour Protection Act stipulates additional legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more. Such employees are entitled to receive not less than 400 days' compensation at the latest wage rate. This change is considered a post-employment benefits plan amendment and the Company and its subsidiaries have additional liabilities for long-term employee benefits of Baht 66.4 million (the Company only: Baht 25.8 million). The Company and its subsidiaries will reflect the effect of the change by recognising past services costs as expenses in the income statement of the period in which the law is effective.

## 21. Statutory reserve

Pursuant to Section 116 of the Public Limited Companies Act B.E. 2535, the Company is required to set aside to a statutory reserve at least 5 percent of its net income after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of the registered capital. The statutory reserve is not available for dividend distribution.

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

## 22. Expenses by nature

Significant expenses classified by nature are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Raw materials and consumables used	13,927,293	13,237,786	6,035,149	5,297,761
Changes in inventories of finished goods and work in process	(208,488)	244,822	(143,585)	(115,951)
Salaries and wages and other employee benefits	3,837,845	3,618,816	1,247,458	1,367,781
Management benefit expenses	99,866	89,773	15,501	14,272
Depreciation and amortisation expenses	1,110,630	1,083,473	385,294	361,344
Loss on exchange	-	-	-	8,939

## 23. Income tax

Income tax expenses for the years ended 31 December 2018 and 2017 are made up as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
<b>Current income tax:</b>				
Current income tax charge	129,547	146,423	6,776	7,592
Adjustment in respect of income tax of previous year	(2,125)	(283)	(127)	(986)
<b>Deferred tax:</b>				
Relating to origination and reversal of temporary differences	13,115	(14,166)	(613)	2,777
<b>Income tax expense reported in the income statements</b>	<b>140,537</b>	<b>131,974</b>	<b>6,036</b>	<b>9,383</b>

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2018 and 2017 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Deferred tax relating to actuarial gain (loss)	(61)	785	(61)	785
Deferred tax relating to exchange differences on translation of financial statements in foreign currency	585	214	-	-
	524	999	(61)	785

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Accounting profit before tax	2,515,759	3,019,705	1,887,863	1,883,119
Applicable tax rate	0 - 30%	0 - 36%	20%	20%
Accounting profit before tax multiplied by income tax rate	463,495	508,123	377,573	376,624
Adjustment in respect of income tax of previous year	(2,125)	(283)	(127)	(986)
Effects of:				
Promotional privileges (Note 25)	(339,289)	(318,413)	(195,147)	(176,237)
Dividend income not subject to tax	(13)	(11)	(178,513)	(186,011)
Income not subject to tax	(2,730)	(1)	-	-
Unused temporary differences and tax losses	25,915	1,652	-	-
Utilised tax losses carry forward	-	(52,304)	-	-
Non-deductible expenses	979	762	529	-
Additional expense deductions allowed	(1,796)	(8,620)	(869)	-
Others	(3,899)	1,069	2,590	(4,007)
Total	(320,833)	(375,866)	(371,410)	(366,255)
Income tax expenses reported in the income statements	140,537	131,974	6,036	9,383

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

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

(Unit: Thousand Baht)

	Statements of financial position as at 31 December			
	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
<b>Deferred tax assets</b>				
Allowance for doubtful debt	2,116	-	-	-
Allowance for diminution in value of inventories	4,983	7,322	729	458
Allowance for assets impairment	2,509	32	40	32
Provision for long-term employee benefits	1,169	815	1,169	815
Provision for vacation	368	249	128	86
Accrued expenses	17,615	24,182	-	-
<b>Total</b>	<b>28,760</b>	<b>32,600</b>	<b>2,066</b>	<b>1,391</b>
<b>Deferred tax liabilities</b>				
Accumulated depreciation - plant and equipment	(15,689)	(5,890)	-	-
<b>Total</b>	<b>(15,689)</b>	<b>(5,890)</b>	<b>-</b>	<b>-</b>
<b>Deferred tax assets - net</b>	<b>13,071</b>	<b>26,710</b>	<b>2,066</b>	<b>1,391</b>

As at 31 December 2018, the subsidiaries had deductible temporary differences and unused tax losses totaling Baht 87 million (2017: Baht 180 million), on which deferred tax assets have not been recognised as the subsidiaries believe future taxable profits may not be sufficient to allow utilisation of the temporary differences and unused tax losses. The unused tax losses will expire by the year 2023.

## 24. Earnings per share

Basic earnings per share is calculated by dividing profit for the year attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the year.



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries  
For the year ended 31 December 2018

## 25. Promotional privileges

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

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

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries  
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Particulars	Subsidiary					
	Hana Semiconductor (Ayutthaya) Company Limited					
1. Certificate No.	1034(2)/2552	1458(1)/2553	2371(1)/2553	2687(1)/2556	59-1374-1-00-1-0	60-0686-1-00-1-0
2. Promotional privileges for	Production of Wafer Saw, Integrated Circuit (IC) and Integrated Circuit Tested (IC Tested)	Production of Integrated Circuit (IC)	Production of Integrated Circuit (IC)	Production of Semiconductor	Production of Integrated Circuit (IC)	Production of Integrated Circuit (IC)
3. The significant tax privileges are						
3.1 Exemption from corporate income tax on net profit from promoted operations and exemption from income tax on dividends paid from the promoted operations which are tax exempted throughout the period in which the corporate income tax is exempted	8 years (Until 1 January 2021)	8 years (Until 9 May 2018)	8 years (Until 27 November 2022)	8 years (Until 2 January 2026)	6 years	6 years
3.2 50 % reduction of the normal corporate income tax rate for net income derived after the expiry date in 3.1	5 years	5 years	5 years	5 years	-	-
3.3 Exemption from import duty on machinery as approved by the Board.	Granted	Granted	Granted	Granted	Granted	Granted
3.4 2 times deduction of transportation, electricity and water expenses from the first earning operating income	10 years	10 years	10 years	10 years	-	-
4. Date of first earning operating income	2 January 2013	10 May 2010	28 November 2014	3 January 2018	Has not yet started utilising the privileges	Has not yet started utilising the privileges

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

The Company's and its subsidiaries' operating revenues for the years ended 31 December 2018 and 2017, divided between promoted and non-promoted operations, are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements					
	Promoted operations		Non-promoted operations		Total	
	2018	2017	2018	2017	2018	2017
Sales						
Domestic sales	224,913	193,000	1,280	847	226,193	193,847
Export sales	16,187,853	15,354,818	5,850,214	6,002,196	22,038,067	21,357,014
Total sales	16,412,766	15,547,818	5,851,494	6,003,043	22,264,260	21,550,861

(Unit: Thousand Baht)

	Separate financial statements					
	Promoted operations		Non-promoted operations		Total	
	2018	2017	2018	2017	2018	2017
Sales						
Domestic sales	54,143	31,835	1,694	847	55,837	32,682
Export sales	8,913,525	8,165,694	1,273	785	8,914,798	8,166,479
Total sales	8,967,668	8,197,529	2,967	1,632	8,970,635	8,199,161

## 26. Operating segments

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

For management purposes, the Company and its subsidiaries are organised into business units based on their products and have two reportable segments as follows:

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

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

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Segment performance is measured based on operating profit or loss and total assets and on a basis consistent with that used to measure operating profit or loss and total assets in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

The following tables present revenue, profit and total assets information regarding the Company's and its subsidiaries' operating segments for the years ended 31 December 2018 and 2017.

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

(Unit: Million Baht)

Year ended 31 December 2018	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Other	Total reportable segments	Eliminations	Total
Revenue from external customers	12,575	8,649	1,040	22,264	-	22,264
Inter-segment revenue	3,630	784	1,449	5,863	(5,863)	-
Total revenue	16,205	9,433	2,489	28,127	(5,863)	22,264
<b>Segment profit</b>	1,794	994	412	3,200	5	3,205
Interest income						196
Other income						375
Dividend income						2
Gain on exchange						15
Selling and distribution expenses						(158)
Administrative expenses						(1,112)
Finance cost						(7)
Income tax expenses						(141)
<b>Profit for the year</b>						2,375
<b>Segment total assets</b>						
Additions to property, plant and equipment	572	1,474	287	2,333	-	2,333

(Unit: Million Baht)

Year ended 31 December 2017	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Other	Total reportable segments	Eliminations	Total
Revenue from external customers	11,741	8,653	1,157	21,551	-	21,551
Inter-segment revenue	3,694	917	1,379	5,990	(5,990)	-
Total revenue	15,435	9,570	2,536	27,541	(5,990)	21,551
<b>Segment profit</b>	1,737	1,058	415	3,210	4	3,214
Interest income						206
Other income						296
Gain on exchange						531
Selling and distribution expenses						(156)
Administrative expenses						(1,064)
Finance cost						(7)
Income tax expenses						(132)
<b>Profit for the year</b>						2,888
<b>Segment total assets</b>						
Additions to property, plant and equipment	577	556	6	1,139	-	1,139

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## Geographic information

Revenue from external customers is based on locations of the customers.

(Unit: Thousand Baht)

	2018	2017
Revenue from external customers		
Malaysia	5,398,804	7,043,089
China	2,774,380	3,266,205
United States of America	2,611,376	2,907,632
Taiwan	2,310,186	888,483
Hong Kong	2,092,175	1,751,694
Others	7,077,339	5,693,758
Total	22,264,260	21,550,861
Non-current assets (other than deferred tax assets)		
Thailand	5,497,580	4,519,223
China	1,200,081	1,324,995
Cambodia	446,146	459,413
Hong Kong	131,220	135,595
Korea	177,585	1,573
Others	146,234	42,131
Total	7,598,846	6,482,930

## Major customers

For the year 2018, the Company and its subsidiaries have revenue from 5 major customers in amount of Baht 10,279 million, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment, (2017: Baht 10,625 million derived from 5 major customers, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment).

## 27. Provident fund

The Company, the subsidiaries and their employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. Both employees and the Company or the subsidiaries contribute to the fund monthly at the rates of 3.0 - 7.5 percent of basic salary. The fund, which is managed by SCB Asset Management Company Limited, will be paid to employees upon terminating in accordance with the fund rules. The contributions for the year 2018 amounting to approximately Baht 79 million (2017: Baht 73 million) and for the Company amounting to approximately Baht 41 million (2017: Baht 39 million) were recognised as expenses.



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 28. Dividend paid

During the years 2018 and 2017, the Company and its subsidiaries had dividend payments as follows:

	Approved by	Total dividends	Dividend per share
		(Million Baht)	(Baht)
<u>The Company</u>			
<u>For the year 2018</u>			
Dividends on 2017 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 30 April 2018 Board of Directors' Meeting on 10 October 2018	805	1.00
Interim dividends in respect of the income for the period from 1 January 2018 to 30 June 2018		805	1.00
Total for the year 2018		1,610	2.00
<u>For the year 2017</u>			
Dividends on 2016 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 28 April 2017 Board of Directors' Meeting on 5 October 2017	805	1.00
Interim dividends in respect of the income for the period from 1 January 2017 to 30 June 2017		805	1.00
Total for the year 2017		1,610	2.00
<u>Subsidiary companies</u>			
<b>Hana Semiconductor (Ayutthaya) Company Limited</b>			
<u>For the year 2018</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 18 April 2018 Board of Directors' Meeting on 8 October 2018	300	2.50
Interim dividends in respect of the income for the period from 1 January 2018 to 31 August 2018 and unappropriated retained earnings		150	1.25
Total for the year 2018		450	3.75

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)
<u>Subsidiary companies</u>			
<b>Hana Semiconductor (Ayutthaya) Company Limited</b>			
<u>For the year 2017</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 17 April 2017	720	6.00
Interim dividends in respect of the income for the period from 1 January 2017 to 31 August 2017 and unappropriated retained earnings	Board of Directors' Meeting on 4 October 2017	360	3.00
Total for the year 2017		1,080	9.00
<b>Hana Semiconductor (BKK) Company Limited</b>			
<u>For the year 2018</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 27 April 2018	450	4.50
Interim dividends in respect of the income for the period from 1 January 2018 to 31 October 2018 and unappropriated retained earnings	Board of Directors' Meeting on 24 October 2018	180	1.80
Total for the year 2018		630	6.30
<u>For the year 2017</u>			
Interim dividends in respect of the income for the period from 1 January 2017 to 31 August 2017 and unappropriated retained earnings	Board of Directors' Meeting on 4 October 2017	300	3.00
Total for the year 2017		300	3.00

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 29. Commitments and contingent liabilities

### 29.1 Capital commitments

As at 31 December 2018, the Company and its subsidiaries had capital commitments relating to acquisitions of machinery totaling USD 6.8 million or equivalent to Baht 230 million (2017: USD 4.8 million or equivalent to Baht 174 million) and the Company only of approximately Baht 97 million (2017: Baht 91 million).

### 29.2 Operating lease commitments

The Company and its subsidiaries have entered into the lease agreements in respect of the lease of equipment, lease of land and the lease of building, factory and services. The terms of the agreements are generally between 1 and 3 years.

Future minimum lease payments required under these operating leases contracts were as follows.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
Payable:				
In up to 1 year	44.4	45.3	27.3	27.2
In over 1 year and up to 5 years	23.8	17.8	0.7	3.6

### 29.3 Marketing supportive service agreement

Since the year 2001, the Company and three subsidiary companies entered into marketing supportive service agreement with an overseas subsidiary company. Under that agreement, the Company and the three subsidiary companies have to pay service fees to that subsidiary company at the rates stipulated in the agreement.

### 29.4 Sale representative agreements

Since the year 2015, an overseas subsidiary entered into sale representative agreement with an unrelated company with the annual service fees of approximately USD 0.6 million.

### 29.5 Guarantees

As at 31 December 2018, there were outstanding bank guarantees of approximately Baht 27 million (2017: Baht 56 million) and the Company only of approximately Baht 27 million (2017: Baht 26 million) issued by the banks on behalf of the Company and its subsidiaries in respect of certain performance bonds as required in the normal course of business of the Company and the subsidiaries to guarantee electricity uses, among others.

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 30. Fair value hierarchy

As at 31 December 2018 and 2017, the Company and its subsidiaries had the assets that were measured at fair value or for which fair value was disclosed using different levels of inputs as follows:

(Unit: Thousand Baht)

	31 December 2018		
	Consolidated Financial Statements		
	Level 1	Level 2	Total
<b>Assets measured at fair value</b>			
Held for trade investments			
Equity instruments	999,753	-	999,753
Available-for-sale investments			
Marketable corporate bonds	1,198,459	-	1,198,459
Quoted bonds	672,416	-	672,416
Derivatives			
Foreign currency forward contracts	-	50,139	50,139
<b>Assets for which fair value was disclosed</b>			
Investment property	-	96,405	96,405

(Unit: Thousand Baht)

	31 December 2017		
	Consolidated Financial Statements		
	Level 1	Level 2	Total
<b>Assets measured at fair value</b>			
Held for trade investments			
Equity instruments	177,102	-	177,102
Unsecured debt instruments	24,230	-	24,230
Available-for-sale investments			
Marketable corporate bonds	1,423,490	-	1,423,490
Quoted bonds	870,441	-	870,441
Derivatives			
Foreign currency forward contracts	-	89,424	89,424
<b>Assets for which fair value was disclosed</b>			
Investment property	-	96,405	96,405

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

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## 31. Financial instruments

### 31.1 Financial risk management

The Company's and its subsidiaries' financial instruments, as defined under Thai Accounting Standard No. 107 "Financial Instruments: Disclosure and Presentations", principally comprise cash and cash equivalents, trade and other receivables, investments and trade and other payables. The financial risks associated with these financial instruments and how they are managed is described below.

#### *Credit risk*

The Company and its subsidiaries are exposed to credit risk primarily with respect to trade and other receivables. 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. The maximum exposure to credit risk is limited to the carrying amounts of receivables as stated in the statement of financial position.

#### *Interest rate risk*

The Company's and its subsidiaries' exposure to interest rate risk relates primarily to their cash at financial institutions and short-term investments. Most of their financial assets and liabilities bear floating interest rates, or fixed interest rates which are close to the market rate.

As at 31 December 2018 and 2017, significant financial assets and liabilities classified by type of interest rates are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity dates, or the re-pricing date if this occurs before the maturity date.

	Consolidated financial statements as at 31 December 2018					
	Fixed interest rate		Floating interest rate	Non-interest bearing	Total	Effective interest rate
	Within 1 year	1 - 5 years				
	(Million Baht)					(% p.a.)
Financial assets						
Cash and cash equivalents	1,964	-	2,044	73	4,081	0.001 - 3.50
Short-term investments	3,985	-	-	-	3,985	1.82 - 9.75
Trade and other receivables	-	-	-	3,832	3,832	-
Long-term fixed deposits with financial institution	-	480	-	-	480	2.10 - 2.24
Other long-term investments	-	-	-	146	146	-
	5,949	480	2,044	4,051	12,524	
Financial liabilities						
Trade and other payables	-	-	-	3,421	3,421	-
	-	-	-	3,421	3,421	



# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

	Consolidated financial statements as at 31 December 2017					
	Fixed interest rate		Floating interest rate	Non-interest bearing	Total	Effective interest rate
	Within 1 year	1 - 5 years				
	(Million Baht)					(% p.a.)
Financial assets						
Cash and cash equivalents	1,381	-	2,938	438	4,757	0.001 - 2.000
Short-term investments	4,317	-	24	177	4,518	0.15 - 9.75
Trade and other receivables	-	-	-	3,904	3,904	-
Long-term fixed deposits with financial institution	-	465	-	-	465	2.10 - 4.55
Other long-term investments	-	-	-	65	65	-
	5,698	465	2,962	4,584	13,709	
Financial liabilities						
Trade and other payables	-	-	-	2,921	2,921	-
	-	-	-	2,921	2,921	

	Separate financial statements as at 31 December 2018				Effective interest rate (% p.a.)
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	
	(Million Baht)				
<b>Financial assets</b>					
Cash and cash equivalents	-	237	1	238	0.05 - 0.375
Trade and other receivables	-	-	1,524	1,524	-
	-	237	1,525	1,762	
<b>Financial liabilities</b>					
Trade and other payables	-	-	1,333	1,333	-
	-	-	1,333	1,333	

	Separate financial statements as at 31 December 2017				Effective interest rate (% p.a.)
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	
	(Million Baht)				
<b>Financial assets</b>					
Cash and cash equivalents	-	400	2	402	0.05 - 0.375
Short-term investments	250	-	-	250	1.20
Trade and other receivables	-	-	1,320	1,320	-
	250	400	1,322	1,972	
<b>Financial liabilities</b>					
Trade and other payables	-	-	1,080	1,080	-
	-	-	1,080	1,080	

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

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## Foreign currency risk

The Company's and its subsidiaries' exposure to foreign currency risk arises mainly from trading transactions that are denominated in foreign currencies. The Company and its subsidiaries seek to reduce this risk by entering into forward exchange contracts when they consider appropriate. Generally, the forward contracts will mature within one year.

The balances of financial assets and liabilities denominated in foreign currencies as at 31 December 2018 and 2017 are summarised below.

Foreign currency	Financial assets as at 31 December		Financial liabilities as at 31 December		Average exchange rate as at 31 December	
	2018	2017	2018	2017	2018	2017
	(Million)	(Million)	(Million)	(Million)	(Baht per foreign currency unit)	
US Dollar	240	229	69	51	32.4498	32.6809
China Yuan	232	319	110	101	4.7237	5.0145
South Korean Won	196	43	9	-	0.0290	0.0306
Japan Yen	54	143	16	121	0.2931	0.2898
Indian Rupee	40	40	-	-	0.4647	0.5104
Hong Kong Dollar	10	12	-	1	4.1416	4.1803
Singapore Dollar	2	2	-	1	23.6943	24.4503
Brazilian Real	2	2	-	-	8.5200	9.7400
Macau Pataca	1	1	-	-	4.0164	3.9891
Euro	-	4	-	-	37.1252	39.0273

As at 31 December 2018 and 2017, the two overseas subsidiary companies had outstanding forward exchange contracts, of which details are presented below.

As at 31 December 2018		
Sold amount	Contractual maturity date	Contractual exchange rate for amount sold
(Million USD)		(Baht per USD)
120	15 January 2019 - 25 February 2019	32.700 - 33.210

As at 31 December 2017		
Sold amount	Contractual maturity date	Contractual exchange rate for amount sold
(Million USD)		(Baht per USD)
140	17 January 2018 - 23 August 2018	32.370 - 33.930

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

## 31.2 Fair value of financial instruments

The estimated fair value of financial instruments, in comparison with the related amount carried in the statement of financial position, is as follows:

(Unit: Million Baht)

	Consolidated financial statements			
	As at 31 December 2018		As at 31 December 2017	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets</b>				
Cash and cash equivalents	4,081	4,081	4,757	4,757
Short-term investments	3,890	3,985	4,289	4,518
Current portion of long-term fixed deposits				
with financial institution	480	480	465	465
Trade and other receivables	3,832	3,832	3,904	3,904
Other long-term investments	146	140	65	62
<b>Financial liabilities</b>				
Trade and other payables	3,421	3,421	2,921	2,921

(Unit: Million Baht)

	Separate financial statements			
	As at 31 December 2018		As at 31 December 2017	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets</b>				
Cash and cash equivalents	238	238	402	402
Short-term investments	-	-	250	250
Trade and other receivables	1,524	1,524	1,320	1,320
<b>Financial liabilities</b>				
Trade and other payables	1,333	1,333	1,080	1,080

The estimated fair value of the derivatives is as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	As at	As at
	31 December 2018	31 December 2017
	Fair value	Fair value
	gain	gain
<b>Derivatives</b>		
Forward exchange contracts	50.1	89.4

# Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries

For the year ended 31 December 2018

The methods and assumptions used by the Company and its subsidiaries in estimating the fair value of financial instruments are as follows:

- a) For financial assets and liabilities which have short-term maturity, including cash and cash equivalents, accounts receivable and accounts payable, their carrying amounts in the statement of financial position approximate their fair value.
- b) For debts and equity securities, their fair value is generally derived from quoted market prices, or based on generally accepted pricing models when no market price is available.
- c) For fixed deposits with financial institution carrying interest approximate to the market rate, their carrying amounts in the statement of financial position approximate their fair value.
- d) For derivatives, their fair value has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, yield curves of the respective currencies and interest rate yield curves. The subsidiaries had considered to counterparty credit risk when determining the fair value of derivatives

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

## 32. Capital management

The primary objective of the Company's capital management is to ensure that it has appropriate capital structure in order to support its business and maximise shareholder value.

The Company manages its capital position by reference to its debt-to-equity ratio. As at 31 December 2018, the Group's debt-to-equity ratio was 0.20:1 (2017: 0.18:1) and the Company's was 0.17:1 (2017: 0.14:1).

## 33. Event after the reporting period

On 28 February 2019, the meeting of the Board of Directors of the Company No. 1/2019 passed the resolution approving the final dividend payment for the year 2018 to the Company's shareholders at Baht 1 per share.

On 9 November 2018, the Company paid the interim dividend from the net profit for the first six-month period of 2018 to the Company's shareholders at Baht 1 per share or a total of approximately Baht 805 million following the resolution of the Board of Directors' Meeting of the Company No. 5/2018 on 10 October 2018.

Therefore, the total dividend payment for the year ended 31 December 2018 will be Baht 2 per share. The Company will propose to the Annual General Meeting of Shareholders for acknowledgement of interim dividend payment and approval of the final dividend payment.

## 34. Approval of financial statements

These financial statements were authorised for issue by the Company's Board of Directors on 28 February 2019.





**Microelectronics Public Company Limited**

**บริษัท ฮานา ไมโครอิเล็กทรอนิกส์ จำกัด (มหาชน)**

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