



HANA

Microelectronics Public Company Limited

บริษัท ฮานา ไมโครอิเล็กทรอนิกส์ จำกัด (มหาชน)

56-1 ONE REPORT 2021

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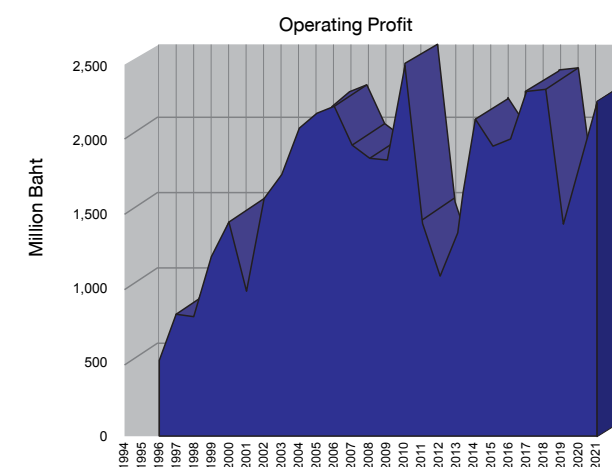
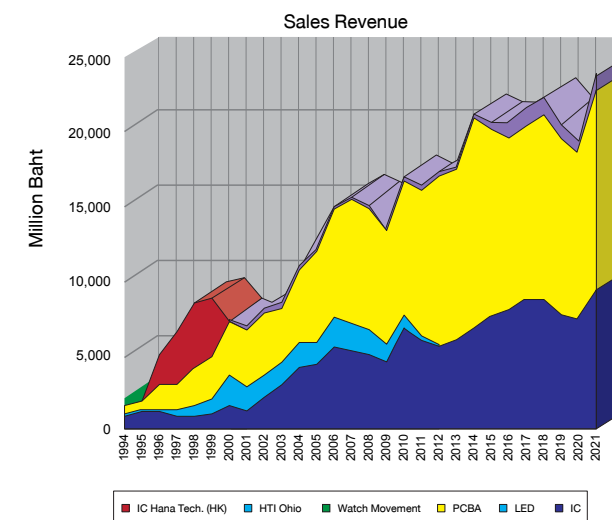
The Group Financial Highlights

(Unit : Million Baht)

	2021	2020	2019	2021/2020 % change
Total Revenue	24,137	19,808	21,250	22%
Sales Revenue	23,780	19,283	20,384	23%
Gross Profit	3,287	2,548	2,191	29%
Earnings From Operations	2,219	1,725	1,408	29%
Net Profit before Non Recurring Items	2,274	1,798	1,470	27%
Net Profit (Loss) for the year	1,545	1,908	1,805	-19%
Recurring EBITDA*	3,520	2,900	2,546	21%
Total Assets	27,853	25,180	24,426	11%
Total Liabilities	4,795	3,567	3,881	34%
Shareholders Equity	23,058	21,614	20,546	7%
Net (Cash**) Debt / Equity	(0.05)	(0.28)	(0.23)	
Net Profit (after tax) % Sales	6%	10%	9%	-40%
Recurring EBITDA Margin	15%	15%	12%	-2%
Return on Equity	7%	9%	9%	-24%
Dividend per share (from the profits of)	2.00	1.40	1.30	43%
Payout ratio	104%	59%	58%	76%
EPS before Non Recurring Items	2.83	2.23	1.83	27%
EPS after Non Recurring Items	1.92	2.37	2.24	-19%
Book Value per share	28.65	26.85	25.53	7%
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



Chairman's Statement



Dear Shareholder,

After the initial economic disruptions wrought by Covid-19 during the year 2020, it became clear as we entered 2021 there would be winners and losers. Fortunately, the electronics industry emerged as a primary beneficiary driven by the need to work-from-home. Industries such as mobile communications (also benefiting from the 5G introduction), cloud computing, PC and consumer electronics saw explosive demand. The auto industry which had underestimated the quick return of their customer's demand in late 2020 were caught short as IC capacity was allocated elsewhere resulting in a shortage of finished vehicle production.

All of the above created a significant increase in demand for the Hana group especially for our IC assembly and test operations. Whilst this was welcomed, we also could not escape our own supply-chain related challenges for key materials and also the extension of lead-times for equipment (in some case over 12 months) as the industry strived to ramp up capacity. This reduced the opportunity to capitalize on the increased demand. Additionally, our IC assembly & test operation in Ayutthaya suffered from a Covid-19 outbreak during Q3 with close to 25% of our work force under quarantine for over three weeks.

Despite these challenges, helped by the weaker THB exchange rate, both our largest operations Hana Ayutthaya for IC assembly & test and Hana Lamphun for microelectronics delivered record operating profits. Hana Jiaxing, in China struggled under the weight of a surging

RMB whilst we continued our shift to a more domestic customer base as China looks to build its semiconductor independence.

Our US facility in Ohio was impacted by Covid-19 related logistic costs and related wage inflation, however the introduction of a new business line in RFID tags has been a success and will support better growth in 2022. Our Cambodian operation remained flat as the national lockdown there impacted our ability to ramp up any meaningful new projects.

Our key financial performances were as follows:

- Revenues up 23% from 19,282 million in 2020 to THB 23,780 million in 2021
- Operating income up 29% from THB 1,725 million to THB 2,219 million
- EBITDA income up 21% from THB 2,900 million to THB 3,520 million
- NPAT down 19% from THB 1,908 million to THB 1,545 million
- Cash and financial investments were down from THB 9.7 billion at end 2020 to THB 6.0 billion at end 2021

In 2021, we made significant investments in expanding our IC assembly & test capacity both in Thailand and China and we have committed further capital into our Silicon Carbide development project which will be booked in 2022. Capital expenditure during the year was THB 3.9 billion nearly four times 2020.

Chairman's Statement

We have now managed to double vaccinate close to 100% of all staff and are working on the booster shot with more than 70% done. With the new Omicron variant spreading, we are positioning ourselves as best possible to mitigate any further business interruptions.

The US/China relationship continues to deteriorate pushing many companies to evaluate their current supply chain strategies both for western and Chinese companies. With manufacturing locations in both China and Thailand, Hana is well positioned to navigate any potential changes such decoupling may influence. However, beyond our control, the recent Russian / Ukraine conflict will almost certainly exacerbate the cost of energy, adding more inflationary pressures probably pushing central banks to tighten more aggressively and withdraw financial accommodation at a quicker pace. We need to watch carefully and react appropriately should the impact on global growth be disrupted significantly.

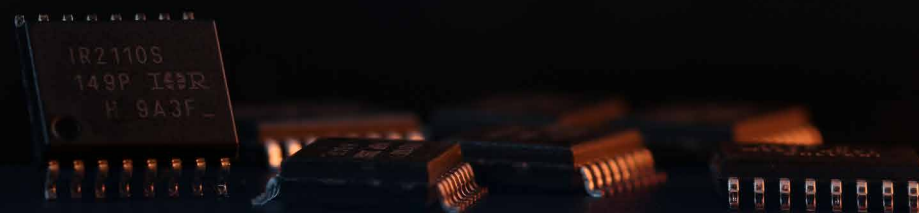
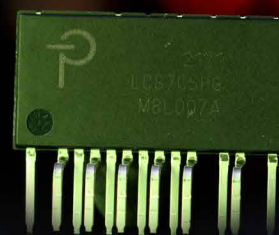
Despite the gathering clouds, we will continue to consolidate the growth we have achieved in our core businesses during 2021 and begin a new chapter for Hana with the development of our Silicon Carbide manufacturing operation in 2022.

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



John Thompson

Chairman of the Board of Directors



Operation Review

Hana Microelectronics Public Co., Ltd. (Lamphun)



The 2021 was a very surprising year for Hana Lamphun. Due to the continuing COVID-19 pandemic, the economic outlook at the beginning of 2021 was uncertain. Nonetheless, customer demand re-bounded early in the year and continued to grow throughout the whole year of 2021 with both sales and profit increasing as a result of strong business demand in all product and customer segments.



Whilst many companies in the region were impacted by both COVID-19 infections and the need to quarantine employees who had close contact with COVID infected persons, Hana Lamphun suffered minimal impact to production as we were able to allocate overtime work to meet with the delivery schedules. In 2021, material shortages also had a significant impact on the electronic manufacturing industry, globally. However, at Hana Lamphun, this was also under control due to the tireless efforts of both Hana staff and our customers to provide sufficient material supplies to support our production. In the automotive sector, whilst other PCBA companies faced semiconductor shortages, we achieved a 20% sales increase, with no supply or quality impact. We were also able to increase sales revenue to the medical sector by 20% and the computer and telecom sectors by 10%.

The outlook in 2022 remains promising and this drives our expansion plans. We have been able to expand 5% of available production space by consolidating some of the factory processes whilst we review our plans for further expansion pending the future outlook. There are many projects from both new and existing customers, which will drive us to add new technological capabilities to meet the future industrial requirements.

We implemented the new Enterprise Resource Planning system “ERP”- SAP/S4HANA system at the beginning of 2020. In 2021 the ERP implementation continued to be refined to further improve the system to provide increased productivity, cost control and effectiveness for our working team. Hana Lamphun continues to put a lot of effort in the Thailand Department of Industrial Works “CSR-DIW” activities with great success. In 2021 we received 5 awards of the Occupational Safety and Labor Management Excellency. In 2022, we will continue to focus in this area as these activities provide valuable recognition for our employee’s efforts in this regard and increase the productivity and quality of our production.

The year 2022 will be a very busy year of changes, such as factory expansion, newer technology, and more automation, while we still cannot overlook the continuing COVID impact.

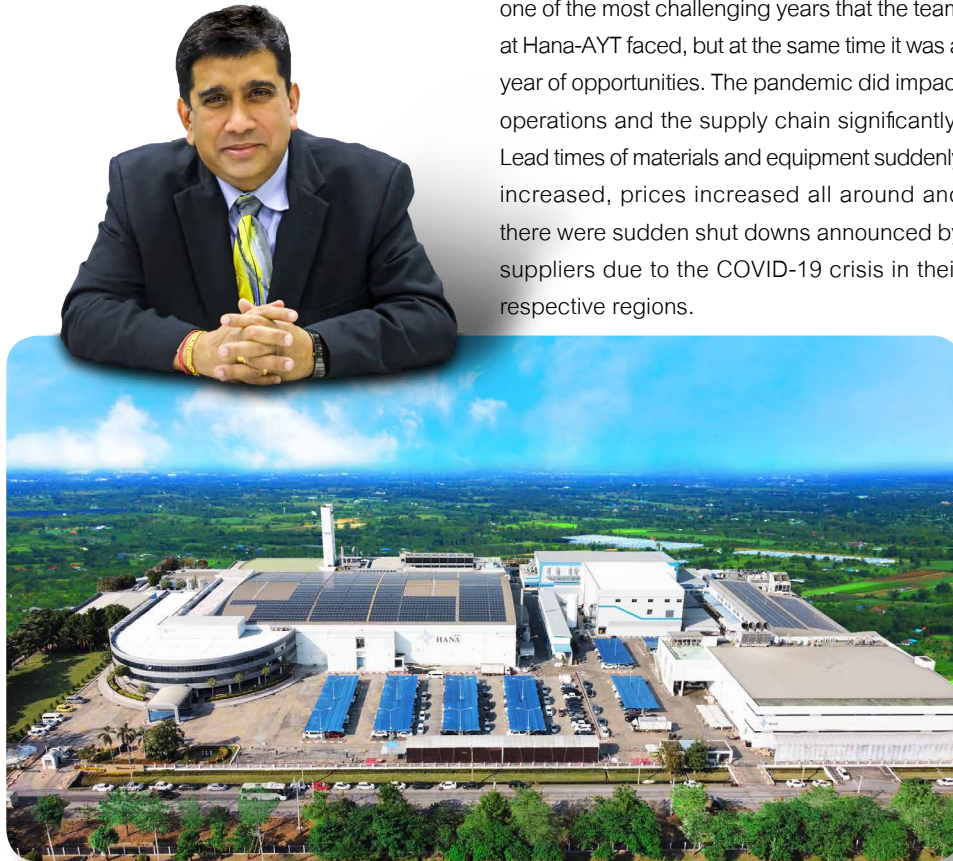
I would thank all Hana Lamphun staff for their whole-hearted support during the difficult pandemic situation and to achieve the record business performance, and prepare for future expansion - **TOGETHER, WE MAKE A DIFFERENCE.**

Mr. Wing Keung Chow

Vice President and General Manager

Operation Review

Hana Semiconductor Co., Ltd. (Ayutthaya)



Due to the ongoing pandemic, 2021 was one of the most challenging years that the team at Hana-AYT faced, but at the same time it was a year of opportunities. The pandemic did impact operations and the supply chain significantly. Lead times of materials and equipment suddenly increased, prices increased all around and there were sudden shut downs announced by suppliers due to the COVID-19 crisis in their respective regions.

Even with these challenges, the team at Hana-AYT excelled, achieving record sales revenue with product shipments 25% higher than 2020. We added significant capacity to fuel our ongoing growth and amidst all the pandemic raging we also embarked on facility expansion to support future demand.

Our journey towards “Zero Defects” continued and the overall trend of quality complaints and defect trend for Hana-AYT showed a continuous decline. We also focused on, and will continue to focus on, productivity improvements using technical innovation and automation.

Our technical competency and flexibility to support our customers through both good times and bad times has rewarded us with many new opportunities and this has kept our New Product Development (NPD) Team and New Package Introduction (NPI) Team very busy. Together with our Intellectual property filings, this bodes well for the future of Hana-AYT.

The most important asset of Hana-AYT is its people and while the pandemic did impact our ability to meet as often as we would have liked to, we continued in our efforts to train, develop and promote the future leaders of Hana-AYT at all levels.

It is just impossible to put in words the gratitude and respect felt towards our loyal and dedicated staff of Hana-AYT. Even during the pandemic spike in Thailand, which was in many cases life threatening, the staff came to work and supported our customers and their colleagues with all their heart and soul. It is truly a pleasure and a very humbling experience to be part of such an awesome team.

Finally, a very special and heartfelt thank you to our suppliers and our customers. They have supported us in every way possible during the pandemic crisis of 2021. We are indeed touched by your faith and trust in us.

While 2022 still remains uncertain with the onset of new variants of the virus, we at Hana-AYT are optimistic that we will have another very strong year. We will however continue to remain very careful, vigilant and always put employee health and safety as the top priority.

Mr. Sanjay Mitra

Vice President and General Manager

Operation Review

Hana Microelectronics (Jiaxing) Co., Ltd.



2021 was a year of recovery and solid achievement for Hana Jiaxing. We achieved 18% growth in terms of the top line year on year to \$138.2M from \$117.8M in 2020. It was also a 5% growth from 2019, the year before the pandemic.

The accomplishment was achieved under a very difficult material market situation. We encountered severe global material supply

issues during the year, mainly the supply of the ICs for the PCBA business, and the lead-frames for the IC packaging. We kept fighting for an uninterrupted supply from the beginning of the year to the end. In addition to the stretched material lead time, 2021 was also extremely challenging in terms of how to manage the issue of material cost increases with our suppliers and customers.

2021 was also a year of expansion and infrastructure upgrading for Hana Jiaxing. Following the strategic business roadmap, we continued to invest aggressively in both capacity and capability for IC packaging to support rapid growing demands from both local and overseas customers. With the new machines all in place by Q2 2022, we are not only doubling the capacity investment, but also further diversifying our package portfolios to better serve the needs of our customers.

On the PCBA side, we continued our capex spending in many process automation projects aiming to improve product quality and reliability, and reduce the manufacturing cost and reliance on manpower. We upgraded a number of SMT lines with in-line AOI and SPI capability

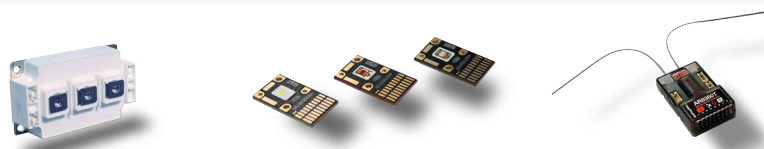
to meet the stringent quality requirements of the automotive, medical and other high-end industries.

As part of our overall expansion plans, we in parallel upgraded our current facilities and optimized the layout of the production floors. We also completed several IT automation projects on improvement of our production and office management systems. For higher operational data security and safety, we invested substantially in upgrading our IT equipment and hardware.

All these capital expenditures are providing us with greater capacity, and improved capability and infrastructure needed for the growth of Hana Jiaxing in the next few years.

As always, I thank all our employees in Hana Jiaxing for their dedication and hard work in 2021. We are seeing more challenges but also more opportunities ahead of us in 2022 and beyond. We will work diligently on ensuring our expansion will deliver higher growth in 2022.

Mr. Steven Lee
Vice President and General Manager



Operation Review

Hana Technologies, Inc.



Year 2021 was another challenging year for Hana Technologies “HTI”. HTI managed to increase revenue and remain profitable, despite difficulties brought on by the pandemic. Supply chain issues impacted every customer, both on HTI’s ability to service them and their ability to service their customers. Staffing was also a major challenge as the US saw unprecedented levels of departures from the workforce, causing

salaries to increase. Absenteeism remained high due to regulatory mandated protocols required to maintain COVID-safe work environments. All circumstances combined to result in increased overall costs to manufacture and deliver products to HTI customers. HTI continues to maintain strict, high levels of safety protocols to ensure both the wellbeing of its staff, as well as the consistency of support to its customers.

markets. Despite this, Y2021 saw a reduction in overall profit.

HTI is proud to bring business opportunities to its sister companies. This activity grew by 18% in Y2021 and was also an annual record for the revenue recorded by other Hana companies as a result of sales to HTI. Tire Tag production in Lamphun was the major contributor to this activity, followed by Consumer Electronics Assemblies in Lamphun and IC Packaging in Ayutthaya.

HTI was able to increase revenues by 30%. The increase in revenue resulted from increases with all major customers, as well as the addition of a new business segment: Hana-branded RFID inlays. Most of the increase came from Tire Tags, with all customers increasing activity in Y2021. Second to that was the increase resulting from the new RFID Inlay business. While a significant contributor to the overall revenue (10%), RFID Inlays still fell far below projections because of limited IC supply availability. HTI also saw modest increases with its major customers in both Telecom and Consumer Electronics. These areas grew only about 5% and struggled with major cost increases in materials and transportation logistics. HTI was able to increase its prices to select customers and in select

HTI continues to try to take advantage of the renewed emphasis of companies in the US to onshore manufacturing. HTI is active with new programs in automotive and medical devices. HTI’s main focus in Telecom and RFID market sectors are also expected to grow, and we look forward to working closely with our customers and suppliers to continue to grow and capitalize on new business opportunities in 2022.

Dr. John Erdmann

President and Chief Executive Officer



Operation Review

Hana Microelectronics (Cambodia) Co., Ltd.



In 2021, Covid-19 pandemic continued to impact our business due to travel restrictions and (integrated Circuit) ICs shortages. Toward the end of Q4, 2021, the ICs shortage was reduced and we were able to start ramp up to fulfil customer high demand until year-end. We put a lot of effort to minimize our overhead by improving productivity and capability of our employees as well as improving machine

efficiency and our supply chain management, which helped to reduce our overall costs.

We continued to improve our support and services to respond to our customer's new product/requirements by using online video/teleconference communication, media/data transfer, virtual remote audit, workshops, training and assessment. During this lock-down period we exceeded expectations in many measures of performance due to good morale and teamwork throughout the organization.

Whilst our operations have risen to the challenge; we focused on ensuring that our employees adhered to strict safety protocols and protection at both work and home and any other places that they would visit, so that they could maintain their good physical and mental health during these difficult times due to the pandemic. We prioritized protecting all areas and made progress toward our net-zero covid-19 cases target during Q4, 2021.

We continue to maintain our emphasis on training and leadership development, even though physical classrooms were not available

but the ability to make improvement and technical readiness will help our business growth.

We expect 2022 will be a year of continued recovery for our operation as the global vaccine rollout accelerates and the pandemic eventually will become less critical. The continuation of US/China trade war as well as material and IC shortages reducing at the end of 2021, will help enable us to capture more business.

I would like to thank of our Hana Cambodia employees for their dedication, good team work and hard work during 2021 and we will look forward to 2022 with confidence to meet new challenges and grow our business further.

Mr. Somchai Chantrachirathumrong

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. Winson Moong Chu Hui
Executive Director

4. Mr. Richard David Han
Executive Director

5. Mrs. Salakchitt Preedaporn
Independent Director

6. Mr. Yingsak Jenratha
Independent Director

Hana Executives



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

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

3. Ms. Achara Chaicharncheep
Finance and Accounting Senior Manager

4. Mr. Richard David Han
Executive Vice Chairman and Chief Executive Officer

5. Mr. Winson Moong Chu Hui
President and Chief Operating Officer

Management Team

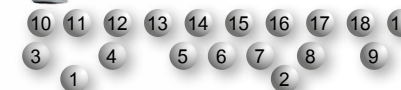


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Hana Microelectronics Public Co., Ltd. - Headquarter Management

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|--|--|--|
| <p>1. Mr. Ki Myung Yoon
New Packages and Products Development Director</p> | <p>4. Ms. Achara Chaicharncheep
Finance and Accounting Senior Manager</p> | <p>6. Mrs. Puntipa Tanthana
Corporate Administration and Human Resources Senior Director</p> |
| <p>2. Ms. Jirapa Kongmanee
Internal Audit Senior Manager</p> | <p>5. Mrs. Tappawong Na Tarlang
Corporate Human Resources, Business Partners, Training & Administration Senior Director</p> | <p>7. Mr. Peter Wuei Hwang
Corporate Business Development & Marketing Planning Director</p> |
| <p>3. Mr. Insuk Kim
Corporate Senior Vice President of International Manufacturing Operations</p> | | |

Management Team



Hana Microelectronics Public Co., Ltd. - Lamphun Management

- | | | |
|--|---|---|
| 1. Mr. Wichai Sukprasertkul
Vice President of Operations | 8. Mrs. Panpen Wuthikhaem
Training & Development Senior Manager | 14. Mr. Sathit Umpai
Operation Director |
| 2. Mr. Wing Keung Chow
Vice President & General Manager | 9. Ms. Chonsita Kitisrivorapot
Inventory Control Senior Manager | 15. Mr. Kam Fu Yim
Quality Management Director |
| 3. Mr. Chana Srisuttha
Operation Senior Manager | 10. Mr. Pattarapol Kantawang
Customer Service Senior Manager | 16. Mr. Wasan Suthum
Operation Director |
| 4. Ms. Kittima Kongsing
Production & Material Control Senior Manager | 11. Mr. Chukiat Suksatian
Operation Senior Manager | 17. Mr. Somjai Namwongsa
Human Resources Development Senior Manager |
| 5. Ms. Krongtong Wannawichit
Human Resources Senior Manager | 12. Mr. Nikorn Tolongtong
Customer Service Senior Manager | 18. Mr. Arkhom Kauekool
Manufacturing Support Senior Manager |
| 6. Ms. Tipawan Duangkaew
Customer Service Senior Manager | 13. Mr. Thawatchai Kumprasert
Management Information System (MIS)
Senior Manager | 19. Mr. Seksit Mulachiwa
Procurement Senior Manager |
| 7. Ms. Hataitip Mongkonsawat
Operation Senior Manager | | |

Management Team



Hana Semiconductor (Ayutthaya) Co., Ltd. Management

- | | | |
|---|--|---|
| <p>1. Mrs. Saowanee Rachatakarn
Finance Director</p> <p>2. Ms. Suparin Kengradomkij
Logistics & Traffic Senior Manager</p> <p>3. Ms. Samantha Kulasinghe
Manufacturing Support & Service Production Planning, Industrial Engineer Senior Director</p> <p>4. Mrs. Thawanvaree Pichitnorakarn
Purchasing Senior Manager</p> <p>5. Ms. Sirirat Silapapipat
CSO Operations Director</p> <p>6. Ms. Areenee Kittisupornpong
Management Information System (MIS) Director</p> <p>7. Mrs. Rhodora F. Ceballo
Assembly Engineering, New Product Introduction (NPI) and New Product Development Director</p> | <p>8. Mr. Swee Seng Lim
Quality Management Senior Manager</p> <p>9. Mr. Michaeljun C. Camba
Technology Development and Customer Support Senior Manager</p> <p>10. Mr. Seri Sukchean
Facility, Industrial Engineer, Environment & Safety Senior Manager</p> <p>11. Mr. Pongsak Klongjai
Operation Senior Manager</p> <p>12. Ms. Praphaphun Naradilok
Plant Human Resources and Training Director</p> <p>13. Mr. Vanapong Kwangkaew
Technology Development and Customer Support Senior Manager</p> <p>14. Mr. Sanjay Mitra
Vice President and General Manager</p> | <p>15. Mr. Punsak Eammongkolchai
Standard IC-Front of Line & End of Line Operations Senior Director</p> <p>16. Mr. Sangwang Pichitpreecha
Test Operation Senior Manager</p> <p>17. Mr. Pongsakorn Jangsatian
Quality & Reliability Assurance (QRA) Director</p> <p>18. Mr. Paitoon Kungsaranuwat
Test Operation Director</p> <p>19. Mr. Sithigorn Petchruk
Maintenance Engineering Senior Manager</p> <p>20. Mr. Anake Wannathong
CSO Test Operation Senior Manager</p> <p>21. Mr. Wanakorn Nonkhunthod
Supply Chain Management Director</p> |
|---|--|---|

Management Team



Hana Microelectronics (Jiaxing) Co., Ltd. Management

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

Management Team



1 2 3 4 5 6 7 8

Hana Technologies, Inc. Management

- | | |
|--|--|
| <p>1. Mr. Matthew Bucholtz
Technology Vice President</p> <p>2. Mr. Edward M Stiles
Quality and Information Technology (IT) Vice President</p> <p>3. Mr. D Scott Worthington
New Product Development Senior Director</p> <p>4. Mr. Michael Hetrick
Sales and Marketing Vice President</p> | <p>5. Dr. John H Erdmann
President and CEO</p> <p>6. Mr. Steve Gargalianos
Program Management Senior Director</p> <p>7. Mr. Paul R Brown, Jr.
Microelectronics Sales Vice President</p> <p>8. Mr. Michael Davis
Controller</p> |
|--|--|

Management Team



Hana Microelectronics, Inc. Management

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

Management Team



1 2 3 4 5 6 7 8 9 10 11 12 13

Hana Microelectronics (Cambodia) Co., Ltd. Management

1. Mr. Heng Mengloan

Facility Supervisor

2. Mr. Narhit Muangnakin

Quality and Reliability Assurance (QRA)

Senior Manager

3. Ms. Hourn Monirath

Programmer

4. Mr. Chheurn Raksmei

Quality Assurance (QA) Senior Supervisor

5. Ms. Kim Montha

Human Resources & Administration

Senior Supervisor

6. Mr. Warin Samarnso

Human Resources & Administration

Senior Manager

7. Mr. Somchai Chantrachirathumrong

General Manager

8. Mr. Ren Maosheng

Operation Senior Manager

9. Ms. Roth Theany

Training Senior Supervisor

10. Mr. Keng Siyin

Process Engineer

11. Mr. Horn Borey

Supply Chain Section Manager

12. Mr. Nuon Sambath

Planning Material Control (PMC) Supervisor

13. Ms. Bun Saruon

Accountant

2021 Awards and Recognition



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



Hana received the ESG100 honor from the Thaipat Institute.
Hana is ranked among the top 100 listed companies achieving an outstanding performance in terms of environmental, social and governance (ESG).

2021 Awards and Recognition



Hana received Rising Star Sustainability Award in Sustainability Excellence category of 2021 SET Awards, as a recognition of the Company's contribution to society and commitment to the environment with an emphasis on the principles of good governance and being a role model for other listed companies and encouraging listed companies to operate business in accordance with sustainability development.



Hana has named in the list of sustainable stocks or Thailand Sustainability Investment (THSI) list 2021, reflecting the greater emphasis on our commitment to sustainable business practices toward environmental, social, and governance (ESG).

2021 Awards and Recognition



Hana received the Sustainability Disclosure Acknowledgement Award from Thaipat Institute. The award presented the Company's outstanding efforts towards sustainability disclosure and reporting on SDG target 12.6.



Hana received CSR-DIW Continuous Awards, the Standard for Corporate Social Responsibility from the Department of Industrial Work (CSR-DIW) granted to the factories in Lamphun. The award recognized the Company for its commitment to responsible operation towards sustainable development towards the principles of environmental, social and governance (ESG).



1993 HQ BKK, Thailand

1994 Lamphun 1 Thailand (PCBA)

1999 Ohio, USA (RFID & Microdisplay)

1999 Ayutthaya, Thailand (IC)

2003 Jiaxing, China (PCBA and IC)

2013 Koh Kong, Cambodia (PCBA)

2014 Lamphun 2 Thailand (PCBA)

Business 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 in Thailand, China, USA and Cambodia, and R&D in Korea. There are sales representative offices located in major parts of the world.

HANA has been certified by internationally recognized standards: ISO9001, IATF16949, ISO13485, ISO14001, ISO45001, ISO/IEC 27001, etc.

1. Organizational Structure and Operations of the Group of Companies

1.1 Policy and Business Overview

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.

Overview of the vision, objectives, goals and business strategies

Vision, Mission and Corporate Objectives

In 2021, 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; to be a good corporate citizen maintaining high corporate, environmental and social practices for the benefit of all stakeholders, and to enable a culture of innovation enhancing business, social and environmental success.

Corporate objectives/Long term goals

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

6. Conduct business with responsibilities, maintain integrity through business ethics and respect the rights of all groups of stakeholders
7. Promote innovative ways to enhance employees' creativity focusing on social responsibilities, reducing environmental impacts and challenges adaption while developing business opportunities towards sustainability

Major changes and development of the Company

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

2019	<ul style="list-style-type: none"> • Hana Technologies Group Limited, a subsidiary company, and Hana Technologies Investments Limited, a subsidiary company of Hana Technologies Group Limited, registered for dissolution of their business. There was no gain/loss on investments in these subsidiary companies. • Hana Semiconductor Holdings Limited, a subsidiary company of Hana Microelectronics International Company Limited, registered for dissolution of its business. There was no gain/loss on investments in this subsidiary company. • Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, had invested in 24,158,257 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 10.49 million or equivalent to Baht 326.30 million, representing 100% of the issued and paid-up share capital of that company.
2020	<ul style="list-style-type: none"> • Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, additionally invested in 45,468,997 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 19.49 million or equivalent to Baht 610.95 million, representing 100% of the issued and paid-up share capital of that company.
2021	<ul style="list-style-type: none"> • Hana Microelectronics Enterprise Company Limited, an overseas subsidiary company, additionally invested in 101,706,697 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 43.99 million or equivalent to Baht 1,413.65 million, representing 100% of the issued and paid-up share capital of that company.

1.2 Nature of Business

Revenue Structure

- Revenue breakdown by product segments

(Unit: Million Baht)

Product	Company	Location	% of share holding by the Company	2021		2020		2019	
				Revenue	%	Revenue	%	Revenue	%
1. PCBA	HM-LPN	Thailand	100%	10,196	44%	8,617	44%	9,093	38%
	HM-JX	China	100%	3,121	13%	2,581	13%	2,788	17%
	HMC	Cambodia	100%	108	0%	107	1%	85	0%
Total PCBA				13,425	57%	11,305	58%	11,966	55%
2. IC	HS-AYT	Thailand	100%	8,182	34%	6,527	34%	6,665	34%
	HM-JX	China	100%	1,162	5%	764	4%	915	6%
	PMS	South Korea	100%	50	0%	4	0%	-	-
Total IC Assembly				9,394	39%	7,295	38%	7,580	40%
3. RFID & Microdisplay	HTI	USA	100%	962	4%	683	4%	838	5%
Total Sales Revenue				23,780	100%	19,283	100%	20,384	100%
Dividend and Other Income				357		525		696	
Total Revenues				24,137		19,808		21,080	

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.

PMS: Power Master Semiconductor Co., Ltd.

- Domestic and Export Sales Revenue

(Unit: Million Baht)

Sales Revenue	2021	2020	2019
Domestic sales	280	261	246
Export sales	23,500	19,022	20,138
Total sales	23,780	19,283	20,384
Ratio of export/domestic sales	99%	99%	99%

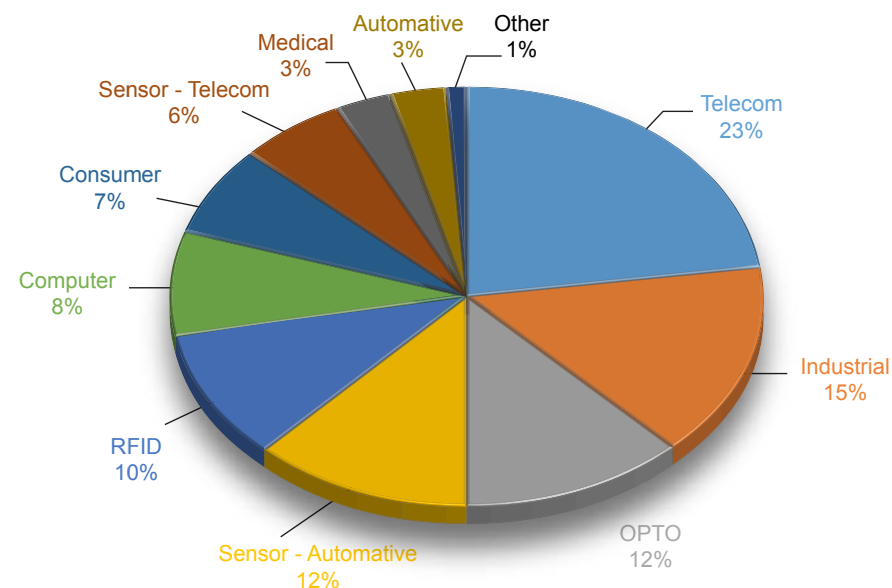
- Sales Revenue by Geographical Customers

(Unit: Million Baht)

Revenue from external customers	2021	2020	2019
U.S.A.	5,088	4,410	3,466
MALAYSIA	4,763	3,850	3,829
SINGAPORE	3,540	3,067	2,944
CHINA	2,979	2,268	2,256
TAIWAN	878	626	1,166
AUSTRIA	867	713	914
SWITZERLAND	834	748	1,131
GERMANY	789	579	488
HONG KONG	635	691	1,589
IRELAND	596	382	404
Others	2,811	1,949	2,197
Total	23,780	19,283	20,384

- Sales Revenue by Industry of Product End Application

2021 Sales Revenue by Product End Application



Hana Product Information

Hana Microelectronics Public Co., Ltd. and its subsidiaries provide Electronic Manufacturing Services (“EMS”) to OEM customers and manufactures the products based on the customers’ specifications and designs. 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 RFID&Microdisplay with our factories currently located in Thailand, China, USA and Cambodia providing a wide scope of assembly processes serving a diverse range of electronic industries.

No.	Company name	Manufacturing location	Product Segment	Key product packages	Production floor space & utilization in 2021	ISO Certification
1.	Hana Microelectronics Public Co., Ltd.	Plant 1: Northern Region Industrial Estate (EPZ), Lamphun, Thailand	PCBA	RF (Radio-Frequency Devices), Automotive Sensors, PCB Assembly including High Frequency Telecommunication Devices, Computer Components, Medical Devices, Industrial Box build products	14,953 SQM (84% Utilization)	ISO 9001 ISO 13485 ISO 14001 ISO 45001 IATF 16949
2.	Hana Microelectronics Public Co., Ltd.	Plant 2: Sahapat Group Industrial Park (Free Zone), Lamphun, Thailand	PCBA	Optical Mouse Sensors, Proximity Sensors, Computer Components, Tire Tag, Ink-jet Cartridge, Wafer Probe, RFID	13,652 SQM (69% Utilization)	ISO 9001 ISO 14001 ISO 45001 IATF 16949
3.	Hana Semiconductor (Ayutthaya) Co., Ltd.	Hi-Tech Industrial Estate (EPZ), Ayutthaya, Thailand	IC	Integrated Circuit Assembly & Test, Optical Sensors and Modules, QFN, SOT, SIP, MEMS, LGA, Smart Card Module, Flipchip, OPTO, RF (Radio-Frequency Devices), Open Cavity QFN, Power QFN Cu Clip, Power Package Dual Cool, TO-247TE Dual Cool	24,500 SQM (98% Utilization)	ISO 9001 ISO 13485 ISO 14001 ISO 45001 IATF 16949 ISO/IEC 27001 ANSI/ESD S20.20

No.	Company name	Manufacturing location	Product Segment	Key product packages	Production floor space & utilization in 2021	ISO Certification
4.	Hana Microelectronics (Jiaxing) Co., Ltd.	Xincheng Industrial Park, Jiaxing, China	PCBA & IC	PCBA, COB & CIB Assembly, Wireless Radio Frequency Product, Micro Coil Winding, Flexible Circuit Board, Surface Mount Technology (SMT), Integrated Circuit Assembly & Test, LED, DC-DC Converter, OPTO, Power Modules and Power Discrete with IGBT or SiC dies	18,000 SQM (95% Utilization)	ISO 9001 ISO 13485 ISO 14001 ISO 45001 IATF 16949 IECQ QC 080000
5.	Hana Microelectronics (Cambodia) Co., Ltd.	Koh Kong Special Economic Zone, Koh Kong, Cambodia	PCBA	Remote Control, Security/Access Control Reader (Secure Reader Box Build, RFID (Radio-Frequency Devices) Reader, Smart Card Reader, USB Token Security, Cable Harness, Telecommunication Devices, Computer Components and Pre-Assembly: Semi-Electronic	6,324 SQM (60% Utilization)	ISO 9001 TL 9000
6.	Hana Technologies, Inc.	Twinsburg, Ohio, USA	RFID & Microdisplay	RFID (Radio Frequency Identification Devices), LCOS (Liquid Crystal on Silicon), MEMS, HTP (high-temperature polysilicon)	2,229 SQM (98% Utilization)	ISO 9001

Hana Product Segments

1. Print Circuit Board Assembly (PCBA)



Printed Circuit Board Assembly is the ICs and other electronic components assembling on a printed circuit board which holds electronic parts to create a useful electronic circuit. In providing high quality with high precision and high accuracy as the components are getting smaller, we have invested in the up-to-date technology equipment to meet customers' requirement and aim towards zero defect manufacturing approach to provide our customers with PCBA solutions and services worldwide.

The PCBA operations of Hana are located in Lamphun province, Thailand and Jiaxing city, China and Koh Kong city in Cambodia where our business includes PCB manufacturing and electronic contract manufacturing service.

PCBA – HANA LAMPHUN

The PCBA factories in Lamphun, Thailand provides manufacturing services for following products:

A) COB (Chip-on-Board) Assembly

COB is die-assembly onto printed circuit board directly that do not operate die as package before installing which is facilitate to reduce operation step and cost of producing. This method is suitable for less circuitry using products such as automotive sensor products, household products, consumer products, telecommunication devices and medical products, etc.

COB and PCBA are using as the component part of electric appliances and other electronic devices such as:

- Circuit Board in automotive sensors for pressure sensor applications
- Circuit Board in personal computer (PC) and notebook
- Circuit Board for hearing aid to help a wearer hear certain sounds better
- Circuit for adding memory management unit in computer industry

B) Wireless High Frequency Product

The product is high frequency telecommunication device for infrastructures and test accessories. It needs technology for signal check technology, high frequency check equipment and requires high delicate for this assembling operation as material part is very high delicate and costly. Also Professional competency workmanship is crucial required. High Frequency device is received and sending Microwave and Millimeter wave signal of telecommunication device that using for mobile phone network station and all other related infrastructures.

C) Electric part product for Interface Device

Electric part product for Interface Device is the product for supporting of demand transmitting between user and electronic equipment (such as PC, laptop, mini-stereo, mobile phone or safety equipment) which user can touch demand transmitting equipment via computer screen, keyboard for selecting information, changing place for information, signal or option setting.

D) Other electronic devices include:

- Air Pressure and Temperature Control product is electronic device for air pressure controlling of vehicle's brake system, air bag system and electronics device for temperature measurement and controlling including other pressure measurement meter (for water and gas).
- Medical device to assist the hearing aid purpose
- Wireless Sensor Product is equipment for sending and receiving light signal that using with other electronic equipment such as Optical Mouse, printer, mobile phone, etc.



PCBA – HANA JIAXING

The PCBA operation in Jiaxing, China provides manufacturing services for following products:

A) COB (Chip-on-Board) and CIB (Chip-in-Board) Assembly

COB is die-assembly onto printed circuit board directly that has the advantage of lower-cost Die component compare to IC package mounting. The process is quite similar to conventional IC process. The only difference is instead of using lead frame, printed circuit board is used as substrate. This method is suitable for products with moderate circuitry complexity such as consumer electronics e.g. Software Copying Protection Device, Circuit Board in personal computer (PC) and notebook, etc. Aside from using printed circuit board, a flexible printed circuit may also be used. This is highly recommended for products requiring thin and flexible profile not attainable using conventional printed circuit board. Typical application of this is in the area of RF cards, BLE cards, Tags, hearing aid devices and etc.

The Chip-in-Board process has the same technology as above but for those products that thickness is critical, the DIE itself is mounted at the substrate below its surface level.

B) Wireless Radio Frequency Product

Wireless Radio Frequency product from low, high, and ultrahigh frequency telecommunication device. This involves using expensive electronic equipment to perform signal level and data integrity check. The wave-length used can ranged from Millimeter wave to Microwave and the applications are mainly for mobile phone network station.

Not limited to the above, the need for low power consuming electronics had led to Bluetooth Low Energy (BLE) technology that can send and receive signals to multiple devices at short ranges.

C) Electronic devices

- Air Pressure and Temperature Control product is electronic device/MEMS for air pressure controlling of vehicle's brake system, air bag system, air flow and measurements for medical applications, gas and air quality detectors, and electronic device for temperature measurement and controlling including other pressure measurement meter (for water and gas).
- Fiber Optic Device is connector equipment between computer equipment and fiber optic thread which sending and receiving light signal from fiber optic thread and sending to computer equipment.
- Wireless Sensor Product is equipment for sending and receiving light signal that using with other electronics equipment such as Optical House, Imaging sensors, printer, mobile phone, health monitor, base stations/router, Remote Controller for Drones and UAV etc.
- Smart Card Product is using for telecommunication, entertainment, controlling equipment, payment transactions, other electric applicants, employee card, student card, etc.
- LED Assembly product such as LED board for vehicle's rear lighting, truck, traffic LED light board which giving more lightly than ordinary light bulb and electronic backlighting.

- Medical device such as hearing aid and accessories, pregnancy test kits and Dosimeter.
- Card Readers and embedded modules which may include RFID technologies for door entrance/access system for residential, offices, transportation vehicles, manufacturing and government facility, hotel, public areas, etc.
- Bluetooth Low Energy Devices used for child care, mobile phone controlled door access, router/extenders, card readers, programmable cards, Audio/Acoustic Device and etc.
- System In Module and/or System On Chip are ultra-compact devices/module offers efficient computing core for variety of leading edge IoT applications for professional camera platforms, multi-display, video conferencing, and/or advanced AI drone/robotic products as provide multiple specialized processing cores for AI Engine, ISP, GPU, and DSP processing needs.

D) Flexible Circuit Board

Flexible Circuit Board product is to assemble IC or other electronic part onto flexible circuit board for more convenience of using such as RFID Tag and low profile dimension products which is adapted for using in commercial work for inventory and selling which is replaced of old bar code system, using in traffic section, transportation, personal identification and building security.

E) Electric part product for Interface Device

Electric part products for Interface Device is the product for supporting of Data-Transmission Demands between user and electronic equipment (such as PC, laptop, mini-stereo, servers, mobile phone or safety equipment) which users can use the touch screen as transmitting equipment via computer screen, keyboard for selecting information, changing place for information, signal or option setting, either by using wired, RF wireless, or Bluetooth low Energy (BLE) protocol.

F) Micro Coil Winding Assembly

Coil is the key component used in wireless transmission and communication such as Smart Card, RFID card, Security Readers, sensors and etc.

G) Surface Mount Technology (SMT)

SMT is a method for constructing electronic circuits (IC) in which the components are mounted directly onto the surface of printed circuit boards (PCB) or flexible printed circuit boards (FPC) by automated equipment. Applications are mainly in equipment and/or products used in telecommunication, measuring equipment's, industrial, security services, automotive, and medical field of use.



PCBA – HANA CAMBODIA

Hana Cambodia provides manufacturing services for following products:

A) Secure Reader Box Build Assembly

Smart Card Product is using for telecommunication, entertainment, controlling equipment, other electric applicants, employee card, student card etc.

1. RFID (Radio-Frequency Devices) Reader

Contactless RFID Card Readers modules for door entrance/access system for residential, offices, transportation vehicles, manufacturing and government facility, hotel, etc. public areas.

2. Smart Card Reader

Contact Smart Card Readers modules to support demand transmitting between user and electronic equipment such as PC, laptop or safety equipment.

B) Cable Harness

Cable Harness for Secure Reader Box Build, Telecommunication Devices, Computer Components and Automotive Cable Wire Harness.

C) USB Token Security

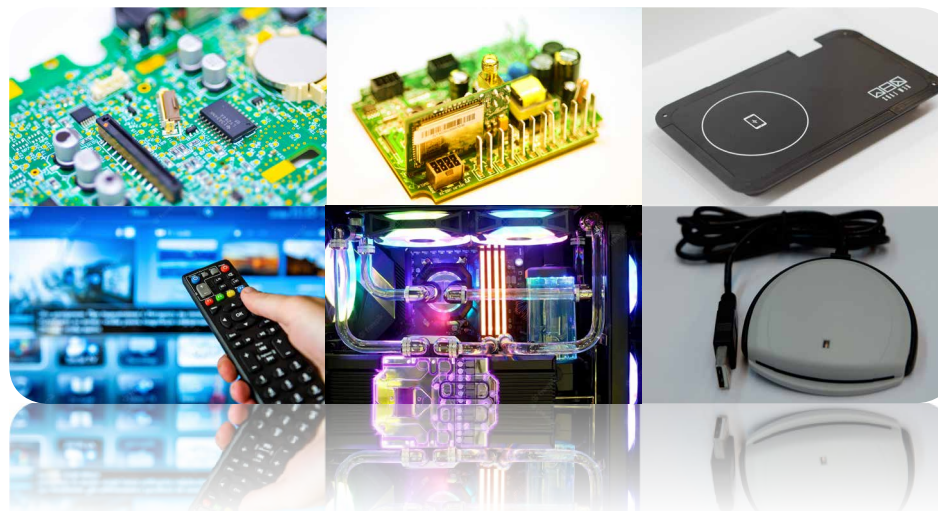
Multi-Factor Authentication Token with added security in accessing online accounts.

D) Ultra Switch

RF/microwave switches use in a wide variety of signal routing applications for test and measurement systems.

E) Remote Control

Remote control for Cable TV control box and Satellite control box.



2. Integrated Circuit (IC) Assembly and Test



Integrated Circuit (IC) is a semiconductor chip consisting of circuit components such as resistor, capacitor, inductor, transistor, diodes, etc., which are connected with wires. Electronic circuits are developed by getting smaller size but more power and safety to incorporate them into devices. We have invested in the up-to-date technology equipment to meet customers' requirement and aim towards zero defect manufacturing approach to provide our customers with a wide range of integrated circuit solutions.

The IC operations of Hana are located in Ayutthaya province, Thailand and Jiaxing city, China where our business includes IC Packaging and Assembly and electronic contract manufacturing service.

IC – HANA AYUTTHAYA

The IC operation of Hana Ayutthaya, Thailand provides manufacturing services for following products:

A) IC (Integrate Circuit) Assembly

IC is a part of electronic device consisting of Chip IC (Integrate Circuit) that compounding as IC package for assembling to other electronic device parts.

Optical Sensors and Modules	Used in a variety of applications, including mobile, electronic appliance, and retail automation
Leadless Packages: QFN, DFN, Multi row/Routable QFN, MCM on QFN	Used for mobile phones, tablets, industrial/power, electric appliance. & play station
Leaded Packages: VSOP, MSOP, SOIC, SOT, SC70, SOT5x3, SOT9x3, SOD723	Used for telecom industry, note book computer, tablet, electronic appliance/home appliance, mobile phone & quick battery charger

Laminate Packages: SIP, MEMS, LGA	Used for mobile phone, digital camera, DVD reader/appliance & power management
Smart Card Module	Used for RFID card, credit card, security card & consumer tag
Power Packages: Flip-chip, Cu-Clip, Soft solder, Heavy Al wire	Used for home appliances, motor drivers, UPS & power management

B) DC-DC Converter Assembly

DC-DC Converter is one type of IC using for convert low voltage level that assembling in Printed Circuit Board Assembly (PCBA) device of general electronic devices such as computer and medical products.

C) OPTO Couplers Assembly

A broad range of isolation products providing performance features and benefits that is unmatched in the industry for industrial, computing, consumer, communication, and automotive markets.

D) RF, Microwave, Millimeter wave and Optical Component Assembly

RF, Microwave, Millimeter wave and Optical are semiconductor products that are used in satellite, radar, wired & wireless networks, automotive, industrial, medical, and mobile devices.

E) Die Sales

This type of business to support customer who do not have capability on wafer probe, back grind, wafer dicing & die inspection, Hana will service & provide sawn dice put in wafer ring, waffle pack, antistatic chip tray.



IC – HANA JIAXING

IC Division of Hana Jiaxing in China has offered variety of IC assembly and test services as follows:

A) Standard IC products

QFN/DFN/LGA Package	Used for smart phones, tablets, automotive sensors and touch pads
SC, SOT, TSOT, MSOP	Used for mobile phone, digital camera, computer and mobile electronic device

B) Power Modules and Power Discrete with IGBT or SiC dies

Used for industrial welding machine, PV inverter, electrical vehicle, hybrid electrical vehicle and wind turbine.

C) WLCSP

Wafer level chip scale package is driven by a strong push for cost reduction and miniaturization. Hana JX offers wafer level chip scale packaging services for hand held, portable, servers and automotive products.

D) LEDs and LED modules for Automotive Lighting and Projector Light Source

Automotive lighting designers can utilize the small size and distinctive look of LUXEON LEDs to rethink lighting applications and lighting engineers can take advantage of the efficiency, robustness and power savings that the small, light-weight emitters deliver. For example, headlamp, high and low beam, break lights, turn signals, position and marker lamps, etc. High power LED modules are used in light sources for projectors, screenless TV and heads-up display. UV LED modules are used in 3D printing and sterilization.



3. RFID & MICRODISPLAY



RFID & MICRODISPLAY – HANA USA

Hana Technology Inc. in Twinsburg, Ohio, USA manufactures microelectronics products such as Microdisplays, camera modules and RFID (Radio Frequency Identification - RFID) passive tags.

A Microdisplay is a device used for transferring electrical signals to high-resolution visual images that can be highly magnified. These products can be LCOS (liquid crystal on silicon), MEMS, or HTP (high-temperature polysilicon) based devices, and are incorporated in a wide variety of products such as virtual and augmented reality goggles, multimedia projectors, rear-projection televisions, adaptive optics, and telecommunication devices.

An RFID (Radio Frequency Identification (RFID) device is used to transfer information in a fast, wireless mode. HTI manufactures passive tags where these tags can be queried by a reader. The tags are programmed with identification, security, and other historical information that is of interest in the particular application. The information can also be modified on the tag (write mode)

by the RFID reader. The tags consist of an IC that contains the vital information and an antenna. The antennas that are primarily used are thin conductors that are either printed or etched onto a plastic web so that they can be manufactured in a high-speed, flip-chip manufacturing mode. HTI is the world leading's producer of RFID tire tags.

The new product line of HTI is RFID Inlays comprised of RFID Chip (IC), Tag Antenna and Substrate, typically on a film face. An RFID inlay is the functional part of an RFID label. The inlay can be used alone by simply attaching it to the target asset. RFID inlay becomes the best option particularly for retailers and other small scale users for tracking, identification, and inventory management. RFID Inlays will drive HTI future growth. HTI customers are mainly based in the North America and Europe, with some having product drop-shipped to other countries for post-assemblies.

Product end applications for RFID technology are listed here:

- Inventory tracking
- Supply chain management
- Asset tracking
- Microchips used in pets
- Attach with cloth for thief preventing in shop
- Movie card
- Anti-Counterfeit
- Anti-theft equipment for car's key
- Car parking card
- M-commerce via mobile phone instead using credit card
- For research and study in consumers' behavior
- Logistics
- Tire Tags



Operation processes and technology:

The Company manufactures products based on customer's orders. Our engineers have a high expertise in providing the improvement of electronic circuit boards prior to launching the production. We focus and provide the best manufacturing option for costs competitive as well as increase the efficiency of production and quality. The Company also has high capabilities to design and develop the test system in order to test assembled products and its liability before delivery to our customers. Currently, Hana has the main technology to manufacture the products to the customers as follows.

- 1) **SMT Technology (Surface Mounted Technology)** is the main technology which mainly used for most of the company's products. This technology is to connection of electrical circuits and other semiconductor devices onto the surface of printed circuit boards (PCB). The SMT is useful for both design and manufacturing since it can save space in the assembly of electronic components onto printed circuit boards. SMT lines are also covers the technology of BGA (Ball Grid Array), flip chip as well as any other higher technologies of SMD (surface mount devices) with fully integrated with advanced AOI machine (automatic Optical Inspection).

The advance SMT & Flipchip combination technology can support extensive array of print circuit assembly to build automotive high performance sensors. Many of our capabilities are considered proprietary to serve world class automotive customers.

- 2) **Through-hole Technology** is a technology for assembling electronic components by inserting into the cavity of the printed circuit board (PCB), and then go through the wave-soldering. In recent years, we upgrade our quality by introducing selective soldering which can reduce the heat effect to other critical area.

- 3) **COB Technology (Chip on Board)** This technology is connected to the integrated circuit devices without the chassis (Bare IC) directly to the printed circuit board. This type of technology will be popular for the product which is limited in the area of electronic product assembly. The COB technology enables lower production costs compared to the cost of producing integrated circuit devices have successfully chassis (Package IC) which is part of the larger and higher prices. Moreover, the company also provides the gold wire bonding as an additional technology of aluminum wire bond.
- 4) **IC assembly technology** is the process of electrically connecting I/O bond pads on the IC to the corresponding bond pads on the lead frame or substrate base. The package can be a single chip package, a multichip package, or a system level board. Such an assembly process involves three interfaces: metallurgical bond pad interface on the IC, metallurgical bond pad interface on the lead frame or substrate, and electrical interconnection between these two interfaces. Company also provides pure Copper, Copper/Palladium & Copper/Palladium/Gold wire bonding as additional technology to our customer achieve both performance & cost objectives.

Promotional Privileges from the Board of Investment (BOI)

The Company and a subsidiary, Hana Semiconductor (Ayutthaya) Co., Ltd., have granted promotional privileges under the Investment Promotion Act B.E. 2520 as approved by the Board of Investment. The significant promotional privileges are disclosed on part 3: Financial Statements Note 26.



Innovative Development

Hana core activities are to offer high quality products and services by ensuring customers' satisfaction through relentless improvement activities. Hana places great emphasis on the innovation organization in order to create value to the business, social and environment by creating innovation atmosphere, providing opportunities for everyone in the organization to generate and apply their knowledge, skill, critical thinking or bring in technological know-how contributing to the development and improvement of working processes, equipment or products to foster the vision of innovation culture in the organization.

Our major innovative development is as follows.

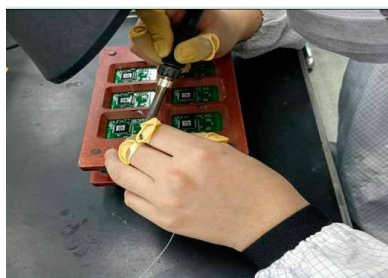
- **Machine Automation & Industry 4.0**

Hana has continuously invested in manufacturing automation projects as to modify the traditional manufacturing process to automation toward industrial 4.0 which can increase the competitiveness advantage of the Company by improving product quality, increasing operating efficiency, reaching lean production, enhancing employees' capability, 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.

HANA 4.0 Roadmap

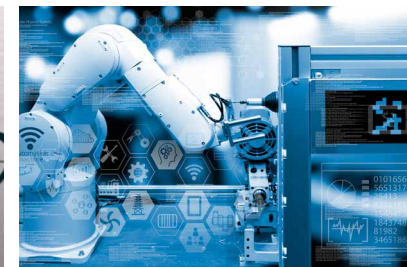
Manual to Automation

Automate manual processes to achieve continuous quality control (input and output) of zero defect at manufacturing stage



Streamline

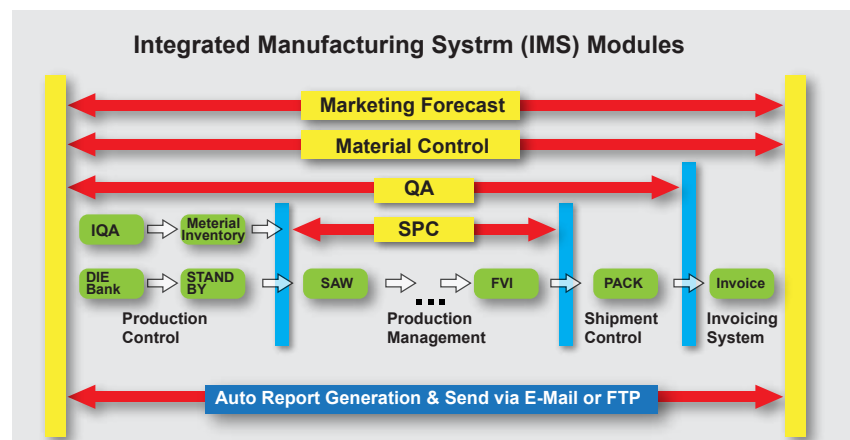
Implementing the shop floor automation system with streamline manufacturing process for a more efficient, faster and better quality production that resulted in greater productivity and optimal resource utilization



HANA 4.0 Roadmap

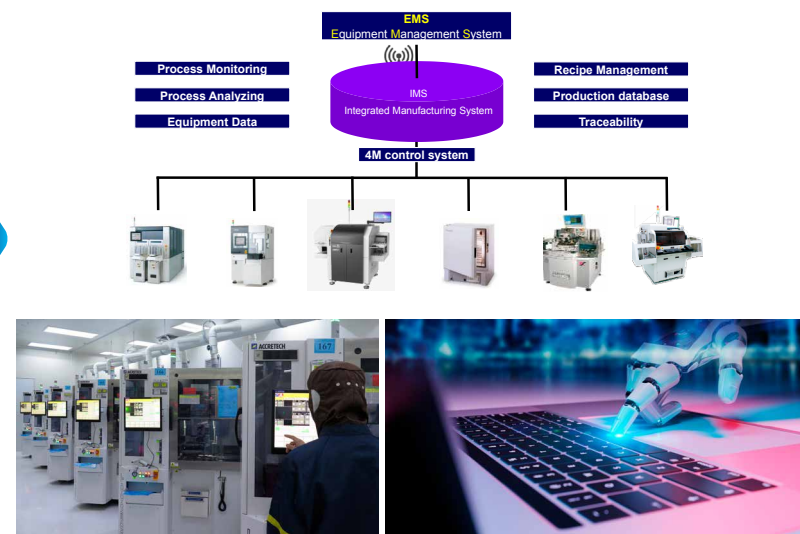
System Integration and Control

Machine-to-machine communication is integrated so allow devices to exchange information with each other.



Big Data Analysis

Use the system applications to control and monitor production process abnormality through data analytics for high-level decision-making



Summary of the consolidated manufacturing automation projects of Hana Lamphun, Ayutthaya and Jiaying operations in the past 3 years:

Project Implementation	No. of Project			No. of Machine			Cost saving (Thousand USD)			Operator reduction (Person)			Total Investment (Thousand USD)		
	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
1. Manual to Automation	93	71	38	411	137	310	1,932	1568	562	189	147	59	1,938	977	527
2. Streamline Process Management	7	9	4	16	16	356	411	184	86	52	25	12	382	628	3
3. System Integration and Control	35	25	19	396	445	79	386	180	30	24	22	5	136	149	13
4. Big Data Analysis	5	6	12	141	10	266	70	50	1,877	0	0	3	13	35	125
Total	140	111	73	964	608	1,011	2,799	1,982	2,555	265	194	79	2,469	1,789	668

- **Use of Advanced Enterprise Resource Planning (ERP) system:**

Hana Lamphun has implemented the new SAP S/4HANA ERP system which enables the workflow of information more efficient, enabling cost controlling including increased productivity by reducing time and effort employees need for completing their day-to-day activities, eliminating manual processes, and automating new information fast and in real-time planning, execution, reporting and analytics with the integration and streamlining business functions: sales, planning, purchasing, finance, inventory, and logistics into one central database. A modern ERP system helps Hana to enable innovation, optimize resources, and streamline operations.

- **Process Innovation**

Hana Ayutthaya has developed the technical competency encouraging our customers to load record number of new package development activities in 2021. This bodes very well for the business outlook in 2022 and beyond since all of these development and NPI activities will translate into increased production over of the next 12-18 months. We also continued to file for intellectual property “IP” on some of our custom package developments. Our focus on IP will continue in 2022 and beyond to further differentiate Hana Ayutthaya. Our technology development focus areas on the following:

Optical Sensors:

We focus the sensor development to build the sensor products to be smaller and thinner to sustain our positioning in this area. R&D also focus to enhance the working temperature of the sensor to be higher in order to coverage more market sector. In addition, there is also focus to enhance the light sensing to be higher accuracy and precision for next generation of application in the future.

Power Packages:

We focus on power package development to have more functionality & for thermal improvement. Packages developed to have multi-chip options as well different cooling options like bottom side cooling or top side cooling or both sides cooling called dual cool. In addition, there are improvement on isolation developed especially for future, higher voltage requirements.

Multichip Modules (MCM):

We focus on IC packaging with complex designs to integrate more functionality while trying to reduce also the overall package size. Development in combining different technologies in IC assembly to have multiple systems in a package with multiple active dice, whether stacked die or side-by-side configuration.

SIP/SMT Modules:

Demand for more functionality in a small package size also drives system-in-package (SIP) & SMT modules combining technology for IC packaging for active components & SMT package with passive component. These packages also have some additional requirements for its functionality improvement, for example, metal shield for EMI protection.

Commodity/Standard IC Packages:

The commodity or standard IC package also gets to be improved & developed further using new supplier capabilities to increase leadframe/substrate density, combined with new BOM selection to improve capabilities to support latest customer requirements.



Silicon & Silicon Carbide Power Management devices

Silicon Carbide (SiC), is a new material, a compound of Silicon and Carbon which can operate at very high temperatures allowing much higher voltage, higher switching frequency with lower power losses than traditional Silicon semiconductors so it is perfectly suited to power applications for smarter power designs in a broad range of high-end consumer electronics, consumer white goods, telecommunications, cloud computing & especially EV-inverter/OBC (On-Board charger) and renewable energy (solar and wind sectors), where faster re-charging speeds are required. Because of these physical properties, SiC is more difficult to manufacture and costlier. However, we will also produce standard Silicon for devices that do not require such high performance levels but are lower in cost to produce as there is high demand for both types.

- Hana has invested the necessary equipment to produce in mass production scale the products of Silicon & Silicon Carbide Power Management devices through its subsidiary Power Master Semiconductor (PMS) in Korea. After installation of equipment, Hana's subsidiary PMS will have the capability to produce Silicon & Silicon Carbide Semiconductors to be sold directly to end customers or further processed at Hana's existing IC Assembly & Test factories in Thailand and/or China into packaged IC or Power Modules.

This will support the growth of Hana's existing IC Assembly & Test business to enter into the fast growing market for EV cars & EV chargers and other uses of Power Management devices.

- Strategic Products and Package Developments (SPPD) in Hana Jiaying which has been established in July 2021 focusing on power semiconductor packaging solution for emerging renewable energy saving application market like Electric Vehicles (EV) traction module, On-board charger, EV charging station, using SiC MOSFET, Diode and Si IGBT, Diode. This research and development organization is capable semiconductor packages design, predict its electrical and thermal performance by simulation software, as well as thermo-mechanical stress and mold flow, also Hana Jiaying's pilot line can provide prototype and pre-production samples to customers.

There are various discrete and multichip power semiconductor package platforms under development like TO-247 2/3/4Leads, TOLL, TOLG, PQFN which are JEDEC compliance. These packages targeted Halogen free EMC, robust delamination solution, heavy Aluminum wire up to 20mil and Clip Bonding capability. These discrete power packages reliability qualification is following AEC-Q101.

Power semiconductor package solution to electric vehicle is most focused activities. This single side and DSC (dual side cooling) molded module for xEV traction is application for 1200V, 400Amp or 650V, 800Amp accommodating die technology of SiC MOSFET, Si IGBT and DIODE combination.

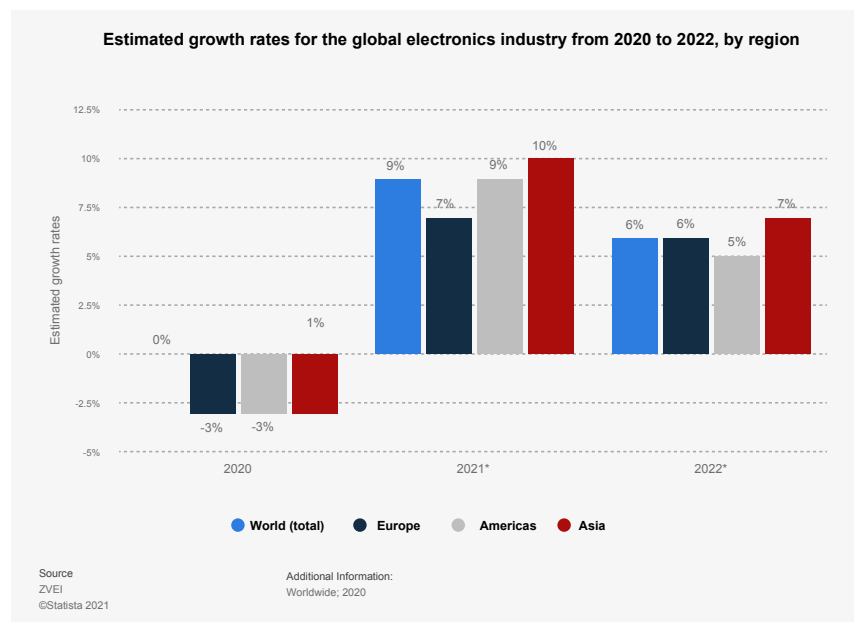
For Semiconductors Packaging Research and Development, Hana established Finite Element Analysis (FEA) capabilities. These simulation solutions will predict products and packages thermal, electrical, thermo-mechanical performance by proposed and given design by Hana Jiaying, also to minimize trial and error, learning cycles, preventing failures, saving customer resource and development cycles.

The investment of Research and Development for power semiconductor device technology in the past 3 years:

(Unit: Million Baht)

2021	2020	2019
94.2	84.4	26.7

Marketing, Industry Status and Competition



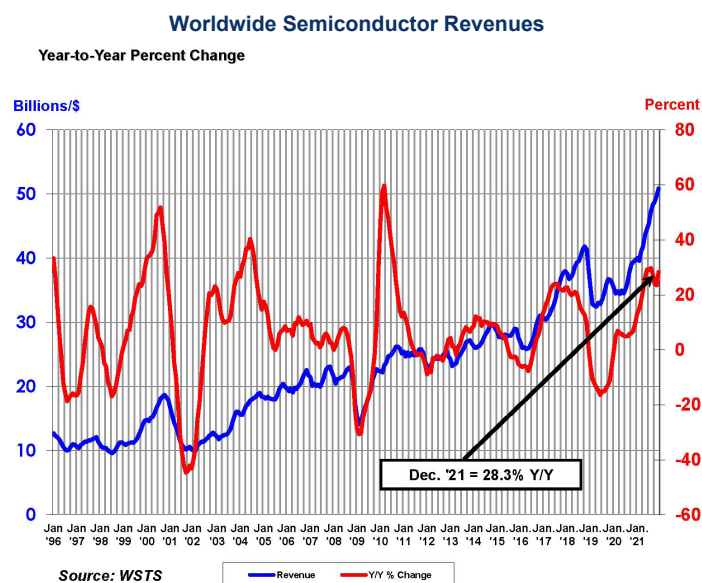
Source: ZVEI - Zentralverband Elektrotechnik- und Elektronikindustrie e. V. (www.zvei.org) and Statista (www.statista.com)

Electronics Market

The electronics sector in 2021 showed a strong rebound when compared to 2020 which was impacted by reduction in global demand due to the COVID-19 outbreak. It is projected that the sector will still maintain a healthy single digit growth in 2022. As at the end of 2021, there remains shortages of both materials and product in the electronics market.

However, there are still many variables that may impact the growth projected in 2022. New variants of COVID-19, inflation that may impact the purchasing power of the consumers, geo-political issues, both the US-China trade war and the Russian war in Ukraine, as well as logistic bottlenecks and continued supply chain challenges, all of which will impact the projected growth outlook in 2022.

A key driver to both the projected and sustainability of this growth is driven by the semiconductor market and how it responds to the challenges posed by increased capacity needs due to demand increasing while grappling with longer lead times of materials and equipment which was further aggravated due to COVID-19 related closures and disruptions.



Source: The World Semiconductor Trade Statistics (WSTS) (www.wsts.org) and Semiconductor Industry Association (www.semiconductors.org)

As per the Semiconductor Industry Association (SIA), the global semiconductor industry sales totaled USD 555.9 billion in 2021, the highest-ever annual total and an increase of 26.2% compared to 2020 total of USD 440.4 billion. The industry shipped a record 1.15 trillion semiconductor units in 2021, as chip companies ramped up production to address high demand amid the global chip shortage.

In 2021, semiconductor companies all added capacity and ramped up production to record levels to address the shortfalls in capacity. The increased use of electronics in Automotive, Industrial, IOT, Medical, storage, computing and many other industries driven by the 'work-from-home' and COVID-19 related life-style changes increased the demand for semiconductors.

In addition, the advent of the national decoupling and a drive towards in-sourcing added to the shortages in supply.

On a regional basis, sales into the US market saw the largest increase (27.4%) in 2021. China remained the largest individual market for semiconductors, with sales there totaling USD 192.5 billion in 2021, an increase of 27.1%. Annual sales also increased in 2021 in Europe (27.3%), Asia Pacific/All Others (25.9%), and Japan (19.8%).

Several semiconductor products segments and IC categories stood out in 2021.

Semiconductor Product Segment	% Growth in 2021
Analog	33.10%
Logic	30.80%
Memory	30.90%

Type of Semiconductors	% Growth in 2021
Micro ICS	15.10%
All Non Memory ICS	24.50%
Automotive ICS	34.30%

Source: The World Semiconductor Trade Statistics (WSTS) (www.wsts.org)

For 2022, WSTS is projecting a more modest annual semiconductor growth of 8.8%, topping USD 600 billion in worldwide annual sales.

Market analyst projected that the supply chain and capacity crisis for chips will be with us through at least mid-2022 when more capacity becomes available and visibility to real demand improves. At the same time, the U.S. and European independent design manufacturers (IDMs) are expected to be online by mid-2022, resulting in component oversupply and another round of supply chain readjustments. We will also see OEM companies increasingly taking control of their product roadmap and supply chains by designing their own chips. This will add another variable and complexity on the supply chain.

Hana's Marketing Policy

Hana's marketing policy is focused on manufacturing quality electronic products and providing good services, while maintaining a trusting and strong relationship with our customers. We form strategic partnerships with our clients by providing turnkey solutions, technical support and new developments in manufacturing solutions. We strive to develop a diverse range of industrial exposures with as low customer concentration as possible.

Whilst keeping a close watch the market trends, we work closely with our customers to become their partner of choice over the long term. All of our Top-10 customers have greater than 10 years of history with Hana.

Our customers are electronic component companies, original equipment manufacturers ("OEMs") and contract manufacturers for printed circuit assemblies and components/ICs that go into a wide range of electronic end applications, such as telecommunication, automotive, computer/cloud computing, mobile phone, medical, RFID, industrial applications, consumer electronics and test and measurement. Our customers range from the largest multi-national global companies to the smallest start-ups worldwide.

Hana manufactures all products according to the customers' specification and requirement and sells such products directly to our customers or customers' designated locations. All of Hana assembled parts are exported with a geographical exposure of USA ~20%, Asia ~55%, Europe 15% and Rest of World ~10%. The group has revenue from 5 major customers about 45% of total sales revenue of PCBA and IC segments. No single customer represented 30% or more of the group's revenue.

Hana's Value Proposition and Competitive Advantage

Hana's value proposition of its manufacture of electronics products is to aim for supply stability, capability, reliability and flexibility for our customers. This we believe offers a more competitive overall "cost of doing business" and provides a stable and reliable supply chain.

Hana focuses on technical capabilities that are leading edge at each manufacturing facility. This enhances our competitive advantage contributing Hana's value proposition for our customers.

Hana's strategic competitive advantage is to provide a diversified Electronic Manufacturing Service to an international customer base. Our diversification includes: IC packaging and Test, Chip-on-board, Surface-mount assembly, Hybrid-assembly, Micro-coil etc, which can provide "One-Stop-Shopping" for most of our customers. Provision of this broad range of services is a key competitive advantage for Hana. This integration proves to be extremely useful due to the merging of the semiconductor device to module level assembly.

Our Competitors

In Thailand, there are only few companies doing similar business as Hana. The major competitors outside Thailand in the EMS sector are IMI, Flextronics, Solectron, Plexus, Pemstar, MPI. In terms of the Semiconductor sector, the major competitors outside Thailand are Unisem, Carsem, Amkor, ASE.

Whilst they are competitors, Hana avoids direct competition with these competitors by focusing on the manufacturing of microelectronics component and sub-assembly, while most competitors focus on box build assembly. In the contract manufacturing industry, Hana is now classified as one of the top 50 world EMS companies.

To compete with our competitors:

- Hana (Thailand) position is towards higher technology and better infrastructure than those in the more labor-intensive countries, such as China, India, and Vietnam. Through innovating automation Hana can continue to remain competitive despite ever increase labour costs.
- With locations in both China and outside China (Thailand / Cambodia) The Hana Group is well positioned to manage the US/China trade tensions and the rising trend of decoupling.
- The COVID-19 crisis and the resulting disruptions have led to many customers looking for alternate sources who have the ability to scale and meet their demands. Hana's solid balance sheet and cash flow position allows us to expand and support the needs of our customers.

- Hana (China) also provides a competitive geographic location but with more corporate technical and administrative support to distinguish them from local competitors. This also strengthen our domestic market inside China.
- 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, as well as to handle the non-China manufacturing requirements.
- 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.
- Even with the recent fluctuations in the worldwide economy, Hana's financial situation has remained very solid giving comfort to our customers
- Hana has multiple sites which provide alternative production facilities in case any one site has any difficulty.

Future Projects in Plan

In the Semiconductor divisions in both China and Thailand, Hana continues to expand to support the requirements of our customers and of the market.

We continue to focus on high value-added opportunities by leveraging our technical competency and enhanced quality performances. We also keep our focus on developing next generation packaging technologies to help capture more opportunities and continue the growth. For 2022, expansions will continue to happen to support increased customer demands and technology needs.

For the microelectronics division in Lamphun, we shall continue to broaden our capabilities and increase automation to maintain a competitive cost structure.

Overall Hana expects increased investments in capacity, facility and capability in all locations to keep up with evolving customer needs and demands.

Procurement of products or services

Production capacity

(Unit: Million pieces/ year)

Manufacturing Plants	2021		2020		2019	
	Production Capacity	Actual Production	Production Capacity	Actual Production	Production Capacity	Actual Production
A) PCBA						
• Lamphun plant	1,400	1,190	1,400	1,100	1,400	1,200
• Jiaxing plant	39	25	39	29	39	27
• Cambodia plant	5	3	22	4	22	18
B) IC						
• Ayutthaya plant	5,767	5,072	5,522	4,887	5,085	4,661
• Jiaxing plant	2,241	1,722	1,783	1,439	1,779	1,150
C) RFID & MICRODISPLAY						
• USA plant	500	180	151	114	151	120

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. Our Thailand and Cambodia operations imported most of our major raw materials used in production either directly or through distributors with the ratio of 95% from overseas and 5% domestic suppliers, whereas our China operation imported from overseas 33% and 67% localize sourcing. For US operation, 40% from US, 55% from Asia and 5% from Europe suppliers. Hana group has more than 1,300 suppliers of raw material and no purchase of raw materials from any one supplier valued more than 30% of the total purchases. Our major suppliers, who are the approved vendor list, have the long term relationship with Hana ranged from 7 to 20 years.

The Company orders materials in relation to our customers' orders using planning software systems to match the customer demand. The raw materials are mainly for industrial use and most of them are common in the market. Our major raw materials are Die/ASIC, Leadframe, PCB, capacitor, connectors, gold/copper wires, epoxy, metal parts and plastic parts. The major raw materials are imported from Singapore, Malaysia, Belgium, Hong Kong, China, Taiwan, USA and etc. For most of our customers, wafers are consigned by the customers with their proprietary design but are used solely on their own products.

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.

Assets used in business operating

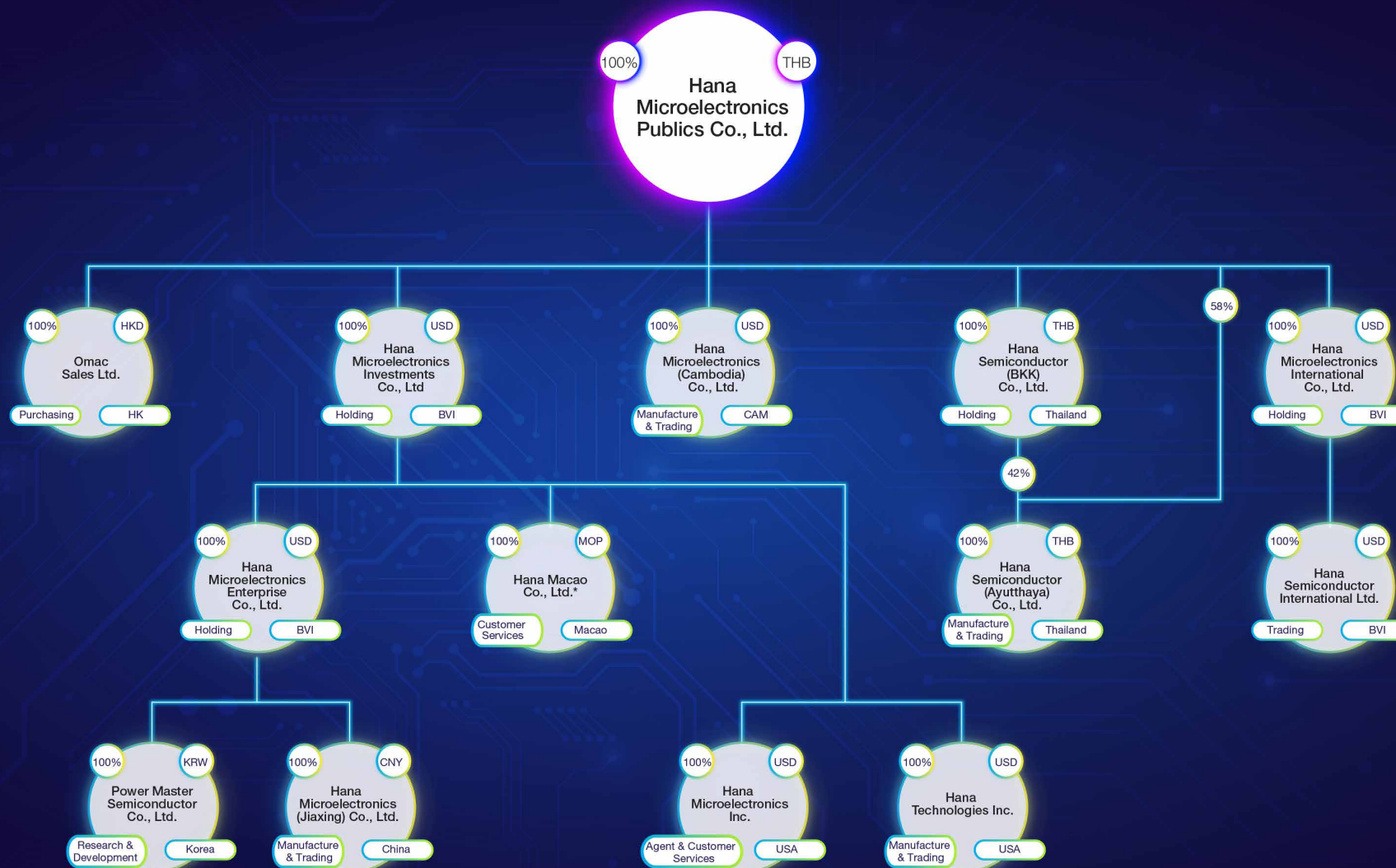
The property, plant and equipment of the Company and subsidiaries as of 31 December 2021 are presented as below.

(Unit: Million Baht)

No.	Description	Net Book Value
1.	Land*	478.4
2.	Building*	1,955.4
3.	Leasehold improvement*	31.8
4.	Fixtures	218.6
5.	Machinery and equipment*	4,943.7
6.	Office furniture and equipment	115.5
7.	Vehicles	10.3
8.	Construction in progress and machinery under installation	1,908.9
	Total	9,662.6

*For further detail reference, it is provided in the attachment 4.

Hana Group Structure



*Formerly named Hana Macao Commercial Offshore Ltd.

1.3 Shareholding Structure

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.

The list of subsidiaries categorize by business type is as follows:

Manufacturing	Holding
<ul style="list-style-type: none"> 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. (R&D) 	<ul style="list-style-type: none"> Hana Semiconductor (BKK) Co., Ltd. Hana Microelectronics International Ltd. Hana Microelectronics Investment Ltd. Hana Microelectronics Enterprises Co., Ltd.
Purchasing	Customer services
<ul style="list-style-type: none"> Omac Sales Ltd. 	<ul style="list-style-type: none"> Hana Macao Co., Ltd.
Trading	Agent and customer services
<ul style="list-style-type: none"> Hana Semiconductor International Ltd. 	<ul style="list-style-type: none"> Hana Microelectronics, Inc.

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

Holding shares by the Company directly:

Company:	Hana Semiconductor (BKK) Co., Ltd.
Business Type:	Holding
No. of shares / Registered shares:	99,999,994/100,000,000 Baht
Type of stock:	Common stock
Address:	65/98 Soi Vibhavadi-Rangsit 64 Junction 2, Kwang Talad Bangkhen, Khet Lakxi, Bangkok 10210, Thailand

Company:	Omac Sales Ltd.
Business Type:	Purchasing of electronic components and equipment
No. of shares / Registered shares:	99,999/100,000 HKD
Type of stock:	Common stock
Address:	Unit B1, 10/F, Block B, HK IND. Centre 489-491 Castle Peak Road, Lai Chi Kok, Kowloon, Hong Kong SAR, China
Company:	Hana Microelectronics International Co., Ltd.
Business Type:	Holding
No. of shares / Registered shares:	2/2 USD
Type of stock:	Common stock
Address:	Vistra Corporate Services Centre, Wickhams Cay II, RoadTown, Tortola, VG 1110, British Virgin Islands
Company:	Hana Microelectronics Investment Co., Ltd.
Business Type:	Holding
No. of shares / Registered shares:	2/2 USD
Type of stock:	Common stock
Address:	Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG 1110, British Virgin Islands
Company:	Hana Semiconductor (Ayutthaya) Co., Ltd.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	69,999,993/120,000,000 Baht
Type of stock:	Common stock
Address:	100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand
Company:	Hana Microelectronics (Cambodia) Co., Ltd.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	5,000,000/5,000,000 USD
Type of stock:	Common stock
Address:	Neang Kok Village, Pakkhlom Commune, Mondul Seyma District, Koh Kong Province Cambodia

Holding shares by the Company's subsidiaries:

Company:	Hana Semiconductor International Ltd.
Business Type:	Trading of electronic components
No. of shares / Registered shares:	1,851,283/10,000,000 USD
Holding shares by:	Hana Microelectronics International Co., Ltd.
Type of stock:	Common stock
Address:	Rua De Pequim No. 126 EDF. Commercial I TAK C18 Macao
Company:	Hana Technologies, Inc.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	437,752/437,752 USD
Holding shares by:	Hana Microelectronics Investment Co., Ltd.
Type of stock:	Common stock
Address:	2061 Case Parkway South, Unit #6, Twinsburg, Cleveland, Ohio 44087, USA
Company:	Hana Microelectronics, Inc.
Business Type:	Agent and customer services
No. of shares / Registered shares:	1,000/1,000 USD
Holding shares by:	Hana Microelectronics Investment Co., Ltd.
Type of stock:	Common stock
Address:	3140 De La Cruz Blvd., #107, Santa Clara, CA 95054, USA
Company:	Hana Microelectronics Enterprise Co., Ltd.
Business Type:	Holding
No. of shares / Registered shares:	2/2 USD
Holding shares by:	Hana Microelectronics Investment Co., Ltd.
Type of stock:	Common stock
Address:	Vistra Corporate Services Centre, Wickhams Cay II, RoadTown, Tortola, VG 1110, British Virgin Islands
Company:	Hana Macao Co., Ltd.
Business Type:	Customer services
No. of shares / Registered shares:	1/1 MOP (Macau Pataca)
Holding shares by:	Hana Microelectronics Investment Co., Ltd.
Type of stock:	Common stock
Address:	Rua De Pequim No. 126 EDF. Commercial I TAK C18 Macao

Company:	Hana Microelectronics (Jiaxing) Co., Ltd.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	40,000,000/40,000,000 USD
Holding shares by:	Hana Microelectronics Enterprise Co., Ltd.
Type of stock:	Common stock
Address:	No#18, Hengnuo Road, Xingcheng Industrial Zone, Ziuzhou district, Jiaxing City, Zhejiang Province, 314000 P.R. China
Company:	Hana Semiconductor (Ayutthaya) Co., Ltd.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	50,000,001/120,000,000 Baht
Holding shares by:	Hana Semiconductor (BKK) Co., Ltd.
Type of stock:	Common stock
Address:	100 Moo 1, T. Baan Lane, A. Bang Pa-in, Ayutthaya Province 13160, Thailand
Company:	Power Master Semiconductor Co., Ltd.
Business Type:	Manufacturing and trading of electronic components
No. of shares / Registered shares:	101,706,697/101,706,697 Won
Holding shares by:	Hana Microelectronics Enterprise Co., Ltd.
Type of stock:	Common stock
Address:	77 Cheongam-ro, Nam-gu, Pohang-si, Kyeongbuk, South Korea

Policy of supervision of subsidiary and associated companies

The Company has authority to manage and oversight the subsidiary and associated companies. Operating section of each subsidiary shall be responsible by General Manager which shall report to the Chief Executive Officer. Capital expenditure and financial control management shall be handling by the Executive Committee which is reviewed by the Board of Directors.

Persons who may have conflicts of interest in shareholding in subsidiaries and affiliated Companies

- None-

List of major shareholders

The first top 10 shareholders and shareholding proportion of the Company as of the latest closing registration book on 1 November 2021 is as follows:

No.	Shareholders	No. of Shares	% Holding
1.	OMAC LIMITED, OMAC (HK) LIMITED, RAINBOW JOY LIMITED		
	1. OMAC LIMITED	40,939,360	5.09%
	2. OMAC (HK) LIMITED	172,480,000	21.43%
	3. RAINBOW JOY LIMITED	40,000,000	4.97%
	TOTAL SAME GROUP	253,419,360	31.49%
2.	LGT BANK (SINGAPORE) LTD	85,592,100	10.63%
3.	THAI NVDR COMPANY LIMITED	56,254,599	6.99%
4.	THE BANK OF NEW YORK MELLON	44,341,500	5.51%
5.	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	29,396,860	3.65%
6.	BBHISL NOMINEES LIMITED	23,520,100	2.92%
7.	SCB DIVIDEND STOCK 70/30 LONG TERM EQUITY FUND	13,681,800	1.70%
8.	BNP PARIBAS SECURITIES SERVICES, LONDON BRANCH	8,600,700	1.07%
9.	UBS AG LONDON BRANCH	7,288,599	0.91%
10.	STATE STREET EUROPE LIMITED	7,082,882	0.88%
	OTHERS	275,700,360	34.25%
	TOTAL	804,878,860	100.00%

Remark:

- No. 1 are the related companies under Section 258 of the Securities and Exchange Act (No. 4) B.E. 2551
- Han Family hold shares in Omac Limited which is a holding company, equivalent to 66.66%. The shareholders of the company consist of:
 - Ms. Janine Margaret Han holds 120,000 shares or equivalent to 33.33% of the total issued shares.
 - Ms. Alyn Sylvie Han holds 40,000 shares or equivalent to 11.11% of the total issued shares.
 - Mr. Oliver Edward Han holds 40,000 shares or equivalent to 11.11% of the total issued shares.
 - Mr. Rupert George Han holds 40,000 shares or equivalent to 11.11% of the total issued shares.
- Mr. Richard David Han takes a position of the director of Omac Ltd., Omac (HK) Ltd. and Rainbow Joy Limited. These 3 companies engage in holding business.

These foresaid 3 companies are the same group of shareholders in accordance to Section 258 of the Securities and Exchange Act of Thailand (No. 4) B.E. 2551

Relationship with the Business Group of Major Shareholders

The major shareholders of Hana Microelectronics Public Co., Ltd. are Omac Limited, Omac (HK) Limited and Rainbow Joy Limited, all of 3 companies holding shares total of 253,419,360 shares, equivalent to 31.49%. Those companies have no relationship or related to any other businesses with the Company.

1.4 Amount of registered capital and paid-up capital

As of 31 December 2021, the Company has a registered capital of THB 974,403,900 and the paid-up capital is THB 804,878,860, divided into 804,878,860 ordinary shares with par value of THB 1.00 per share. The Company has no preferred shares.

1.5 Issuance of other securities

The Company does not issue any other securities besides ordinary shares as stated above.

1.6 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 of the subsidiaries to pay the Company is 0 - 100% of appropriated earnings.

In 2021, the Board considered to propose to pay the dividend payment higher than the policy which was 104% of THB 1,545 million of net profit (EPS 1.92) whilst the proposed dividend of THB 2.00 per share is 71% of net profit before non-recurring items of THB 2,274 million (EPS 2.83) which is more reflective of the operating cash flow of the Company whereas the retained earnings are sufficient to cover the proposed dividend.

Dividend payment	2021	2020	2019
Interim dividend (Baht/share)	1.00	0.65	0.65
Annual Dividend (Baht/share)	1.00	0.75	0.65
Total dividend payment (Baht/share)	2.00	1.40	1.30
Total amount paid (Baht)	1,408,538,005	1,126,830,404	1,046,342,518
Earnings per share (EPS)	1.92	2.37	2.24
Payout ratio	104%	59%	58%

2. Risk Management

2.1 Risk management policy and plan

With due recognition by the Board of Directors of the various risk factors posing as possible threats to the Company and its subsidiaries' business operations, the Board therefore assigned the Risk Management Committee to be responsible for formulating policies and guidelines for risk management, setting risk indicators, evaluating and supervising the organization's risk management practices in a systematic manner as well as improvements to the action plans to manage the organization risks at an acceptable level.



The Risk Management Committee consists of 3 members which composed of independent directors as the majority by having an executive director acting as the Chairman of the Committee in responsible for performing duties directly report to the Board of Directors. The Committee can assign duties to the Risk Management Working Group, which consists of the management team of each Hana division to be responsible for risk management or the Committee can set up any other working group as deemed appropriated.

The Risk Management Committee has formulated risk management policies as following purposes:

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

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.

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

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

2.2 Risk factors on business operation

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

2.2.1 Risk Factors which effect to the Company Group's Business

A) Strategic Business Risk

• Change in Major Customers Risk

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

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

• Global Economic Risk

The Company's selling prices and demand for products and services can be affected from economic condition of global markets derived from the impact of Covid-19 outbreak, US/China trade war, etc.

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

The Russian war in Ukraine increases global economic risks, particularly in

regards to shortages of key raw materials which have a material proportion of world supply from Russia and Ukraine. Global energy prices will be under upward price pressure, however there are also key materials regarding electronics industry such as neon gas which is used in certain wafer fab processes. The Company at this time does not expect any significant impact from theses shortages and the Company's customers also have not identified any significant impact on future IC wafer supply. The Company does not have any customers in Russia or Ukraine and does not believe its major customers have a material exposure to Russia or Ukraine.

B) Operational Risk

• Supply Chain Disruption

The electronics component market in 2021 persisted with shortages, particularly IC components for Printed Circuit Board Assembly "PCBA" and lead frames and customer's IC dies, for Integrated Circuit "IC" production. These shortages continued to escalate during the year due to the increasing demand for electronic products from the recovery of automotive industry, and high demand for goods ordered online during the pandemic. Furthermore, periodic lockdowns due to the pandemic disrupted key manufacturing sectors, and power shortages in China temporarily halted production at numerous factories there. As such, the electronic components supply chain has grappled with lead time delays, availability issues and also the effect of logistics interruption due to a shortage of containers and ship capacity. As a result, the Company could face inability of our suppliers/distributors to deliver materials consistently on time as required, consequently impacting our production planning and delivery of products to customers according to schedule.

To minimize supply chain disruption, each Hana division worked closely with our long-term suppliers/distributors while placing orders in advance for assurance of supply, negotiating extra capacity allocation from our customers by signing long term purchase orders with the customers and suppliers which are backed up by material liability agreements. Stocking more weeks of inventory of material

based on customers' forecast which is once again covered by material liability agreements, as well as aggressively using spot component markets to fill the gaps. We also worked with customers on alternate sources with shorter lead times or multi-sourcing options, and localise sourcing of alternative parts to overcome the shortages. The Company has enhanced Systematic EDI/B2B Integration including evaluating alternative inbound logistics options, booking shipping space in advance and preparing for potential delivery channel shifts.

- **Labour Shortage due to Covid-19 Pandemic**

Our IC assembly & test operation in Ayutthaya "Hana-AYT" suffered from a Covid-19 outbreak during Q3 with close to 25% of our workforce under quarantine for over three weeks. This resulted in labor shortage especially the production operators consequently impacted production planning and delivery to the customers.

Hana-AYT prepared for increased absenteeism and monitor the safety of employees including workforce/labour planning due to quarantine or illness, reviewing manpower requirements, manpower arrangement and recruitment, job rotations, implementing new work schemes between working from home and working at the office. The Company took efforts to accelerate to get employees' fully vaccinated and boosters also, as well as various measures to take care of employees' health, both prevention and control of the epidemic including communicating and adjusting production plans with customers to prioritize production and delivery.

- **Long Lead Time of Equipment Impact On Capacity Expansion**

In view of the ongoing pandemic coupled with the sudden surge in industry demand caused extension in lead times for new machine orders. This impacted the ability of Hana-AYT to provide increased capacity for new customer orders. However, while the customers were looking for increased capacity as the current level of production capacity is insufficient, they were also looking for solid and dependable CM's like Hana-AYT who would be able to expand and grow with them over time. Given the solid standing of Hana in the industry, this has opened up new customer opportunities.

Hana-AYT has placed the long lead time equipment orders so that we will have capacity in place to meet the increased customer demand. As the qualification times for semiconductor manufacturing expansion take 9-12 months, we need to get enough time to get ready. We are continually looking into optimising processing time so that we can produce more units per hour and maximize capacity utilisation.

- **Cybercrime**

Cybercrime is a potentially high impact risk from which part of the Company's IT software and data could be compromised. The Company could be affected by cyber-attacks affecting hardware, systems, network, customer data and intellectual property that can cause damage to our business, affect our bottom line, business disruption as well as our reputation as a reliable supplier and customer trust.

The Company has developed the Cyber Security Policy and Cyber Attack Guideline Information Technology System including Personal Data Protection Policy covering security incident response plan and security incident respond team, which have been approved by management. Our Hana Ayutthaya has been awarded ISO 27001 certification which is the international standard for information security management which is a risk-based approach to corporate information security risk management that addresses people, processes and technology. Further, we have the expert review and assess the associated risks with our cyber security control along with proper management actions to reduce identified risks. In 2022, Hana Lamphun plant will work towards achieving ISO 27001 certification also.

- **Hazard Risk**

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

The Company mitigates this risk through having multiple production sites in multiple countries. The Company further reduces facility risks at each factory with numerous measures to minimize the risk of a facility being damaged by such events. The

management regularly reviews and audits the measures taken to minimize fire and flood risk. Furthermore, the Company has insurance for property damage and business interruption to further mitigate the risk from facility damage. At the group's major facilities in Thailand the Company has additional flood protection to reduce the risk of damage from flood.

• Key Management Risk

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

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

C) Financial Risk

• Foreign Exchange Rate Risk

In 2021, the Group had loss on exchange rate and loss on derivatives amounting to Baht 308,655,356.

Below is the summary of the past 3-year of gain (loss) on exchange rate and derivatives.

(Unit: Million Baht)

	2021	2020	2019
Gain/(loss) on exchange rate	(274)	127	334
Gain/(loss) on derivatives	(35)	8	-
Total	(309)	135	334

The main risk of financial impact is the exchange rate movements of the Thai Baht and Chinese Yuan compared to the US dollar. However, both the Company's sales revenues and material costs are almost wholly in USD which provides a natural hedge. Capital expenditure is also in USD for machinery which is mostly imported.

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

To reduce the risk of volatile exchange rate, USD 120 million is hedged using foreign exchange forward contracts to buy THB and sell USD on a rolling 1 to 6 months basis.

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

• Group Financial Investment Risk

As at 31st December 2021, the group had THB 6.0 billion in cash and short term investments. Part of the cash reserves are invested in corporate bonds and short term debt funds to provide investment income return.

In 2018 and 2019 the Company invested a total of USD 35 million in SICAV-SIF - Credit Suisse (LUX) Supply Chain Fund. The fund was to provide supply chain funding for companies which were backed by sales invoices of those companies and the payment risk was to be insured by AA grade insurers. In March 2021, Credit Suisse Asset Management (Switzerland) AG, announced the termination of Supply Chain Fund, in which the Group had the investment of USD 37.3 million or equivalent to Baht 1,169.8 million as at date of termination. During 2021, USD 24.6 million was repaid leaving a balance of USD 12.7 million outstanding. As there is no independent fair market valuation of the balance outstanding of the fund the Company's management as decided that it is prudent to write down to zero the

balance of the Credit Suisse Supply Chain Fund. This resulted in a charge to the 2021 Financial Statements of the Company of THB 421 million (USD 12.7 million).

The financial investments risk is mitigated through investing in investment grade financial instruments such as deposits, bonds and similar funds which are investment grade at the time of purchase. The financial investment portfolio invests in a diversified range of corporate bonds and short term debt in a diversified range of industries and countries which minimizes the risk if a country and/or industry is impacted by certain economic events.

D) Compliance Risk

- **Regulatory risk**

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

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

E) ESG Risk

- **Environmental Risk**

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

Solar panels (totaling 3MWP output) have been installed on the roof of the Companies' facilities in Lamphun and Ayutthaya from which the Company uses this green electricity, which reduces electricity consumption which would otherwise be from using fossil fuels.

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

- **Human Rights Risk**

The Company employs only legally qualified persons in each country that it operates and has assessed human rights risk. The Company has been regularly assessed by the customers to ensure compliance with the Electronic Industry Coalition (RBA) Code of Conduct which covers labor and human rights, self-assessment audits done by the internal auditors where the findings and corrective actions are reported to management and to the Audit Committee regularly. In addition, the Company has been certified the ISO 45001 Occupational Health and Safety standard. The Company has required our Suppliers to sign compliance with the Supplier's Code of Conduct. In addition, Hana Lamphun received an award from the Department of Industrial Works for the third year in a row in recognition of the Company's commitment towards sustainable corporate social responsibility. The Company also provides an open channel for employees and the third party to filing compliant/suggestion for areas that need improvement.

- **Corruption Risk**

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

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

2.2.2 Shareholder Concentration Risk

- **Risk from the Company having a major shareholder of more than 25%**

As at 1 November 2021, the Company's major shareholder was the Han family with a shareholding ratio of 31.49% of the total number of shares issued. As a result, they can exercise their right to object or disapprove the resolutions of the shareholders' meeting on matters as specified in the Company's Articles of Association or related laws requiring a vote of not less than three-fourths of the shareholders' meeting who attended the meeting and voted.

In order to ensure transparency and in compliance with the principle of good corporate governance, we have an organization structure consisting of competent management and have clearly defined the scope of powers and duties including the Audit Committee comprising of independent directors to ensure that stakeholders are treated fairly according to their rights and the right balance of management and transparent leadership. The company's Board of Directors comprises 50% independent directors and the Chairman of the Company is an independent director.

2.2.3 Risk of Listing in Foreign Securities Markets

Hana does not have any securities listed in foreign markets.

2.2.4 Emerging Risks

- **Climate Change**

Climate change and its associated impacts are an operational risk. Climate change brings warmer temperatures from the greenhouse effect, resulting in more frequent and extreme weather events such as floods and storms which may cause severe impact. The Company therefore emphasizes on the management and control of risks toward climate change with both short and long term actions as well as monitoring the emerging climate related risks. To prepare and manage of climate change, the Company and its subsidiaries are pursuing a range of adaptive practices to identify, respond to, and stay ahead of current and expected legislation. We are endeavor to reduce consumption of, and reusing, resources. The Company automation manufacturing transformation. However, technology innovation also creates opportunities for cybercriminals to find loopholes and to commit crimes. We continue to period for all Hana plants. Our Hana LPN plant also had 100 cases of Covid-19 in Q421 but production output was not affected. In 2022 and future years, similar events are possible. However, with high levels of vaccination and boosters, the risk of shutdown and production impact is much reduced.

- **The US-China Relationship**

Trade friction between USA and China will lead to a separation of the global supply chain for electronics as USA and China want to reduce reliance on each other throughout the supply chain. As the Company has factory locations based in China, Thailand, USA and Cambodia, we are in a position to support all markets. Our plant in China will support local demand and less reliance on overseas demand. The other plants in the Company will support customer demand outside China. We expect this trend to continue in future years.

3. Business Sustainability Development



3.1 Policy and objectives of sustainability management

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 whilst minimizing the impact to the environment.

Policy: The Board of Directors commits that Hana shall conduct its business with respect to Environmental, Social and Governance (ESG) responsibilities, as well as for all group of stakeholders. It is the board policy that we endeavor to conduct the business with high professional and ethical standards under the principles of good corporate governance for continuous and sustainable growth. We shall uphold 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 and environment for the mutual benefit of our stakeholders, community and our planet

Strategy and framework: Hana's business environment is highly competitive. The Company seeks to expand its growth and to continually improve the capabilities and productivity of its production processes. Whilst doing so the management and staff are mindful for sustainable development and review each change to ensure compliance with the sustainability objectives with regards to the economic, social and environmental impact. The Company has established Corporate Governance and Sustainability Committee with the sub-committee representatives from different departments to deploy the Company's policy, goals and action plans in practices.

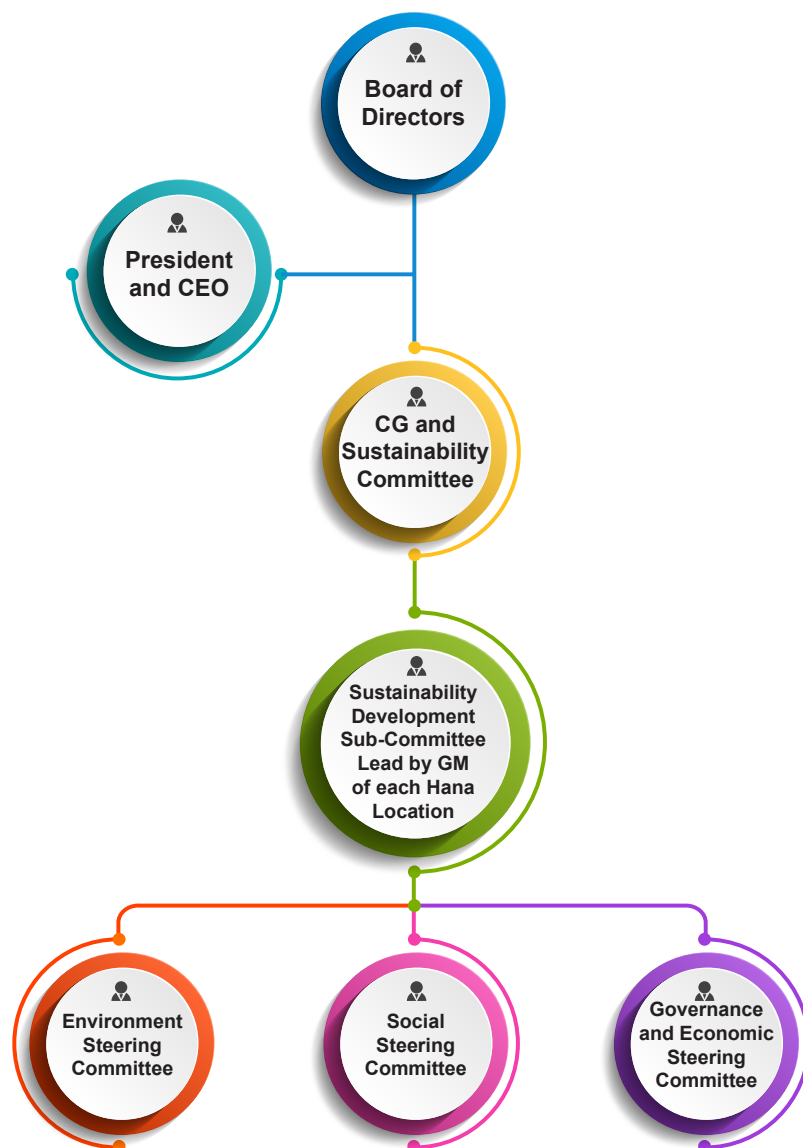
Our sustainability principles



A responsible business of the future — conducting business with good governance, integrity and accountability, managing business performance with profitable growth and shareholders return, and innovation for efficient process, product quality and service as well as making positive contribution to the organization towards sustainable development

A society for our future — Respecting human rights, non-discrimination, developing human capital with knowledge and skills, creating a healthy and safe workplace, social and community engagement.

A better environment with a future — Managing greenhouse gas emissions, improving resource usage efficiency, preventing pollution, protecting and improving ecosystems



Sustainable Development Structure

A board-level Corporate Governance and Sustainability Committee has been established with the majority of independent directors to help the board discharge their responsibilities by delegating to the Committee to set the Company's sustainability policy, framework, goals, strategy and oversee the implementation and monitor the progress. The activities of the Committee are managed by each GM of each Hana operating units along with ESG working groups.



UN Sustainable Development Goals (SDGs)

The 17 UN Sustainable Development Goals are the fundamental goals continuing an ongoing effort in working towards a sustainable future for economically, environmentally and socially. Hana promotes the stakeholder participation through its various activities by integrating the United Nations Sustainable Development Goals (SDGs) into the organizational sustainability practices. We have reviewed our progress on the SGD's and our strategy in actions which lately cover 12 goals as follows.



Goal 3: Good health and well-being

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



Goal 4: Quality education

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



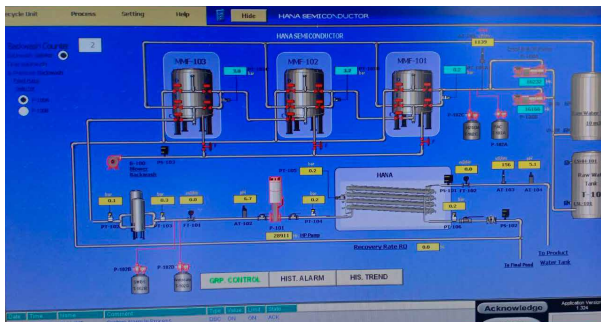
Goal 5: Gender equality

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



Goal 6: Clean water and sanitation

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



Goal 7: Affordable and clean energy

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



Goal 8: Decent work and economic growth

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



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Goal 9: Industry, innovation and infrastructure

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



10 REDUCED INEQUALITIES

Goal 10: Reduce inequality within and among countries

Promote social inclusion policies for all employees regardless of age, gender, disability, race, ethnicity, origin, religion, and economic status



11 SUSTAINABLE CITIES AND COMMUNITIES

Goal 11: Sustainable cities and communities

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



12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Goal 12: Responsible consumption and production

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



13 CLIMATE ACTION

Goal 13: Climate action

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



16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Goal 16: Peace, justice and strong institutions

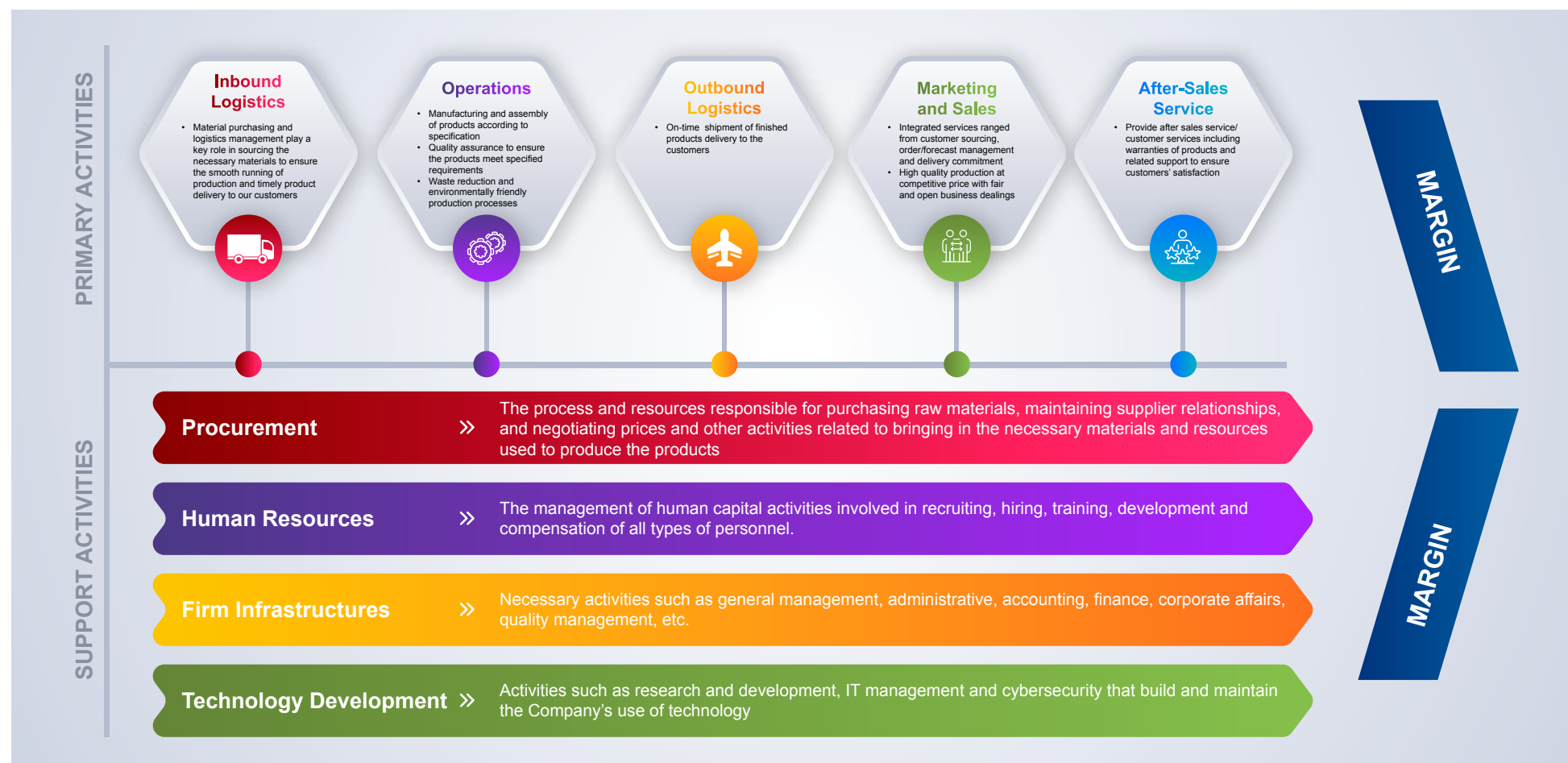
Anti-corruption certification and the implementation of the principles of good corporate governance



3.2 Management of impacts on stakeholders in the business value chain

Hana Business Value Chain

Hana is an EMS provider where the Company's activity mainly focuses on product manufacturing serving to customers around the world whereby we shall strive to operate sustainability across the value chain which is classified as primary activities and support activities to ensure responsible business practices and to meet the expectations of stakeholders inside our own organization and across our entire value chain.



Stakeholder Engagement

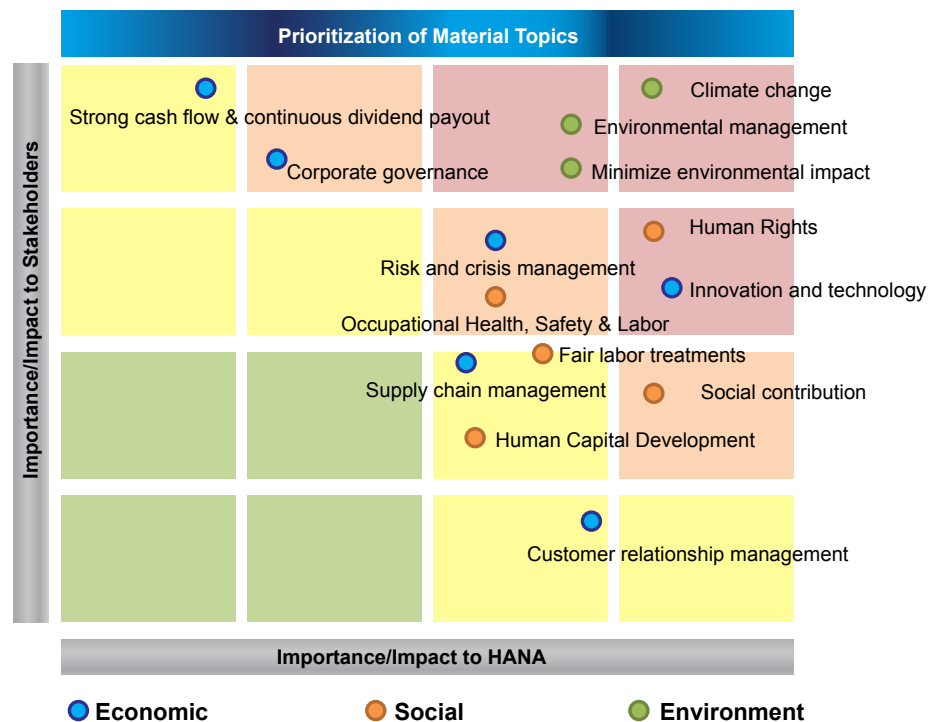
The Company has the policy to provide opportunities for stakeholder involvement with those who are affected by or may affect from the business activities of the Company. The stakeholder feedbacks are used to assess key issues in order to find ways for mutual benefits.

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Internal stakeholders			
Shareholder/Investor	<ul style="list-style-type: none"> Analyst meeting Annual General Meeting of Shareholders 56-1 One Report, Press Release ESG scorecard questionnaire 	<ul style="list-style-type: none"> Consistent dividend payment Steady growth Environment, Social and Governance 	<ul style="list-style-type: none"> Dividends paid each year based on the Company's cash flow Company vision for constantly strives to grow and be competitive Corporate governance scorecard Environmental management
Employee	<ul style="list-style-type: none"> Employee's satisfaction survey Orientation, exit interview Training and workshop Complaint channels Operation meeting Risk assessment 	<ul style="list-style-type: none"> Appropriate compensation and welfare Occupational health, safety, and environment Career development 	<ul style="list-style-type: none"> Employee Relation Committee Occupational health, safety and environment Career development program
External stakeholders			
Customer	<ul style="list-style-type: none"> Customer audits Customer's satisfaction survey Customer visits Risk assessment 	<ul style="list-style-type: none"> Quality products with on time delivery and competitive product pricing Ethical and environmentally responsible Occupational health, safety and environment 	<ul style="list-style-type: none"> Quality management system Supply chain management Code of conduct and The Responsible Business Alliance (RBA) Version 7.0 Occupational health, safety and environment Green product Productivity improvements Cost reduction programs Working to grow with new and existing customers

Stakeholders	Engagement Approach	Expectation/Concerns	Implementation
Business Partner/Supplier	<ul style="list-style-type: none"> Supplier audit Supplier quality management Risk assessment 	<ul style="list-style-type: none"> Fair and transparent supplier selection Payment on time Supply chain management 	<ul style="list-style-type: none"> Code of conduct Treatment of creditors Supply chain management
Community	<ul style="list-style-type: none"> Activities conducted outside the Company Advice/feedback from Industrial Estate Community visit program Recruitment Procurement 	<ul style="list-style-type: none"> Operate with no impact to the environment Support low-income and disadvantaged communities Employment opportunities for local people Support local business 	<ul style="list-style-type: none"> Environmental management CSR to support community project Hiring local people when qualified Products and services purchase from local business when qualified

Materiality Prioritization

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



Economic:

Risk and crisis management
Innovation and technology
Good governance
Supply chain management
Strong cash flow & continuous dividend payout

Social:

Human Rights
Fair labor treatments
Occupational health, safety & environment
Customer relationship management
Social contribution

Environment:

Climate change
Environmental management
Minimize environmental impact

3.3 Management of environmental sustainability

3.3.1 Environmental Policy and guidance

Hana's environmental policy is approved by management to suit the context and support the strategic direction of the organization in showing its commitment to protect the environment, use resources efficiently, reduce the impact on the environment including complying with legal requirements and continuously promoting employee participation in environmental management initiatives.

Hana's Occupational Health, Safety and Environment Policy


Hana is committed to preserving the environment, caring for our employees regarding occupational health, safety and environment as well as adhering to the social and labor accountability with respect to the business. We aim to:

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

The main content of this policy has been communicated to employees at all levels through the Company's noticeboard, the intranet website, and guidelines for employees to perform their work. 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.

2030 GOALS

Hana is committed to take actions to improve the environmental impact and actions that can help slow the rate of climate change. The United Nations Sustainable Development Goals (SDGs) serve as a framework for our development in regard to an environmental dimension with a focus on protecting and preserving natural resources and climate for the next generation of global citizens (Planet) whereby Hana Thailand has set the targets within 2030 from the base year 2020 as follows:

SDGs	<div><div>6</div><div>CLEAN WATER AND SANITATION</div><div></div></div>	<div><div>7</div><div>AFFORDABLE AND CLEAN ENERGY</div><div></div></div>	<div><div>12</div><div>RESPONSIBLE CONSUMPTION AND PRODUCTION</div><div></div></div>	<div><div>13</div><div>CLIMATE ACTION</div><div></div></div>	<div><div>16</div><div>PEACE, JUSTICE AND STRONG INSTITUTIONS</div><div></div></div>
Environment Management	Energy Management	Water Management	Waste Management	GHG Emission	
Hana Lamphun and Hana Ayutthaya	40% Energy intensity reduction	45% Water intensity reduction	40% Waste generation intensity reduction	40% GHG emissions intensity reduction (scope 1&2)	
Navigating the Roadmap	Synergies between renewal energy and energy efficiency	Taking a sustainable and holistic approach to water management	Waste-to-Energy and waste management improvement projects	Clean and energy efficiency innovation including carbon credit projects	

3.3.2 Environmental operating results

Energy management

Major focus areas of energy consumption reduction projects are as follows:

- **Energy-efficiency programs:** The Company has assessed its energy conservation potential of major machinery and equipment; undertaken actions by investing in projects to upgrade the operational efficiency to save energy. The Company also has implemented energy conservation projects each year to reduce electricity consumption. Electricity reduction projects in 2021 of more than 20 projects such as reducing energy consumption in compressed air systems by reducing pressure and reducing air leakage, controlling the speed of the Air Handling Unit, split system air conditioners, control the operation of the Make-up Air Units, reduce the flow rate of the Chilled Water System, and etc. resulting in a total annual energy savings of 3,148,682 kWh, which can reduce greenhouse gas emissions 1,571 Ton CO₂-eq and saving electricity cost to the Company amounting to Baht 10,261,170 per year.
- **Renewable Energy Strategy:** The Company recognizes the importance of renewable energy as one of the strategies necessary to make our environment sustainable and help mitigate climate change. Solar panels were installed on the roofs of three factories of Hana in Lamphun and Ayutthaya Provinces in 2020. These three solar plants have total 3 MWs capacity. The renewable power generation result in energy consumption reduction as follows:

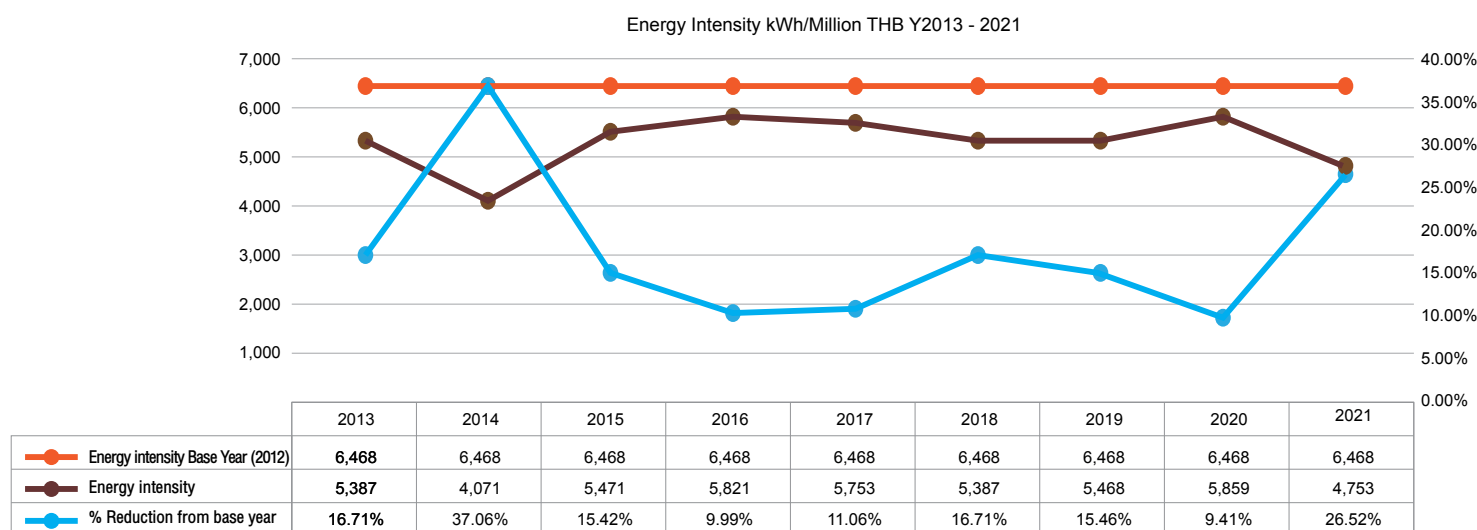
Energy saving from installing solar roof panels	Hana Lamphun	
	2021	2020 (base year)
Units of energy reduction (kWh)	2,820,724	498,497
Energy intensity reduction (kWh: Million THB of Sale Revenue)	271.43	56.89
Electricity cost reduction per year (THB)	4,332,162.50	770,625.62

*Start in October 2020

Energy saving from installing solar roof panels	Hana Ayutthaya	
	2021	2020 (base year)
Units of energy reduction (kWh)	1,394,988	921,988
Energy intensity reduction (kWh: Million THB of Sale Revenue)	170.04	140.59
Electricity cost reduction per year (THB)	2,022,732.60	1,336,882.60

*Start in May 2020

Summary energy emission intensity with original base year in 2012 of Hana Lamphun:



Energy consumption performance in 2021 compared to the new base year of 2020 of the Company and its subsidiaries:

Energy intensity (kWh: Million THB of Sale Revenue)				
Energy consumption	2021	2020 (base year)	% (2021-2020)	2021 Target
Hana Lamphun	4,752.72	5,859.43	-19%	-5%
Hana Ayutthaya	12,132.42	13,967.80	-13%	-5%

Water management

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

Water resource management – The Company has implemented the 3R's of water conservation: Reduce, Reuse, Recycle as to reduce water supply consumption and minimized wastewater discharge.

- Water “Reduce” by removing excess water usage by equipment and adjust the pressure accordingly, “zero chemical usage project” to reduce the drainage of the Cooling Tower system as well as the project to upgrade the Chiller system to reduce the use of water supply
- Water “Reuse” by using the water in the gutter around the factory, reuse for watering planting around the plant and in the bathroom
- Water “Recycle” by improving waste water quality through Reverse Osmosis System and flow back to the Chilled water loop, Wet Scrubber System and planting watering systems including the use wastewater from Sawing production process and re-treated through Ultra-Filtration System to be reused in the air-conditioning Cooling Tower System.

Water consumption performance in 2021 compared to the new base year of 2020 of the Company and its subsidiaries:

Water consumption (Cubic meters per Million THB of Sale Revenue)				
Water usage	2021	2020 (base year)	% (2021-2020)	2021 Target
Hana Lamphun	32.30	49.00	-34%	-5%
Hana Ayutthaya	30.00	35.49	-15%	-3%

Waste management

Hana is committed to sustainable waste management for resource-efficient consumption both in the production process and the supporting departments, by promoting awareness among those involved both inside and outside organization as well as the campaign to raise awareness among employees to effectively reduce waste and promote better waste management. The Company has the waste inventory, waste profile, waste flow diagram including the waste management and hazardous waste separation where the waste is collected separately from the production building and is disposed of by a licensed company authorized by the Ministry of Industry. The Company has implement its waste management system in accordance with the 3R's (Reduce, Reuse, Recycle) principle as a guideline for managing unused materials in the factory, hazardous substances control towards environmentally friendly production processes, projects to reduce the amount of waste and create value-added as well as contribute to the most efficient use of resources.

Waste management guidelines:

- Waste sorting procedure to segregate waste for reuse or recycle
- Process improvements to minimize the amount of waste generation
- Improve waste management and minimise waste disposal to reduce landfill waste
- Hazardous substances control and the production process to be environmentally friendly production and increase the disposal value by converted to the new products (Recycle) as much as possible and reduce the type of hazardous waste of electronic equipment

Waste management performance in 2021:

- The amount of waste that can be recovered for reuse is 87% of the total waste from the target of 80%.
- Received Green Industry Certification Level 4, reflecting a green culture organization which emphasizes on the cost-effective use of resources as well as the systematic supervision and management of waste
- Zero oil and chemical spill

Waste management performance in 2021 compared to the new base year of 2020 of the Company and its subsidiaries:

Waste Management (Weight (kg) per Million THB of Sale Revenue)				
Waste management	2021	2020 (base year)	% (2021-2020)	2021 Target
Hana Lamphun	61.10	57.30	7%	-4%
Hana Ayutthaya	214.12	231.70	-8%	-4%

Greenhouse Gas Emissions (GHG) Reduction

To reduce the carbon footprint of operations and the value chain, Hana has focused on mitigation solutions and projects to reduce its contribution to global warming and environmental degradation. Here is an overview of our ways to reduce greenhouse gas emissions for a low-carbon economy in 2030.



The major activities of the business generated greenhouse gas emissions are from the use of electricity in the production process and supporting functions. In 2020, Hana factories in Thailand had installed renewable power capacity for the solar panels on the roof as part of our mitigation to reduce the negative environmental impacts and continue to achieve our long-term goals for sustainable society. To reflect the commitment and ensure reliability of GHG emission data, the Company and its subsidiaries in Thailand have prepared the carbon footprint reports according to the standard of the Greenhouse Gas Management Organization (TGO) in 2021 as the first year, which is the data from 1 January 2021 – 31 December 2021 and have been verified by the reviewers who are registered with the TGO. Our carbon footprint covers the emissions of 7 GHG gases: Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF₆) and Nitrogen Trifluoride (NF₃) with the purpose to be used in determining effective ways to reduce the organization's greenhouse gas emissions. The Company's greenhouse gas emissions are prepared covering three scopes: Scope 1 (Direct Emissions), Scope 2 (Indirect Emissions from Use of Purchased Electricity) and Scope 3 (Other Indirect Emissions).

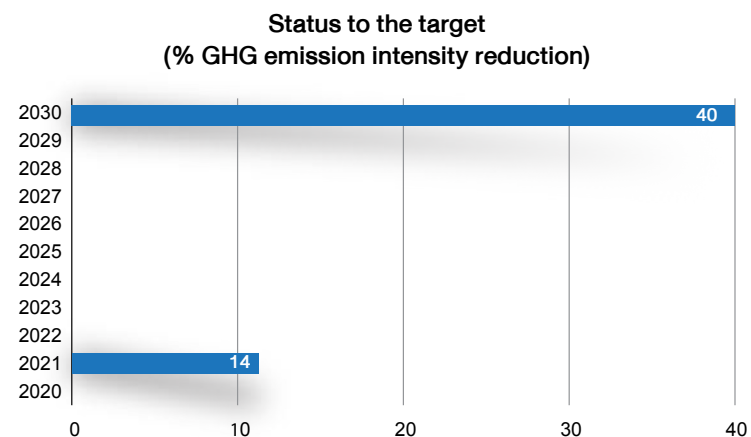
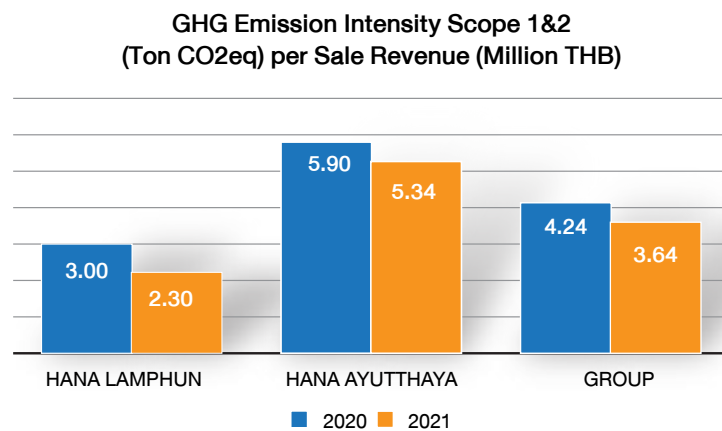
In 2021, the Company and its subsidiary have 3 manufacturing plants in Thailand with the greenhouse gas emissions as follows.

Greenhouse Gas Emissions (Ton CO ₂ eq)					
Company	No. of factory	Location	Direct emission	Indirect emission	Total GHG emissions
			Scope 1	Scope 2	
Hana Lamphun	2 factories	LPN1- Northern Region Industrial Estate, Lamphun, Thailand	533	23,332	23,865
		LPN2- Sahapat Group Industrial Park, Lamphun, Thailand			
Hana Ayutthaya	1 factory	Hi-Tech Industrial Estate, Ayutthaya, Thailand	3,139	40,644	43,783
Total GHG emissions of Hana Thailand factories in 2021					67,648

Name list of the qualified consultants and the reviewers of the carbon footprint preparation who registered with the Greenhouse Gas Management Organization (TGO) for the carbon footprint reports of the Company and its subsidiaries in 2021 are as follows.

Company	Qualified consultant	Qualified reviewer
Hana Lamphun	Mr. Wasan Puttiput	Asst. Prof. Dr. Nathiya Kreetachat SEEN School of Energy and Environment University of Phayao
Hana Ayutthaya	Mr. Samart Sukman	VGREEN Faculty of Environment Kasetsart University

Greenhouse Gas Management (Scopes 1 and 2) Performance in 2021 (verified by the reviewers) vs 2020 base year (reviewed by the consultants):



3.4 Social sustainability management

3.4.1 Social policy

Hana conducts the business with social responsibility to reduce the impacts arising from the business activities by adhering to the principles of accountability, transparency, ethical, respect for human rights and focus in the needs and expectations of stakeholders throughout the value chain.

The Company provides the high quality products and services to meet customer satisfaction and takes into account the participation and community development and promote the well-being of society and the environment by complying with laws and regulations or relevant international guidelines and participate towards the sustainable development goals.

Social Sustainable Goals

Hana is committed to socially responsible business towards the Sustainable Development Goals (SDGs) to serve as a direction for the development of the social dimension.



3.4.2 Social operating results

Respect Human Right

Hana aims to conduct its business with ethics holding on to responsibility to society and all groups of stakeholders based on the corporate governance principle and the code of conduct. For human rights protection, the Company has complied with laws and international standards especially giving support to and complying with Universal Declaration of Human Rights: UDHR, United Nations Global Compact: UNGC, United Nations Guiding Principles on Business and Human Rights: UNGP and the International Labor Organization Declaration on Fundamental Principles and Rights at Work: ILO. The Company recognizes and put in place labor practices by respect human rights in regard to the fairness, equality and non-discrimination both in terms of employment, compensation, promotion, training and development without discrimination of gender, age, educational institution, race and religion, as well as supporting employment for disadvantaged groups in order to create opportunities, career path and a more income with the goals achieving the Sustainable Development Goals (SDGs).

To ensure the Company's business is free from human rights violation, the Board of Directors has approved the Human Rights Policy to prevent violation of human rights in every activity of the Company's business including the Company's business partners. Employees' training, risk assessment, and measure to monitor on the complaint related to human rights violation has been implemented.

The Company supports the responsible sourcing of minerals from such conflict-affected or high-risk areas by providing mineral due diligence support and continue to collaborate with customers and suppliers to implement measures such as mineral identification within the supply chain including supporting the use of mineral resources that meet the requirements under the supervision of the Responsible Business Alliance (RBA/EICC) to uphold human rights across our supply chain.

In 2021, the Company has not received any complaints or reports of human right violations from employees, business partners, or local communities.

Empowering Human Capital

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.

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.

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

Number of disabled employees per total workforce (as at the report date to the Department of Empowerment of Persons with Disabilities)				
	2021	2020 (Restated)	2019	Pay money to the Fund for Empowerment of Persons with Disabilities during the past 3 years
Hana Microelectronics Public Co., Ltd.	40 : 3,767	42 : 4,032	39 : 3,920	-
Hana Semiconductor (Ayutthaya) Co., Ltd.	56 : 4,116	54 : 4,467	62 : 4,606	-
Total Disabilities hiring	96 : 7,883	96 : 8,499	101 : 8,526	

In 2021, Hana Semiconductor (Ayutthaya) Co., Ltd., a subsidiary of the Company, 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 empowering and supporting disability programs for 9 consecutive years. This represents our commitment to promote and create opportunities for hiring people with disabilities and improving their well-being.

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

Summary of welfare program provided to employees:

Economic betterment	Healthcare improvement	Family support	Amenities and others
<ul style="list-style-type: none"> Retirement benefits Provident Fund Social Security Fund Hana Cooperative Fund Shift allowance Attendance allowance Long Service Award Outstanding employee awards 	<ul style="list-style-type: none"> Life and accident insurance Annual physical check-up and specific test in case the work environment can affect health Influenza/Covid-19 vaccination Medical benefits Nursing room for first aid clinic Fitness center and stadium Health promotion programs such as employee training on hypertension and high cholesterol, cancer in women, pulmonary tuberculosis, and training for pregnant and child care Provide helmets to employees for safe driving 	<ul style="list-style-type: none"> Right to leave for vacation, sick leave, maternity leave, etc. Employee assistance program i.e., maternity benefit, employee death benefit, disaster victim, etc. Child education support 	<ul style="list-style-type: none"> Uniform Canteen and low-price consumer goods Dormitory Transportation Recreation activities

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

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

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

Career Path Development Program: To ensure sustainable business growth, the Company has continued the development program for senior staff and manager level called "Career Path Development Program" or CPDP Program. Employees reaching senior staff level have equal chance to undergo the development program which includes the assessment and development activities. The participants have the opportunities to share their expertise, interests and perspectives with management. The program aims to align between the company's expectation, goals and strategies, and the employee strength and contribution. In 2021, there were total 26 employees participated in this program.

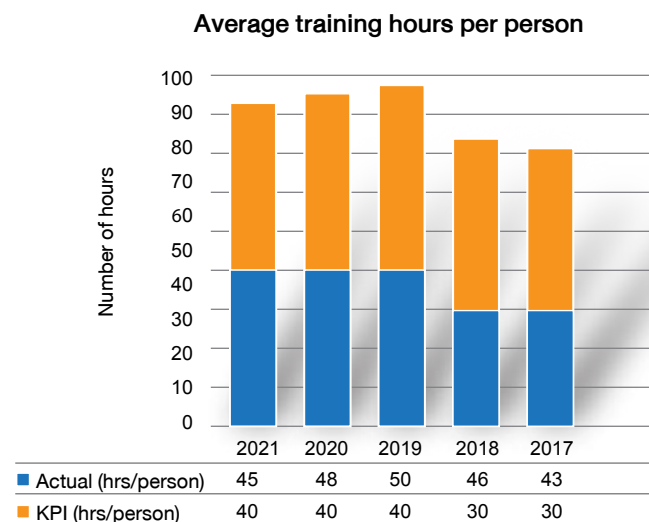
The Company also realizes the importance of developing junior staff as the young generation, who will become the future successor. The "Talent Program" has been established and continued in order to identify high potential individuals and equip them with essential managerial skills and the right mindsets. In 2021, there were 4 courses provided to the selected participants such as Project Management Course, Cultural Difference Management Course, and Learning Organization Course

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

Training and People Development: The Company arranges the annual survey of training necessities from the opinion survey of management and supervisors in consideration of both internal and external factors. The internal factors are job positions, performance assessment according to the competency of each job position, project evaluation such as CPDP Program and Talent Program and business strategic plan. The external factors are customers' requirements, technological advancement, requirement of legal and international standards and etc.

In addition, the Company provides opportunities for employees to participate in the introduction of useful training courses through the suggestion box and employee satisfaction survey form. The result of survey will be considered and carried out for annual training plan as well as individual development plan (IPD). In 2021, the Company provided trainings to employees totally 160,501 hours for total 3,555 employees, of which were for daily employees 108,810.55 hours and for monthly employees 51,690.45 hours, resulting in an average training per person is 57 hours per year.

The average training per person per year for monthly and daily employees versus the KPI in 2021.



In 2021, a wide range of courses was provided to employees, which can be broken down into the following categories:

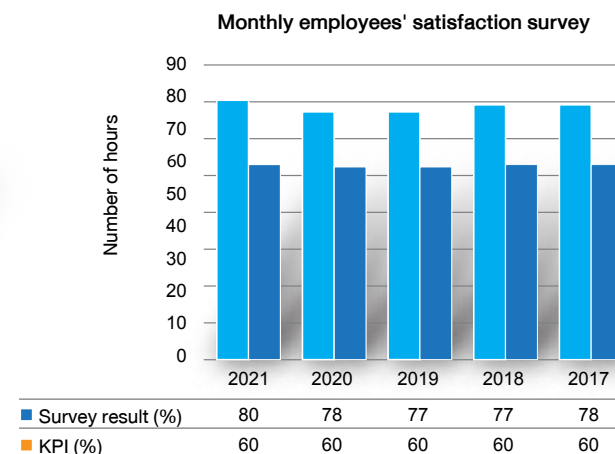
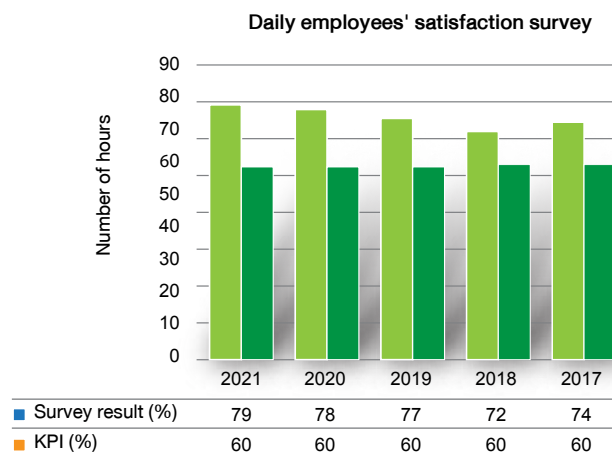
Training courses (type)	Number of training hours			%
	Daily employees	Monthly employees	Total hours	
Professional certification	37,883.15	14,039.40	51,922.60	32.4
Professional re-certification	30,066.00	5,158.00	35,224.00	21.9
Quality	21,054.50	7,523.10	28,577.60	17.8
Management skills	410.30	11,419.15	11,829.50	7.4
General	4,121.00	5,580.35	9,701.40	6.0
Training for certification program	7,428.30	1,668.30	9,096.60	5.7
Health, Safety and Environment	3,222.00	2,774.00	5,996.00	3.7
Computer skills	1,142.30	3,515.15	4,657.50	2.9
Multi-Skills	2,728.00	13.00	2,741.00	1.7
Job transfer	755.00	-	755.00	0.5
Total	108,810.55	51,690.45	160,501.00	100

Personnel Development Evaluation: The Company evaluates the satisfaction and benefits that employees and the Company obtain from our human resource development with a percentage index of satisfaction by assessing the satisfaction of the instructor, the content and the benefits received from the training through the training satisfaction assessment form after the training or after the project complete. In 2021, the training satisfaction of monthly staff achieved 97.6% and 96.5% for daily employees, compared with the target of 80%. The satisfaction of the employees of the Talent Program was achieved at 100%.

For the Talent Program. The Company has evaluated the benefits that the Company has received from the number of employees below managers in the Talent Pool. In 2021, the number of employees in the Talent Pool has increased to 47 employees from 44 headcounts in 2020, representing 6.82% compared with 5% KPI.

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

Employee satisfaction survey vs. KPI of year 2021 compared with the previous years:



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

Employee satisfaction survey results - The Company has analyzed the employee satisfaction survey results for further improvement plans. The improvement project from employees' feedback in the latest year was for work environment related comment. The Company has increased the parking space at the employees' dormitory due to insufficient car parking to service employees, also the Company has arranged a car park at a former football field at employees' dormitory which can accommodate up to 70 additional car parking lots. There are also other facilities improvement projects to enhance the quality of life of employees.

Social protection: Our compensation policy is fair and reasonable according to employees' capability by considering the packages with the same industry and in accordance with their position, experience and their performance in the Company as well as the economic and social situation. Moreover, the Company provides various employees' welfare for example annual vacation, overtime with the consent of employees, medical treatment, employees' cooperatives and other welfares such as group life and accident insurances, annual health check, special vaccination such as Influenza vaccine, Employee Fitness Center, library at certain location, etc. More importantly, the Company provides the children education allowance for children of low income employees. In 2021, Hana Lamphun and Hana Ayutthaya gave the employees for educational expenses of their children almost 984 students amounting Baht 1.6 million.

Long Service Award - The Company recognizes the importance of employee engagement. There are also long service awards are held annually to promote the morale and pride of employees who are dedicated to working with the Company for long time and are the important part of the success and growth of the Company. In 2021, the group of companies, both domestically and internationally, has a total of 766 employees who received awards, classified by service years as follows:

Number of service years with Hana	Number of employees	 Long Services Award	
35 years	3		
30 years	24		
25 years	95		
20 years	73		
15 years	213		
10 years	358		
Total employees	766		

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

Improving health and safety at work: A workplace health and safety plan and its program has been set and approved by management on a yearly basis for managing the prevention of work-related injuries and diseases in the workplace including creating a healthy organization. In 2021, specific activities undertaken by improving employees' health and well-being included the training and awareness-raising about health and safety in the workplace, the implementation, monitoring and evaluation.

- Provide training to promote employees' well-being** – In 2021, the Company provided health and safety training for newly hired and existing employees, including our partners and subcontractors, to ensure full awareness of occupational hazards, to encourage and promote safety in the workplace as follows.

Safety, health and environment training for new hired employees – The Company aimed to equip new hired employees with the basic knowledge to ensure they have the skills, knowledge and attitudes to make them competent in the safety and health aspects of their work. There were 465 new hired employees attending the training in 2021. Their level of knowledge regarding health, occupational health and environment was measured by means of a questionnaire distributed before and after the session.

Safety, health, and environment training for contractors – The Company provided training to 615 people for suppliers, contractors in 2021, as well as other related personnel to ensure the primary stage of the effective working conditions and safe working environment in reducing the risk of injuries and accidents at work.

Prevention of musculoskeletal disorders in the workplace - The Ergonomics training was provided to 359 employees that help lessen muscle fatigue, increases productivity and reduces the number and severity of work-related musculoskeletal disorder such as office syndrome.

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

Workplace accidents or injuries: The accident statistic report is posted on the bulletin board by detailing the target and accident statistics and being updated every day. In 2021, there were totally 4 accidents with 4 cases of small accident that an employee took leave less than 3 days and 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.

Workplace accidents or injuries (case)	2021	2020	2019
Minor accident when employees stop working less than 3 days	4	3	4
Accident that employees stop working more than 3 days	0	1	0
Total	4	4	4

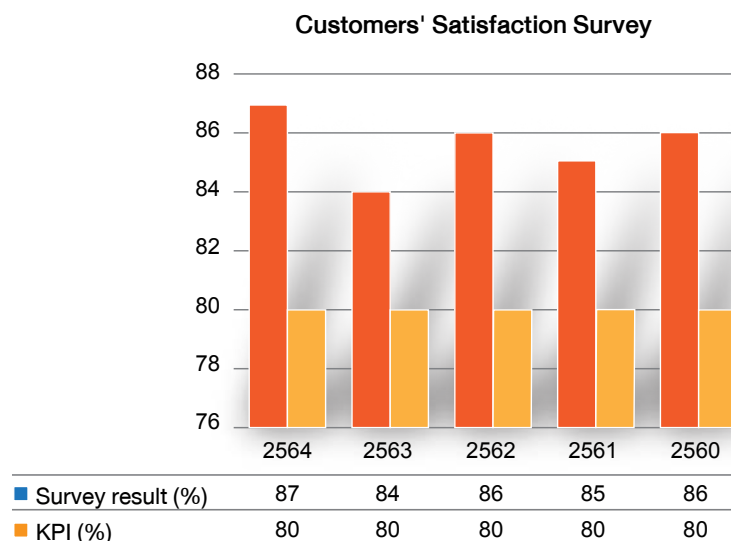
Customer Responsiveness

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

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

Customer relationship management: The customer satisfaction surveys are conducted annually to improve the Company's products, services and other business processes in order to meet the customers' needs and requirements enabling the Company to maintain and expand its customer base in the long term. Our responsible principle toward customers is to operate our business in compliance with applicable laws, rules and regulation as well as compliance with Responsible Business Alliance (RBA) Version 7.0 which is the code of conduct for electronic industry best practices.

Customers' satisfaction survey vs. KPI of year 2021 compared with the previous years:



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

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

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 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 2021. In 2021, the Company received totally 4 prizes consisting of the QCC Promoter Award to Mr. Wichai Sukprasertkul to honor the executive who has contributed to the success of QCC activities, 2 diamond awards were for manufacturing and junior manufacturing, and 1 golden award for junior manufacturing. Those are the performance of small groups of staffs working together to contribute to the improvement of production processes aiming for waste reduction or zero defect enabling the cost reduction to the Company more than Baht 1.7 million per year. The group activity program leads to employees' involvement and participation at all levels working toward common goals for continuous quality improvement as an approach to identify, investigate, analyze and solve their work-related problems so enhance productivity and quality while achieving customer satisfaction. QCC program is also a tool to increase the morale of employees, promote human relations, reduce accidents at work, improve two-way communication with the management and encourage both employees and management at all levels to focus on continuous improvement of our manufacturing processes.

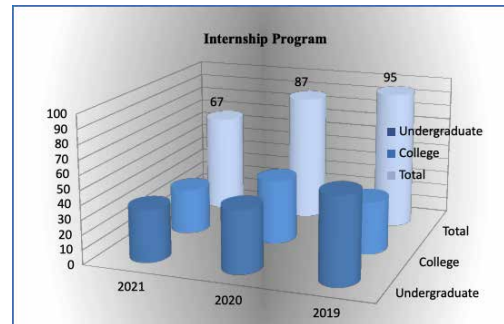


Social and Community Development

The Company engages employees for all levels to participate in the community and social activities and promote the volunteer spirits to realize the importance of caring for the environment and to improve better quality of lives with social contribution as follows:

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

Internship program - Hana recognize the importance of education and career exploration for college and undergraduate students. Our internship program gives students the opportunity to apply knowledge from their fields of study and gain real work experience in preparation for future work.



Career development and income generation for the community

- The Company have coordinated with Wat Nong Sew School and surrounding community in Lamphun Province to renovate the old buildings of the school including support equipment to build-up bakery learning knowledge center. The Company has cascaded the knowledge of doing bakery with digital technology relating to online marketing and distribution by teaching them on how to do online webpage so that the school can have another distribution channel for selling goods efficiently. This helped extending knowledge and revenue to the students and community considerably.
- Supporting the project of a sustainable vegetable garden and fish farm for the local community by cooperation with a local Thesaban Ban Klang School and Ban Klang community in Lamphun, as a learning knowledge center along with solar energy implementation. This project has been created the valuable opportunity for the community by generating income and job advancement for local people.
- The Company made the donation to the persons with disabilities to support their sustainable careers totally 4 projects.



Promoting quality of life and well-being community

As part of our corporate responsibility in support the fight against COVID-19, Hana Lamphun and Hana Ayutthata made the donation to Lamphun Hospital, Bangpa-in Hospital, and Rajthanee Hospital for the fullest benefits in the prevention of COVID-19 and hospital activities.



Underprivileged support

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



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 & NO PLASTIC PROGRAM - The Company joined the government sector in signing a Memorandum of Understanding Ceremony for reducing or banning foam food. The Company has further enhanced the project “HANA NO PLASTIC PROGRAM” along with awareness raising and communication campaign including training provided to all employees to reduce plastic consumption such as plastic cups, plastic bags and switch to use reusable cups/bags/bottles to promote a healthy and safe environment.

General Waste Management Project - The Company promotes the waste and energy reduction to increase green spaces and reduce greenhouse gas emissions by raising awareness to employees to realize the environment is not far away and is a matter for everyone. All must take care of the globe for sustainability. Throughout 2021, we have enhanced the process of bringing waste to recycle disposal and other non-recyclable materials turn into fuel.

Tree planting activities: Hana promotes the green society with the tree planting project in the community to reduce environment pollution.

Build a natural dam: The Company and Lamphun Provincial Office of Labor Protection and Welfare along with the Industrial Estate Authority of Thailand Lamphun Province joined the activity to build natural dam according to the Royal Initiative Project.



Summary of social performance in 2021



CSR Development: In 2021, Hana received CSR-DIW Continuous Award from the Department of Industrial Works for sustainable development for the fifth consecutive years (Lamphun plant 1) and CSR-DIW Award for Lamphun plant 2 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.



The Company received the honor awards in achievement of Outstanding Establishment in Labor Relations and Labor Welfare from the Department of Labor which is demonstrating the importance and cooperation between employers and employees in the development of labor relations and welfare to improve the quality of life of our employees.

The Company received the gold awards for excellent Safety, Occupational Health and Environment in the workplace at a country level, given by the Ministry of Labor for the fourth consecutive years which demonstrates the systematic management of Safety, Occupational Health and Environment in the workplace to international standard level.

The Company received the certificate for “The National Award for Safe, No Disease, and Happy Workplace” from the Department of Disease Control, the Ministry of Public Health, which is valid for 3 years as for the honor by passing the assessment criteria to reduce disease, increase happiness, promote and support well-being, reduce illnesses from chronic non-communicable diseases and injuries with good environment workplace as well as create mental health for employees.

4. Management Discussion and Analysis (MD&A)



Overall Group Performance

Hana Microelectronics Group 'Hana' Sales Revenue increased 23% year on year, at THB 23.8 billion in year 2021 from THB 19.3 billion in year 2020. Sales Revenue in USD terms increased by 21% to USD 743 million in 2021 from USD 616 million in 2020. Earnings from Operations increased 29% to THB 2,219 million in 2021 from 1,725 million in 2020.

Net Profit decreased by 19% to THB 1,545 million in 2021 from THB 1,908 million in 2020 due to higher bonuses, higher R&D costs, exchange loss of difference of THB 444 million and exceptional item of THB 421 million (USD 12.7 million) write-down of balance of Credit Suisse Supply Chain fund in Q421.

Past Performance Analysis

Revenue Analysis

Group Sales increased 23% in 2021 to THB 23,780 million from 2020 at THB 19,282 million due to market recovery from the lower sales revenues in 2020 due to the COVID-19 pandemic. USD sales were 21% higher in 2021 at USD 744 million up from USD 616 million in 2020 as the average THB/USD exchange rate weakened 2% to THB/USD 31.98 in 2021 from THB/USD 31.29 in 2020.

The Microelectronics divisions' sales revenue increased 16% [19% in THB terms] in 2021 over 2020. The microelectronics operation in Lamphun sales increased 16% [+18% in THB terms] and JXG increased by 18% [+21% in THB terms] in 2021. In 2021 IC assembly sales overall increased by 25% in USD terms [+28% in THB terms]. Specifically, IC AYT sales increased 23% [+25% in THB terms], and IC JXG USD sales increased by 49% [+52% in THB terms]. Hana Technologies, Inc. "HTI", sales increased 37% [+41% THB] for the year.

The annual sales split was:

	2021	2020	2019
PCBA (Thailand)	44%	45%	45%
PCBA (China)	13%	12%	14%
PCBA (Cambodia)	0%	0%	0%
IC (Thailand)	34%	34%	33%
IC (China)	5%	5%	4%
HTI (USA)	4%	4%	4%
Total	100%	100%	100%

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

Gross Profit increased by THB 739 million with the gross margin being 14% in 2021 up 1 percentage points from 13% in 2020. +1% points higher gross margin due to greater economies of scale from higher revenues in 2021.

Operating Profit Analysis

The Earnings from Operations margin was similar at 9% in 2021 and 2020 due to higher salary expenses from resumption in bonus payments during 2021 and increased R&D expenses in the IC operation in Korea. SGA including R&D expenses were 17% higher in 2021 than 2020. Exceptional items were THB 421 million (USD 12.7 million) write down to zero of the balance of the Credit Suisse Supply Chain Fund.

Payout Analysis

For the year 2021 the company paid full dividends of THB 1,610 million (THB 2.0/share). An interim dividend paid of THB 805 million in Q4/21 and the final dividend of THB 805 million in Q2/22.

For the year 2020 the company paid full dividends of THB 1,126 million (THB 1.40/share). An interim dividend paid of THB 523 million in Q4/20 and the final dividend of THB 603 million in Q2/21.

For the year 2019 the company paid full dividends of THB 1,046 million (THB 1.30/share). An interim dividend paid of THB 523 million in Q4/19 and the final dividend of THB 523 million in Q2/20.

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

Financial Status

Net Cash reserves and financial investments were THB 6.0 billion at the 31st December 2021 down from THB 9.7 billion at the 31st December 2020.

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 62 days in 2021, 64 days in 2020 and 64 days in 2019.

(Thousand Baht)

Trade Receivables	2021	2020	2019
Less than 3 months	4,252,339	3,318,590	3,212,509
3 - 6 months	52,465	18,861	9,054
6 - 12 months	5,720	3,203	3,579
More than 12 months	5,408	2,418	3,626
Total accounts receivable - other companies	4,315,932	3,343,072	3,228,768
Less : Allowance for doubtful accounts	(11,114)	(6,117)	(4,485)
	4,304,818	3,336,955	3,224,283

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 101 days in 2021, 98 days in 2020 and 98 days in 2019.

Accounts Payable

Credit terms with suppliers are mostly open account with credit terms varying from cash in advance to 90 days. The credit term has been determined in accordance with the principles of fair dealing between the Company and suppliers. Accounts payable were 52 days in 2021, 50 days in 2020 and 57 days in 2019.

Liquidity

The group has THB 6.0 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 3,520 million in 2021, 21% higher than THB 2,900 million in 2020. EBITDA was THB 3.5 billion in 2021 and THB 2.9 billion in 2020 and 2.5 billion in 2019.

Cash and financial investments in 2021 decreased to THB 6.0 billion, due to EBITDA 3.5 billion less final dividend THB 0.8 billion 2020 paid in Q221, interim dividend Q421 THB 0.6 billion, net capital expenditure THB 3.9 billion, other items THB -1.9 billion.

Cash and financial investments in 2020 increased to THB 9.7 billion, due to EBITDA 2.9 billion less final dividend THB 0.5 billion 2019 paid in Q220, interim dividend Q420 THB 0.5 billion, net capital expenditure THB 1.1 billion, other items THB 0.6 billion.

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

Capital Expenditure

Capital Expenditure was THB 3,895 million in 2021, THB 1,055 million in 2020, and THB 1,076 million in 2019. Capital Expenditure was higher than in 2020 due to the higher capital expenditure from Ayutthaya plant compared to recent years due to the demand recovery in 2021, COVID-19 pandemic starting in 2020 and weakening in the semiconductor industry in 2019. Higher capital expenditure from development in IC division in Korea. Generally, capital expenditure for production equipment will follow the increase in sales, particularly in the IC division. However, there is a 6 to 12 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.

Tax Payment

The corporate tax policy of Hana group has been set as a framework for tax management and practices to be in accordance with legal, rules and regulations governing the taxes of each country in which the business operates. Below is the tax reporting for local and overseas operations of Hana group.

Description	Thailand operations	Overseas operations	Total
Total revenues (Million Baht)	18,873	5,264	24,137
Profit before income tax expenses (Million Baht)	2,710	(1,112)	1,598
Normal income tax rate (%)	20%	0-25%	
Income tax expenses per normal tax rate (Million Baht)	542	48	
Actual income tax expenses (Million Baht)	25	28	53
Actual income tax rate (%)	1%	(3%)	

Hana operations in Thailand have paid the corporate income tax expenses lower than the normal tax rate as received the promotional privileges for tax exemption under the Investment Promotion from the Board of Investment (BOI) while the overseas operations have paid lower than the normal tax rates due to the operating loss.

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 values 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. Other factors which may affect operating performance of the company are (but not limited to): Customer retention, winning new customers, product price erosion, customers products success in their respective markets and lifecycle of such products, consistently manufacturing products to agreed specifications and delivery schedules with customers, recall, product liability risks in the event of product failures, suppliers price and consistent supply of raw materials to

agreed specifications, supplier financial solvency, fluctuation in foreign exchange rates for each of our operations compared to both product sales currency which is primarily USD, materials purchasing currency which is primarily USD and the operating currency in each country which we operate, wages and salaries increases, availability and turnover of direct labour and skilled staff, credit risks, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks. Our success in executing and completing mergers and acquisitions and subsequent operational risks. Our success in developing and marketing new products and factory processes. Success in protecting intellectual property developed.

Macro-economic stability of the countries in which we, our customers and suppliers operate. Global financial stability which may affect interest rates and access of funding of the company, its customers and suppliers. Pandemic risks such as the continuing severity, magnitude and duration of the COVID-19 pandemic, including impacts of the pandemic, of businesses' and governments' responses to the pandemic the extent to which the COVID-19 pandemic and related impacts, including global supply chain disruptions.

Foreign Exchange Rates

The THB/USD currency movements reflected the economic trends in emerging markets and commodities during period. The average rate for 2021 was THB/USD 31.98 which was 2% weaker than 2020 of THB/USD 31.29 was 1% weaker than the THB/USD 31.05 in 2019.

Impact from COVID-19

Demand in 2021 continued to increase and was strong throughout the year. Increased demand resulted from consumers' expenditures moving from travel and services more towards physical goods, including electronics, due to the restrictions on travel and entertainment imposed by governments in attempts to control the spread of COVID-19. Demand was further supported due to developed country governments injecting cash in the economies to help alleviate reduced spending from the economic downturn.

COVID-19 outbreak occurred in Q321 in our Ayutthaya plant reducing production in Q321 and an outbreak also occurred in Q421 in our Lamphun plant but there was no material affect on

production. Due to increased demand globally for physical goods rebounding from cut backs in demand in 2020 supply chain disruptions occurred of semiconductor components which affected many of our customers. However, the overall result was not a material impact to our ability to supply our customers.

In 2020 there was no material impact on the company or groups performance or financial condition from the COVID-19 pandemic. Our plant in Jiaying, China was the most directly impacted due to an extended Chinese New year shutdown and shortage of labour which resulted in USD 20 million sales in Q120 being less than sales of USD 33 million in Q119. No other plants in the group suffered from any lockdown. Except for 2 cases at the subsidiary, Hana Technologies, Inc. in Ohio, USA, no other site's employees suffered COVID-19. Each factory made preparations for work-from-home if an outbreak occurred. Social distancing strategies, daily checking of all employees and visitors to each site for COVID-19 symptoms and regular disinfection of all surfaces in all non-production areas also have been implemented.

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

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

Exceptional Items

In Q4 2021 we wrote down the balance invested in Credit Suisse (Lux) Supply Chain Finance Fund of THB 421 million (USD 12.7 million) to zero. The original invested amount totaled USD 35 million. Whilst there may be some further recoveries from the fund we believe it is prudent to provide for the balance of the fund. There were no Exceptional Items in 2020, or 2019.

Subsequent Event

None

Consolidated Statement of Earnings

(Unit: Thousand Baht)									(Unit: Thousand Baht)								
	2021		2020		2019		2021-2020	% 2021- 2020		2021		2020		2019		2021-2020	% 2021- 2020
Revenues									Expenses								
Sales	23,780,179		19,282,520		20,384,422		4,497,659	23%	Cost of Sales	20,492,977	86%	16,734,326	87%	18,193,460	85%	3,758,651	22%
Consisting of:									Selling & Admin. Expenses	1,329,088	6%	1,126,805	6%	1,103,980	6%	202,283	18%
PCBA (Lamphun, Thailand)	10,195,977	44%	8,617,065	44%	9,093,562	38%	1,578,912	18%	R&D Expenses	94,223	0%	84,417	0%	26,744	0%	9,805	12%
PCBA (Jiaxing, China)	3,120,701	13%	2,581,014	13%	2,787,832	17%	539,687	21%	Other Expenses	-		-		-			
PCBA (Cambodia)	108,126	0%	107,461	1%	85,348	0%	665	1%	Total Expenses	21,916,287	92%	17,945,549	93%	19,324,183	91%	3,970,738	22%
IC (Ayutthaya, Thailand)	8,182,304	34%	6,526,515	34%	6,665,343	34%	1,655,789	25%	Operating Earnings	2,218,648	9%	1,725,137	9%	1,408,122	10%	447,559	26%
IC (Jiaxing, China)	1,161,537	5%	763,655	4%	914,667	6%	397,882	52%	Dividend Income	2,066		1,992		66		75	
HTI (Ohio, USA)	961,680	4%	682,908	4%	837,670	5%	278,773	41%	Interest	113,953		139,610		183,557		(25,658)	-18%
IC (Korea)	49,854		3,902	0%					Finance Expenses	(7,492)		(9,066)		(13,234)		1,575	-17%
	23,780,179	100%	19,282,520	100%	20,384,422	100%	4,451,708	23%	Earnings Before Income Tax	2,327,175	10%	1,857,673	9%	1,578,511	11%	423,550	23%
Other Income	354,755		388,166		347,883		(33,411)	-9%	Corporate Income Tax	(52,708)	2%	(60,127)	3%	(108,265)	5%	7,419	-12%
Total Operating Revenues	24,134,935		19,670,686		20,732,305		4,418,297	22%	Earnings Before Exch. & Exceptional Items	2,274,466	10%	1,797,545	9%	1,470,246	11%	430,969	24%
									Exchange Gain (Loss)	(308,655)		135,706		334,338		(444,361)	
									Exceptional Items	(420,498)		(25,511)		-		(394,987)	
									Net Earnings For The Period	1,545,314	6%	1,907,741	10%	1,804,585	13%	(408,379)	-21%

Consolidated Balance Sheet

	(Unit: Thousand Baht)				
	2021	2020	2019	2021-2020	% 2021-2020
Assets					
Current Assets					
Cash In Hand & At Banks	3,304,173	5,400,261	5,434,979	(2,096,088)	-39%
Financial Investments	2,694,695	4,266,901	3,582,766	(1,572,206)	-37%
Accounts Receivable - Trade	4,552,783	3,460,920	3,340,723	1,091,863	32%
Inventories	6,856,572	4,496,142	4,518,387	2,360,430	52%
Other Current Assets	161,613	95,709	137,874	65,904	69%
Total Current Assets	17,569,835	17,719,932	17,014,729	(150,097)	-1%
Long Term Financial Investments	154	97	135,790	57	58%
Investments In Associated Company	-	-	-	-	
Fixed Assets (Net)	9,734,970	7,010,560	6,974,166	2,724,410	39%
Other Assets	548,008	449,543	301,497	98,465	
Total Assets	27,852,967	25,180,132	24,426,182	2,672,834	11%
Liabilities					
Current Liabilities					
Bank Overdrafts & Loans	-	-	500,000	-	
Accounts & Notes Payable	3,505,876	2,354,747	2,252,054	1,151,129	49%
Short Term Provisions	334,199	311,099	301,540	23,100	7%
Corporate Income Tax Payable	20,528	12,338	22,447	8,190	66%
Accrued Expenses	-	-	-	-	
Other Current Liabilities	168,375	127,928	105,661	40,447	32%
Total Current Liabilities	4,028,978	2,806,113	3,181,702	1,222,865	44%

	(Unit: Thousand Baht)				
	2021	2020	2019	2021-2020	% 2021-2020
Long Term Liabilities					
Long Term Loans	-	-	-	-	
Other Long Term Liabilities	765,895	760,407	698,864	5,488	
Total Liabilities	4,794,873	3,566,520	3,880,567	1,228,353	34%
Shareholders Equity					
Share Capital	804,879	804,879	804,879	-	
Unrealised Gain(Loss) on change in investments	-	-	-	-	
Share Premium	1,723,219	1,723,219	1,723,219	-	0%
Retained Earnings	-	-	-	-	
Appropriated Statutory Reserve	514,958	456,463	456,463	58,495	13%
Unappropriated & Treasury Share Reserve	19,343,953	19,239,560	18,441,803	104,393	1%
Translation adj. & investment revaluation	671,085	(610,508)	(880,748)	1,281,593	-210%
Treasury Shares	-	-	-	-	
Excess Cost Over Net Book Value of Subsidiary Investments	-	-	-	-	
Total Shareholders Equity	23,058,093	21,613,612	20,545,616	1,444,481	7%
Total Liabilities & Shareholders Equity	27,852,967	25,180,132	24,426,182	2,672,834	11%

Consolidated Summary Statement of Cashflows

(Unit: Thousand Baht)					(Unit: Thousand Baht)				
	2021	2020	2019	2021-2020		2021	2020	2019	2021-2020
Cashflow from Operating Activities					Cashflow from Financing Activities				
Net Earnings before Tax	1,598,022	1,967,868	1,912,849	(369,846)	Payment of principal portion of lease liabilities	(11,385)	(22,822)	-	11,437
Adjustments to reconcile net earnings to net cash provided by operating activities					Cash received from increase in share capital & overdraft	-	(502,038)	494,115	502,038
Non Cash items					Dividend paid	(1,408,538)	(1,046,343)	(1,328,050)	(362,195)
Depreciation	1,301,418	1,175,279	1,138,134	126,139	Net cash (used in) from financing activities	(1,419,923)	(1,571,203)	(833,935)	151,280
Unrealised (gain) Loss on exchange	81,982	4,428	(45,839)	77,554					
Change in other provisions	492,210	(26,762)	(193,122)	519,012	Net Cash, equivalents and short term liquid investments	(2,096,087)	(34,719)	1,353,643	(2,061,368)
	1,875,610	1,152,945	899,174	722,705	increase (decrease)				
Working Capital (increase) decrease					Cash and Equivalents at the beginning of the period	5,400,261	5,434,980	4,081,337	(34,719)
Trade accounts receivable	(1,092,088)	(117,081)	481,963	(975,008)	Cash and Equivalents at the end of the period	3,304,174	5,400,261	5,434,980	(2,096,087)
Inventories	(2,402,126)	(45,845)	720,903	(2,356,280)					
Trade accounts payable	1,065,268	(15,246)	(689,159)	1,080,513					
Other	(137,189)	(37,375)	(114,364)	(99,814)					
	(2,566,135)	(215,546)	399,342	(2,350,589)					
Net Cashflow from Operating Activities	907,497	2,905,267	3,211,365	(1,997,729)					
Cashflow from Investing Activities									
(Increase) decrease in short term investment	1,185,543	(333,929)	1,180,808	1,519,472					
Increase in property, plant and equipment	(4,129,321)	(1,200,505)	(1,407,023)	(2,928,816)					
Proceeds from sale of fixed assets	32,693	33,546	73,694	(853)					
Increase (decrease) in translation adjustment	1,355,725	191,894	(880,325)	1,163,791					
Decrease in short term loans to related parties				-					
Other	(28,301)	(59,789)	9,060	31,488					
	(1,583,661)	(1,368,783)	(1,023,787)	(214,918)					

Consolidated Financial Ratios

(Unit: Thousand Baht)

	2021	2020	2019	2021-2020
Profitability Ratios				
Gross Profit Margin (%)	14%	13%	11%	1%
Operating Profit Margin (%)	10%	9%	7%	1%
Net Profit before Exceptional Margin (%)	10%	9%	7%	1%
Net Profit after Exceptional Margin (%)	6%	10%	9%	-4%
EBITDA margin (%)	15%	15%	12%	
Return On Equity (%) pa	7%	9%	9%	-2%
Return On Assets (%) pa	6%	8%	7%	-2%
Return On Operating Capital Employed (%) pa	12%	14%	11%	-2%
Efficiency Ratios				
Working Capital turnover	4	3	4	1
Account Receivable days	62	64	64	-2
Inventory days	101	98	98	3
Accounts Payable days	52	50	57	2
Liquidity Ratios				
Current Ratio	4.4	6.3	5.3	-1.9
Quick Ratio	2.6	4.7	3.9	-2.1
Financial Capital Ratios				
Debt / Equity	0.2	0.2	0.2	
Net Debt to Equity	-0.1	-0.3	-0.2	0.2
Interest Coverage	N/A	N/A	N/A	

5. General Information and Other Important Information



5.1 General Information

Name:	Hana Microelectronics Public Co., Ltd.
Symbol:	HANA
Company registration number:	0107536000773
Contact address:	
Headquarter:	65/98 Soi Vibhavadi-Rangsit 64 Junction 2, Kwang Talad Bangkok, 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:	www.hanagroup.com
Nature of business:	Electronics Manufacturing Service “EMS” Producer
Registered share capital:	974,403,900 ordinary shares at par value of THB 1 per share
Paid-up capital:	804,878,860 ordinary shares at par value of THB 1 per share
Other type of shares:	None
References:	
Auditor:	EY Office Limited 33rd Floor, Lake Rajada Office Complex, 193/136-137 New Rajadapisek Road, Bangkok 10110 Thailand Tel.: 66 2264 0777 Fax: 66 2264 0790
Solicitors:	Civilian Co., Ltd. 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
Registrar:	Thailand Securities Depository Co., Ltd. 93 Rachadapisek Road, Dindaeng, Dindaeng, Bangkok 10400 Thailand Tel.: 66 2009 9000 Fax: 66 2009 9991

5.2 Other Important Information

- None -

Investors can get more information of the Company at www.hanagroup.com

5.3 Legal Disputes

- None -

5.4 Secondary Market

- None -



6. Corporate Governance Policy

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. We will continue to seek improvements to our solid foundation in good corporate governance to achieve sustainable long-term growth.

6.1 Overview on Corporate Governance Policy and Guidelines

The Board realizes and commits to conduct the Company's business with the good corporate governance in conformance with the principles of corporate governance 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.

The Company has established the corporate governance policy based on the 5 Principles of Good Corporate Governance for Listed Companies of the Stock Exchange of Thailand 2012, and annually 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 8 Principles as follows.

SET CG Principles		Compliance with the SEC CG Code	
Principle 1:	Rights of Shareholders	Principle 1:	Establish Clear Leadership Role and Responsibilities of the Board
Principle 2:	Equitable Treatment of Shareholders	Principle 2:	Define Objectives that Promote Sustainable Value Creation
Principle 3:	Roles of Stakeholders	Principle 3:	Strengthen Board Effectiveness
Principle 4:	Disclosure and Transparency	Principle 4:	Ensure Effective CEO and People Management
Principle 5:	Responsibilities of the Board	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

The Company's Corporate Governance Policy has been disclosed both in Thai and English on the Company's website www.hanagroup.com under the subject Investor Relation > Corporate Governance > CG Related Policies on the subject: Corporate Governance Policy.

6.1.1 Policy and Guidelines relating to the Board of Directors

The Board is responsible for the corporate governance, management and strategic direction of the organization and for delivering accountable corporate performance in accordance with the organization's goals and objectives. The Board has a fiduciary duty with respect to the shareholders and must act in the best interest of the Company.

The Board of Directors of Hana consists of 6 directors which are 3 executive directors and 3 independent directors which is accounted for 50% of the Board. The Chairman of the Board is not the same person who holds the Chief Executive Officer position and the Chairman is an independent director. The Board of Directors has appointed 5 sub-committees which are Executive Committee, Audit Committee, Nomination Committee, Corporate Governance and Sustainability Committee and Risk Management Committee. Those consist of directors with knowledge, ability and experience in the performance of duties in accordance with the responsibilities. All directors have freedom to express their opinions on the Company's operations. The roles and responsibilities of the Board and management are clearly defined so as to ensure independence and ensure that business is efficiently, accurately and transparently administered by the management. The Board shall annually review the structure in terms of size, composition, the proportion of independent directors and the board diversity to ensure its leadership role in achieving the Company's objectives.

Director selection and remuneration

For the director nomination, a director shall be a person whose qualifications are complete pursuant to the Public Limited Companies Act and other qualifications not contrary to any regulations of the Securities Exchange of Commission (SEC) or the Company's policies. The Company also considers the Board's skill matrix by having the Nomination Committee to review and ensure the board selection process and qualified candidates before proposing to the board and/or shareholders for approval.

The Company's succession plan on the key executive position has been set up and review by the Nomination Committee and propose to the Board annually to ensure the proper transition planning of the Company.

The director remuneration (except for the executive committee who receive the remuneration as employees of the Company) is considered and approved by the shareholders' meeting annually. The basis of the remuneration is based on the Company's performance, the director's responsibility, whereby the remuneration shall be benchmarked with other listed companies in the same industry and to be sufficient to attract, retain, and motivate qualified directors to bring the organization achieve both short-term and long-term goals.

Board diversity

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. As part of adopting our diversity policy, the Board has been nominated a female independent director to serve as its member and will look for future opportunities for more woman representation as advancement of women to board positions.

Service on Other Boards

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

Director development

The Board development policy is to ensure the directors gain more understanding and enable them to fulfill their roles. The Company support the director development in forms of orientation, undertaking specific training for continual improvement, updating best practices/director manual, providing access to relevant papers and reports, annual evaluation and factory tours. The Board promotes the directors to receive training through seminar/webinars/forum/workshop/events that enhance the effectiveness of the board roles on an annual basis.

Performance assessment

The Board realizes that the good corporate governance requires effective boards and to evaluate their performance and appraise directors at least once a year. The self-evaluation is the board approach to evaluate each director's contribution on an individual basis, as a team member and as a member of committees. Reporting on the board and committees' evaluations shall allow the Board to view individual director performance and potential additional contribution.

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.

6.1.2 Policy and Guidelines Related to Shareholders and Stakeholders

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. The Company shall not obstruct or cause obstacles for communication opportunities among shareholders. If any shareholder agreement is to be executed by any shareholder, the Company shall endeavor to ensure that such shareholders agreement will not materially affect the Company or other shareholders.

- **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 2021, the Company held the AGM on 30 April 2021 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 on 8 April 2021 which was 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) on 31 March 2021 which was 30 days in advance and the notice of meeting was published through SET's information system or "SET Link" in both Thai and English versions, which were the same as the original notice mailed to shareholders.

The Company also provides opportunities for shareholders to submit questions or enquiries in advance prior to the meeting with the procedures enclosed in the notice of meeting and available in the Company's website. Further, the Company encourages the exercising of voting rights by shareholders who cannot attend the shareholders' meeting by appointing their proxies to participate in the meeting or appoint the Company's independent directors on their behalf to attend the meeting and vote by providing the proxy form B on which shareholders are able to specify their votes, with the notice of meeting. Each shareholder has one vote for each share and a resolution passed by a majority of votes, except where it requires otherwise in accordance with the Company's Article of Association. In case of directors and/or shareholders who have interests in any particular agenda, the interested directors in a foresaid agenda shall leave the meeting room and the votes are not allowed for shareholders who have interests related to any particular agenda item.

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 2021, 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 or invalid and kept for further evidence and verification. In addition, the Company arranges the lawyer as the inspector who is 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. Duty stamps were made available to shareholders with no charge.

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 2021 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 56-1 One Report, etc.;
- The right to obtain a redress or a rectification for any violations of their rights.

In 2021, the Company had no actions that violated the right of shareholders, such as not changing or adding agenda items without notifying shareholders in advance or which limit the access to the Company's information that is released to public. In addition, the Company did not prevent or obstruct any opportunities for shareholders to communicate with each other.

2. Equitable Treatment of Shareholders

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

Treat all class equally:

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

Protect minority shareholders' rights:

The Company has the policies to promote the right of minority shareholders by allowing minority shareholders to propose agenda items and nominate candidates to be elected as the directors in advance at the AGM. During October - December, shareholders have the right to submit proposals for the upcoming AGM to the Board of Directors for consideration. The procedures and criteria to propose agenda items and nominate the directors to the Board of Directors have been posted to the Company's website under section "Investor Relation" title "Corporate Governance." However, in 2021 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.

3. Responsibility to 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. The Company is dedicated to the achievement of equality of opportunity for all of its employees in relation to all personnel matters including recruitment, training, promotion, transfer, benefits, dismissal, and etc. without regard to race, color, religion, gender, national origin or handicap status. All employees will be treated as individuals solely according to their abilities to meet job requirements. Employees shall be provided with reasonable accommodation for religious practices.

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 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.

Customers

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

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

Intellectual property

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

Business partners

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

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

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

The US-China trade war hit semiconductor industry earlier and the performance of semiconductor sector has been tied up to the situation between the world's two largest countries for a period of time. In 2020-2021, the crisis of COVID-19 pandemic has been anticipated and the spread of the lethal illness has interrupted global supply chain and caused the disruptive impacts to the industry. Some of our major suppliers suddenly shut down their operation for several weeks following the demand from local authorities on health and safety concerns and the cross border logistics were also interrupted.

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

Hana conducts suppliers' audit both self-assessment and site visits including business review regularly every quarter and use these activities as a tool to develop and strengthen relationship with our strategic suppliers, especially supplier in tier 1 or critical suppliers. However, with the COVID-19 pandemic and physical distancing requirements, travel bans and the site visits were not possible. We still maintain supplier business review and managed it via WebEx and Zoom meetings for both critical and non-critical suppliers as we are confident that supplier relation, communication and collaboration are the key to our success. For supplier selection criteria, the Company has various criteria for evaluation not only covering price, service, quality, delivery, credit term, but also covering environmental criteria such as ISO 14001 certification of Environmental Management System, ISO 45001 certification of Occupational Health and Safety Management System, or other environmental management.

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

Shareholders

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

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

Business competitors

The Board focuses on running its business with open and fairness and have a practical guidance for the competitors such as fair competition, not involved in the competition by the dumping, persecution or deprivation influence in order to avoid competition, not take any action that violates the intellectual property or copyright of competitors, not use dishonest methods to discredit a competitor or no trade secret violations. In 2021, there was no dispute or lawsuit between the Company and any competitors.

Creditors

The Company treats creditors responsibly with honesty and fairness to obtain a fair return to both parties and comply with the agreement including the terms of guarantee and managing cash flow to be able to pay to the creditors according to the terms and conditions. The Company will notify the creditor status in the event of payment default and to comply with the Consumer Protection Law and other related laws. In case that the Company cannot comply with the agreed terms, the Company shall notify the creditors in advance to jointly find solutions. In 2021, 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.

Hana is also ISO 45001 certified company for Occupational Health and Safety Management System with the policy expressing the commitment to operate business not only to resolve health and safety at work but also cover ways to prevent accidents to the workers and the surrounding community.

The Company encourages the use of resources efficiently by arranging various energy saving projects. The Board supports the training of all employees to achieve a better understanding and create awareness of the environment. In 2021, 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.

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

Government authorities and associated organizations

Hana requires its executive, directors and employees to understand and abide by those laws, regulations, policies, and procedures that applicable to them in the performance of their job duties including the duties to pay tax to the government properly. In 2021, the Board of Directors has established a corporate tax policy as a framework for tax management and practices to be in accordance with legal compliance and the rules and regulations governing the tax of each country in which the business operates including adhere to the business operations with the principles of good corporate governance, business code of conducts and social responsibility.

The Company's Corporate Tax Policy has been disclosed both in Thai and English on the Company's website www.hanagroup.com under the subject Investor Relation > Corporate Governance > CG Related Policies on the subject: Corporate Tax Policy.

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 56-1 One Report, the Company also discloses information in both Thai and English versions through other channels such as the Company's website with regularly post and update. The Company has the Communication and Disclosure Policy to ensure all information relevant and material disclosure in an appropriate, equal and timely manner. There was no violation that Hana breached the disclosure rules and regulations. The financial reports have been disclosed in a timely manner during the past years.

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

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

In 2021, the Company participated in the investor relation's activities as follows.

Participation events	Total (Time)
Analyst Meeting	4
SET's Opportunity Day	4
SET's Digital Roadshow	3
SET's Thailand Focus	1
Online meeting with foreign investors	31
Online meeting with local investors	10

Remark: Completely held by virtual meetings due to the COVID-19 epidemic

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

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

6.2 Business Code of Conduct

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 2021 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 2021.

The Company's Code of Conduct has been disclosed both in Thai and English on the Company's website www.hanagroup.com under the subject Investor Relation > Corporate Governance > CG Related Policies on the subject: Corporate Code of Conduct and Business Code of Conduct of The Board of Directors.

6.3 Major Changes and Development on the Corporate Governance Policy and system during the year

The Board of Directors places importance on conducting business under the principles of good corporate governance. The Corporate Governance Policy has been reviewed at least once a year. In 2021, the Board of Directors has approved the change of the Corporate Governance Committee to be the Corporate Governance and Sustainability Committee and approved the changes of duties and responsibilities through the Charter of the Corporate Governance and Sustainability Committee to be appropriate to the current situation and enhance the efficiency of corporate governance as the key to the sustainability of the Company.

In 2021, the Company has reviewed our corporate governance practices and there are certain areas that the Company adapted alternative approaches, having regard to the Company's particular circumstances. As a result, the Company has not complied with CG Code and corporate governance best practices as major items as follows.

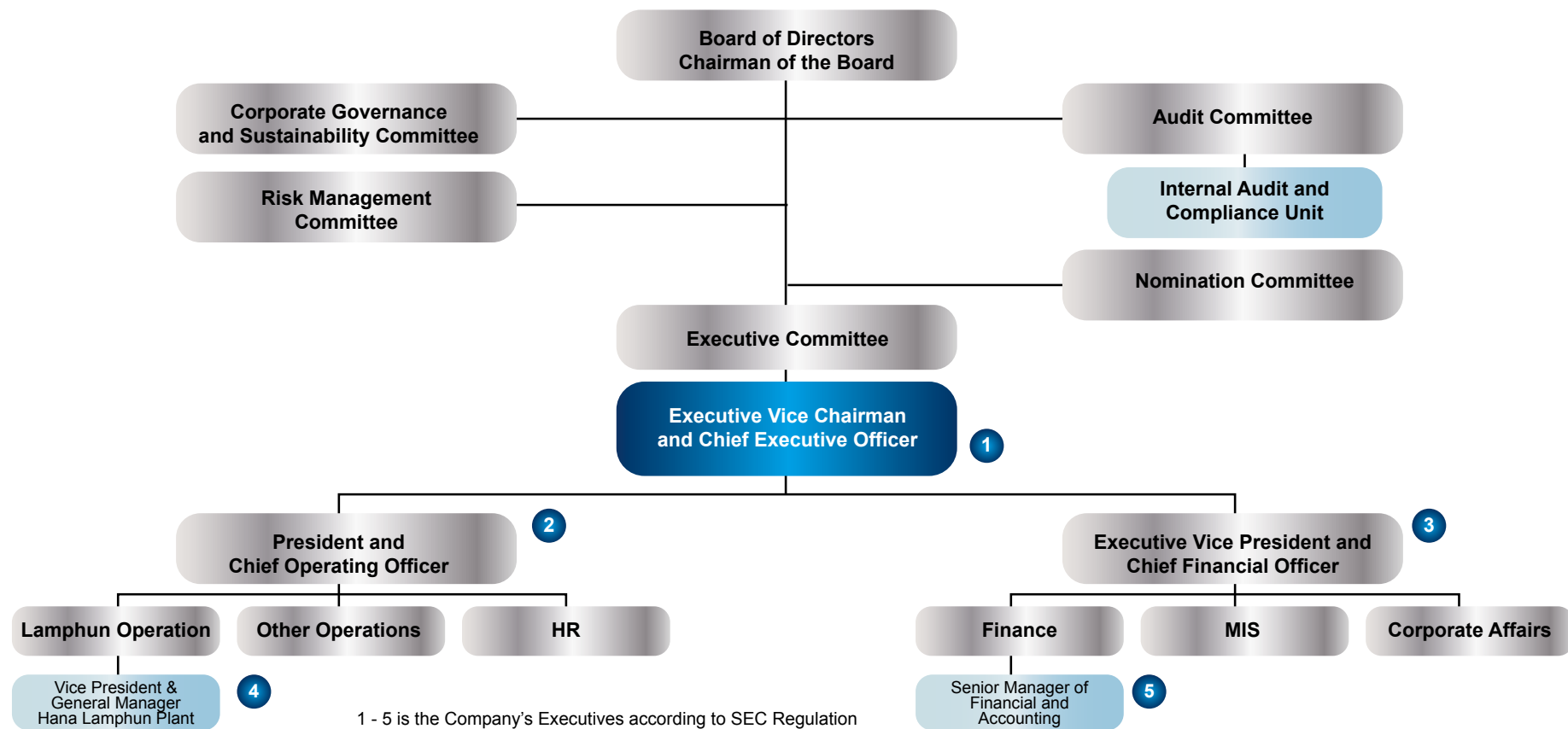
Disclosure of non-compliance	Reasons
1. Independent directors more than 50% The independent directors should make up more than 50% of the Board.	The board structure of the Company consists of three independent directors and three executive directors, which is accounted for 50% of the Board, whereby: The Chairman of the Board and the Chief Executive Officer (CEO) is not the same person; The Chairman is an independent director; The Chairman and the CEO are not immediate family members; The Chairman is not part of the management team.

Disclosure of non-compliance	Reasons
2. Appointment of Remuneration Committee The Remuneration Committee should be appointed and composed of majority of independent directors with specified sets of duties and responsibilities and held at least 2 meetings per year.	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.
3. Disclosure of CEO remuneration	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. 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.

7. Corporate governance structure and material facts related to the board, subcommittees, executives, employees and others

7.1 Governance Structure

The Company's organization structure includes the Board of Directors and 5 sub-committees: Executive Committee, Audit Committee, Nomination Committee, Corporate Governance and Sustainability Committee, Risk Management Committee and the management of key business units. The organization structure as of 31 December 2021 is as follows.



7.2 Board of Directors

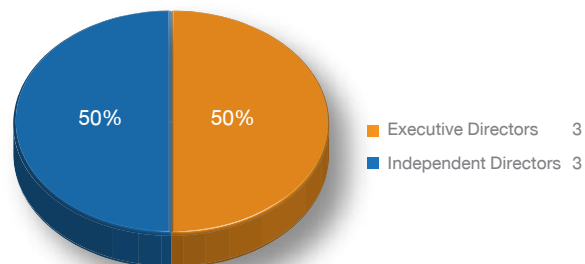
As of 31 December 2021, the Board of Directors consists of six directors of whom three are executive directors and three are independent directors.

Name	Position	Appointment Date
1. Mr. John Thompson	Independent Director Chairman of Board of Directors Chairman of Audit Committee	01 January 2017
2. Mrs. Salakchitt Preedaporn	Independent Director Audit Committee Corporate Governance and Sustainability Committee Nomination Committee	01 December 2013
3. Mr. Yingsak Jenratha	Independent Director Audit Committee Chairman of Nomination Committee Corporate Governance and Sustainability Committee	01 December 2013
4. Mr. Richard David Han	Executive Director Nomination Committee	26 July 1993
5. Mr. Winson Moong Chu Hui*	Executive Director	26 July 1993
6. Mr. Terrence Philip Weir	Executive Director Chairman of Corporate Governance and Sustainability Committee Chairman of Risk Management Committee	26 July 1993

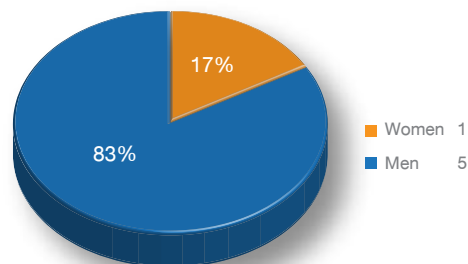
Remark: Mr. Winson Moong Chu Hui resigned from the director effective on 1 January 2022.

Board composition:

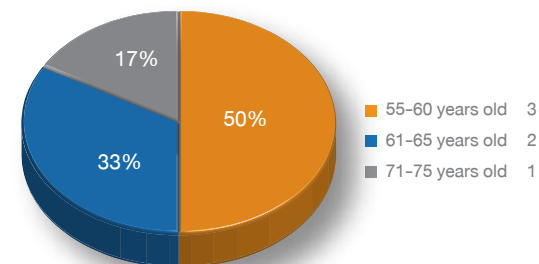
Independent proportion



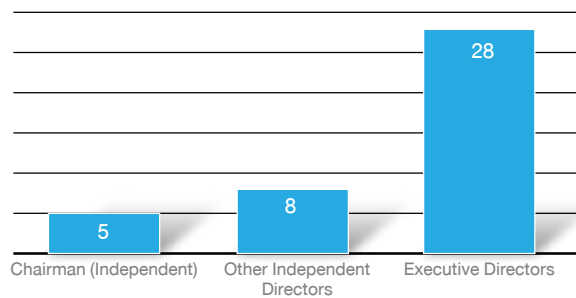
Gender Representation



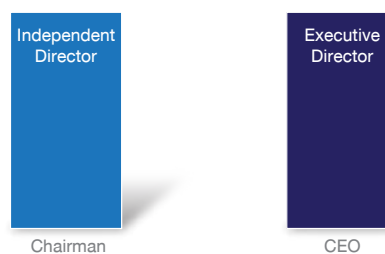
Age Diversity



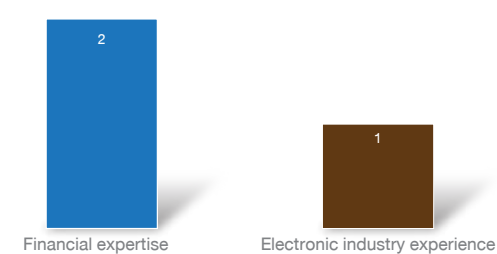
Director Tenure (years)



Separation of Chairman and CEO



Audit Committee Expertise



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.

The information of directors of the Company's subsidiaries:

The information is disclosed on Attachment 2.

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

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, sustainability development policy, risk management and internal control including management of enterprise information technology

Duties and responsibilities of the chairman of the Board of Directors:

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

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

Segregation of duties between the Board of Directors and management:

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

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

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

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:

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

7.3 Subcommittees

The Board currently has five committees - Executive Committee, Audit Committee, Nomination Committee, Corporate Governance and Sustainability Committee and Risk Management Committee in fulfilling its responsibilities whereby the Charter of Board of Directors and other sub-committees have been posted on the Company's website as shown on Attachment 5.

1. Executive Committee:

Structure: As of 31 December 2021, the Committee 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

Remark: Mr. Winson Moong Chu Hui resigned from an executive director effective on 1 January 2022.

Duties and responsibilities of the Executive Committee:

- To perform and manage the Company's business to comply with the policies, mission and business plans as determined by the Board of Directors
- To determine budget and the management's authorities of the Company
- To monitor and follow up the operation of the Company's policies to ensure its efficiency
- To monitor and follow up the performance of the Company to ensure its compliance with the business plan
- 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
- To perform other duties as assigned by the Board of Directors

2. Audit Committee:

Structure: The Audit Committee was formally established since 10 September 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 external auditors including propose their remuneration including consider the performance of auditors and dismissal as well as attend the meeting at least once a year with the external auditors without executive management present
5. To review the connected transactions or transactions that may lead to conflicts of interests in order to ensure that they are in compliance with the SET regulations and applicable laws, and are reasonable and for the highest benefit of the Company
6. To prepare and disclose in the Company's annual report, an Audit Committee's report which shall be signed by the Chairman of Audit Committee and consist of at least the following information:
 - 6.1 an opinion on the accuracy, completeness and creditability of the Company's financial report,
 - 6.2 an opinion on the adequacy of the Company's internal control system,
 - 6.3 an opinion on the compliance with related laws i.e. the Securities and Exchange Act, the SET regulations, or the laws relating to the Company's business,
 - 6.4 an opinion on the suitability of an auditor,

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

3. Nomination Committee:

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

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

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

Duties and responsibilities of the Nomination Committee:

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

4. Corporate Governance and Sustainability Committee:

Structure: In 2013, the Board established the Corporate Governance Committee that composed of the majority of independent directors. In 2021, the Board of Directors has approved the change of the Corporate Governance Committee to be the Corporate Governance and Sustainability Committee and approved the new roles and duties and the Charter of the Committee to be appropriate to the current situation and enhance the efficiency of corporate governance as the key to the sustainability of the Company.

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 and Sustainability Committee:

Corporate Governance oversight:

1. To consider, review and revise the corporate governance policy continually at least once (1) 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 prepare the annual report on corporate governance including any necessary opinion and suggestion and propose to the Board
4. To perform any other duties assigned by the Board

Sustainability development oversight:

1. To set the Company's sustainability policy framework, goals, strategy, and plan for implementation covering ESG dimensions
2. To approve the budget plan related to sustainability development
3. To appoint the working team to assist the Committee as well as appoint the consultant/expert in performing their duties
4. To monitor the performance of the sustainability strategy to be in line with the policy framework and specified goals
5. To regularly report performance progress to the Board for acknowledgement

5. Risk Management Committee:

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

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

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

Duties and responsibilities of Risk Management Committee:

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

7.4 Executive Management

As of 31 December 2021, the executive management of the Company consists of below 5 members where the detail of the executive management is shown on Attachment 1.

	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

Remark: Mr. Winson Moong Chu Hui and Mr. Wing Keung Chow retired from the Company effective on 1 January 2022.

Remuneration Policy 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.

Remuneration for Executives:

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

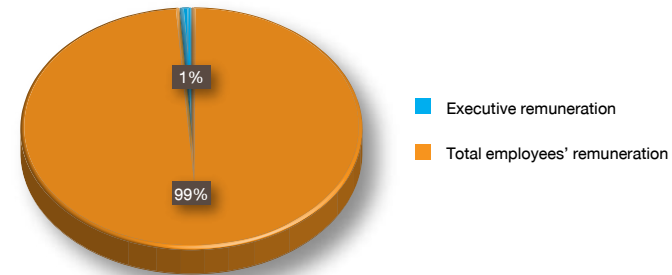
The Board of Directors has established the written CEO remuneration policy that covers the short-term and long terms incentives. The Board delegates the CEO compensation process to the executive committee. The short-term incentive depends on the group's financial performance and on CEO's own success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

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

In 2021, the total remuneration of 5 executives is as follows.

Type of remuneration	Amount (Baht)
Salary	20,880,085
Bonus	4,018,000
Provident fund	1,070,577
Board remuneration	-
Non-monetary remuneration	-
Total	25,968,662

Comparison of executive directors and executive management remuneration with total group remuneration



7.5 Employees

As of 31 December 2021, the Company and its subsidiaries have 9,895 total number of employees. For 2021, the total remuneration including salary, overtimes, bonus, provident funds, etc. is THB 4,091 million. In Thailand, there are 8,083 employees (accounted for 82% of total group employees) with THB 2,865 million paid for remuneration (accounted for 70% of total group remuneration).

Number of employees and remuneration in Thailand:

Department	Number of Employees as of 31 December 2021		Total Employees
	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.	
CEO Office	2	2	4
Customer Service and Business Development	33	22	55
Finance and Accounting	25	17	42
Human Resources / Administration / Training	92	99	191
Management Information System (MIS)	41	23	64
Operation Support	609	1,138	1,747
Production	2,250	2,713	4,963
Quality Assurance	394	258	652
Supply Chain Management	190	175	365
Total employees	3,636	4,447	8,083

Employees' remuneration	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.	Total remuneration
2021	THB 1,305 million	THB 1,560 million	THB 2,865 million

Provident Fund

The provident fund is an investment fund that is jointly established by the company and employees to serve as a long term savings to support employees upon retirement. The Company has set up a provident fund (PVD) according to Provident Fund Act B.E 2530 since 8 April 1999. Currently, the provident fund is under the management of SCB Asset Management Company Limited.

Name of the company and subsidiary	Provident Fund	Total Number of Employees (person)	Number of Employees Participated with PVD (person)	% Participation
Hana Microelectronics Public Co., Ltd.	Yes	3,636	3,338	92%
Hana Semiconductor (Ayutthaya) Co., Ltd.	Yes	4,447	3,056	69%
Total		8,083	6,394	79%

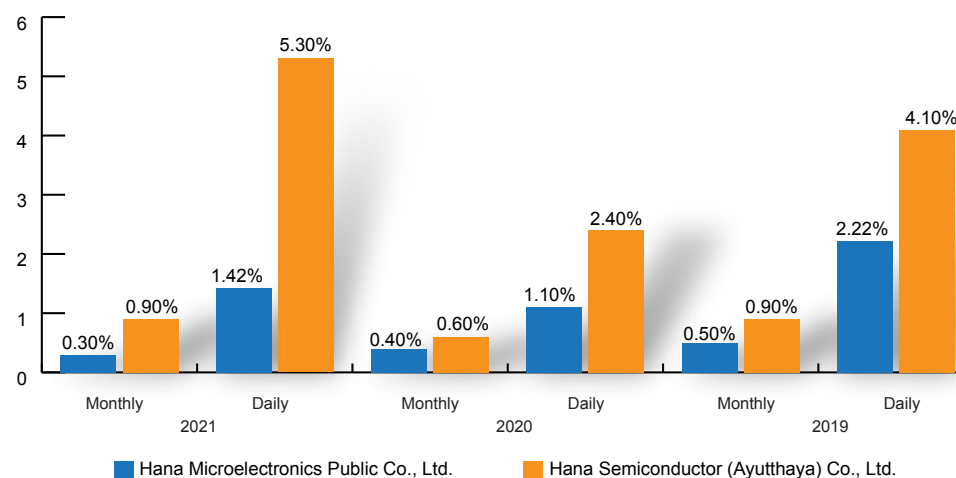
As the provident fund is considered a retirement savings fund for employees, the Company has a policy to support the Company's Provident Fund Committee to perceive the principle of the Investment Governance Code ("I Code") and select fund comply with the I Code and/or manage investments responsibly, with policies regarding to environmental, social and good governance (Environmental, Social, and Governance: "ESG") as it is an investment approach which can lead to the best interests of the fund members who are the Company's employees in long term.

Number of employees' movement in Thailand:

	2021	2020	2019
Total female (person)	5,548	5,606	5,880
Total male (person)	2,535	2,426	2,516
Total number of Employees	8,083	8,032	8,396
Increase / (Decrease)	51	(364)	(226)
% Change	0.63%	(4.34%)	(2.69%)

Employees' turnover rates in Thailand:

	2021		2020		2019	
	Monthly	Daily	Monthly	Daily	Monthly	Daily
Hana Microelectronics Public Co., Ltd.	0.30%	1.42%	0.40%	1.10%	0.50%	2.22%
Hana Semiconductor (Ayutthaya) Co., Ltd.	0.90%	5.30%	0.60%	2.40%	0.90%	4.10%



7.6 Other Information

The Corporate Secretary

The Board has formally appointed Ms. Jirapa Kongmanee as 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. 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 shareholder meetings
 - Liaise with regulatory agencies such as the SET and ensure disclosure and press release according to the applicable laws

The detail of the Corporate Secretary is shown on Attachment 1.

Auditor's remuneration

The Board provides external independent auditors who are qualified to be the auditors of companies approved by the Securities and Exchange Commission (SEC) by appointing a rotating auditor at least every 5 years and the same auditor shall not be appointed to perform the audit for 2 consecutive years.

The Board of Directors is responsible for appointing external auditors and determining the amount of audit fees with shareholders' approval. There will be no directors, representatives, or employees can be appointed to act as an auditor during the period of service in the position.

The auditor has authority to audit the Company's and subsidiaries accounts, other related documents and evidence related to income and expenses including the assets and liabilities of the Company and subsidiaries during business hours. In this case, the auditor has authority to interrogate directors, management, employees of the Company in any position and also representatives of the Company and also advise them to provide financial facts or provide related documents or evidence related to the Company's business operations. The auditor has a duty to attend every shareholders' meeting when considering the balance sheet, profit and loss of financial statements and any issues related to the Company's accounting.

In 2021, 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 2,450,000.

The Company and 3 subsidiaries paid the audit fees to EY Office Limited, Thailand as follows.

Audit fee:

(Unit: Baht)

Company	Auditor name	2021	2020
Hana Microelectronics Public Co., Ltd.	Ms. Kamontip Lertwitworatep	2,450,000	2,600,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	Ms. Kamontip Lertwitworatep	1,260,000	1,260,000
Hana Semiconductor (BKK) Co., Ltd.	Ms. Kamontip Lertwitworatep	150,000	150,000
Hana Semiconductor International Co., Ltd.	Ms. Kamontip Lertwitworatep	340,000	340,000
Total		4,200,000	4,350,000

Non-audit fee:

(Unit: Baht)

Company	Non-audit fees	2021		2020
		Paid during the year	Future payment	Paid
Hana Microelectronics Public Co., Ltd.	BOI audit fee		540,000	450,000
	Inventory destruction fee	80,000	-	20,000
Hana Semiconductor (Ayutthaya) Co., Ltd.	BOI audit fee	20,000	270,000	270,000
	Inventory destruction fee	-	-	-
Total		100,000	810,000	740,000

For the financial year ended 31 December 2021, the external auditors confirmed to the Audit Committee on the actions they take to maintain their professional independence with respect to the Company and its affiliates in accordance with the Code of Ethics for Professional Accountants issued by Thailand's Federation of Accounting Professions by not holding any shares in the Company and its affiliates and not purchasing goods and services from the Company and its affiliates.

8. Report of Key Corporate Governance Activities

8.1 Performance of the Board of Directors in 2021

8.1.1 Selection, development and evaluation of duty performance of the Board of Directors

The Board of Directors gives emphasis on the transparency of director nomination. The Company shall use a professional search firm, IOD director pool for new director recruitment or personal recommendation as considered by the Nomination Committee. 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 2021, there was no proposal for candidates sent by shareholders to the Nomination Committee to review. Therefore, the Board considered those directors who retired by rotation and which the Board considers based on their qualifications in line with a company's business strategies including working experiences, expertise, previous year performances, willingness and time devoted to the Board that are suitable to be considered for re-election.

Qualification of director

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

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

Qualification of independent director

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

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

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

Appointment of directors

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

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

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.

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 2021, the directors attended following training courses/seminar as follows.

Name and position	2021 Training course/seminar
1. Mr. John Thompson, an independent director	<ul style="list-style-type: none"> The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by the Securities and Exchange Commission - November 2021
2. Mr. Terrence Philip Weir, an executive director	<ul style="list-style-type: none"> Deep Dive into Climate Related Disclosures by the Securities and Exchange Commission and the UK government - March 2021 Company Valuation using Excel by CPA Australia Ltd. - November 2021 (3 hours) Dashboarding with heat maps by CPA Australia Ltd. - November 2021 (3 hours) Financial Dashboard Design by CPA Australia Ltd. - November 2021 (4 hours)
3. Mrs. Salakchitt Preedaporn, an independent director	<ul style="list-style-type: none"> Preparation for post COVID-19 (once in a hundred-year crisis, opportunity and prospect offered post COVID-19) by EY Office Limited - October 2021 The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by the Securities and Exchange Commission - November 2021
4. Mr. Yingsak Jenratha, an independent director	<ul style="list-style-type: none"> The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by the Securities and Exchange Commission - November 2021

Mr. Terrence Philip Weir, an executive director and Chief Financial Officer, has completed 3 courses of 2021 refreshment programs in financial and accounting totally 10 hours from CPA Australia Ltd. Those courses were reviewed by the Audit Committee to be beneficial to the Company and related to accounting principles/standards that are consistent with the nature of the Company's business.

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 2021, the overall performance of the Board's group was assessed at "very good" ranking equivalent to 96.94%.

The Board also has conducted the performance evaluation of an individual director using the self-assessment method with evaluation criteria. In 2021, the corporate secretary concluded the Board's individual performance and reported to the Board's meeting with the average performance was "very good" ranking equivalent to 95.45%

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 2021, each sub-committee got the average score as "very good", equivalent to 97.52%.

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 2021, the independent directors assessed the CEO with an average score of 96.45%.

CEO succession plan

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

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

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

Managing the CEO succession plan is the Board's responsibility. In 2021, 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.

8.1.2 Meeting Attendance and Individual Directors' Remuneration

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 2021, 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. The minutes of Board of Directors meeting are properly made and contain key facts such as the timing of start and finish, name of directors present and absent, summary of items of major discussion and resolutions, the minute taker and certifier. The minutes are maintained at the Company's head office and cannot be edited without prior consent of the Board's approval.

The meeting without attendance of management

The Board encourages the non-executive directors to have a separate meeting in absence of management to encourage more open discussion without management present. In 2021, the independent directors conducted a meeting without attendance of management one time on 12 November 2021. The meeting was conducted with the participation of internal and external auditors with the agenda discussion on the significant matters and other concerns related to financial statements and internal control audits by the auditors during the year 2021 including review if there is any connected transaction in 2021 that may lead to conflicts of interest, any fraud findings, as well as the cooperation from management and staff to support the auditors and any limitation related to the audit works.

Meeting Attendance:

Meeting	Board of Directors	Audit Committee	Nomination Committee	Corporate Governance and Sustainability Committee	Risk Management Committee	Non- Executive Meeting	Annual General Meeting
Total number of meetings in 2021	7	4	3	1	1	1	1
Number of meeting attended/participated in 2021							
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	1/1
Mr. Yingsak Jenratha	7/7	4/4	3/3	1/1	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	-	1/1

Remuneration for Directors:
(1) Monetary remuneration

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

Individual disclosure of remuneration for the Board of Directors in 2021 is as follows.

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

(2) Other type of compensation for directors

- None –

8.1.3 Supervision of subsidiaries and associated companies

The detail is shown in 6.1.1

8.1.4 Corporate Governance Policy and Guideline Compliance Control

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 2021, there was no conflict of interest from directors and executives reported to the Board.

Prevent insider trading:

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

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

- Require the Board and executives to inform to the Board or the corporate secretary at least 1 day in advance before actual trading of the Company's security.
- Confirm the shareholding status with individual director and executive through the corporate secretary on a monthly basis. Report to the Board for the shareholding status of individual director and executive at every Board's meeting.

In 2021, no director or executive traded the Company's shares by using inside information.

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 2021, 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 2021, the Company communicated and provided training to employees regarding its anticorruption policy and related policies i.e., corporate code of conducts, gifts and hospitality policy, conflict of interest policy, etc. Employees can get access to the policies via the Company's bulletin boards and intranet website. The supplier code of conduct covering the anti-corruption policy has been communicated with both overseas and local suppliers for their acknowledgment and compliance. In 2021, the Company received the signed acknowledgement from 1,294 suppliers, which was accounted for 100% from the goal of 100%.

Monitoring and review: The Audit Committee reviews the anti-corruption policy on an annual basis and proposes any amendment to the Board for approval. The Audit Committee also monitors the implementation of the policy and makes recommendations accordingly. Internal control systems and procedures shall be reviewed periodically by an internal audit department to ensure that they are effective in countering bribery and the audit results are to be discussed with relevant operational personnel and reported to senior management and the Audit Committee. In 2021, the risk assessment included the anti-corruption was reported to the Board for consideration.

Certification: In 2021, The Company has been certified for 2nd time 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.

The Company and its subsidiaries yearly announces "No Gift Policy" and communicates with its business partners and discloses to the public as the guideline for directors and employees not to accept or giving gifts by cooperating with other business sectors for the fight against corruption.

CAC CERTIFIED **NO Gift Policy**

HANA
Microelectronics Group

HANA has consistently been at the forefront of good corporate governance. We're welcome the festive season with the new normal culture of **No Gift Policy**. Your ultimate cooperation is highly appreciated.

บริษัท ฮานา ไมโครอิเล็กทรอนิกส์ จำกัด ยังคงยึดมั่นในหลักธรรมาภิบาลที่ต่อเนื่องเสมอมา และในเทศกาลแห่งความสุขที่กำลังจะมาถึงนี้ นับเป็นโอกาสที่ดีที่จะช่วยกันส่งเสริมมาตรฐานการดำเนินงานธุรกิจในรูปแบบบรรทัดฐานใหม่ โดยการ**งดให้และงดรับของขวัญ**ทุกประเภท ขอขอบคุณเป็นอย่างสูงสำหรับความร่วมมือที่ดีจากทุกท่าน

HANA一直处于企业规范治理的前沿我们倡导以“**无礼品政策**”的新理念来迎接节日的到来非常感谢您的全力支持

하나는 지속적으로 보다 나은 기업문화를 만들기 위해 앞장서고 있습니다. 우리는 새로운 규범인 “**선물 금지 정책**” 과 함께 연말연시를 맞이하려고 합니다. 임직원 여러분의 적극적이고 능동적인 참여 바랍니다.

ក្រុមហ៊ុនហានាបានប្រកាន់ខ្ជាប់ជាចីបងនូវអភិបាលកិច្ចគ្រប់គ្រងដ៏ល្អបំផុត។ ក្រុមហ៊ុនសូមសូមអំណរគុណដល់អ្នកគ្រប់គ្រង។ នេះជាមួយនឹងវប្បធម៌ទូទៅថ្មីមួយគឺ **គោលការណ៍គ្មានការ ជូនអំណោយអនុស្សាវរីយ៍គ្រប់ប្រភេទ**។ ក្រុមហ៊ុនសូមសម្តែងនូវការគោរព គោតសរសើរអំពីការចូលរួមសហការពីអ្នកគ្រប់គ្រង។

Merry Christmas & Happy New Year

Hana Microelectronics Public Co., Ltd.
and its subsidiaries

The Company's Anti-Corruption Policy has been disclosed both in Thai and English on the Company's website www.hanagroup.com under the subject Investor Relation > Anti-Corruption.

Whistleblowing and Channel of Complaints

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

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

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

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 2021, 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.

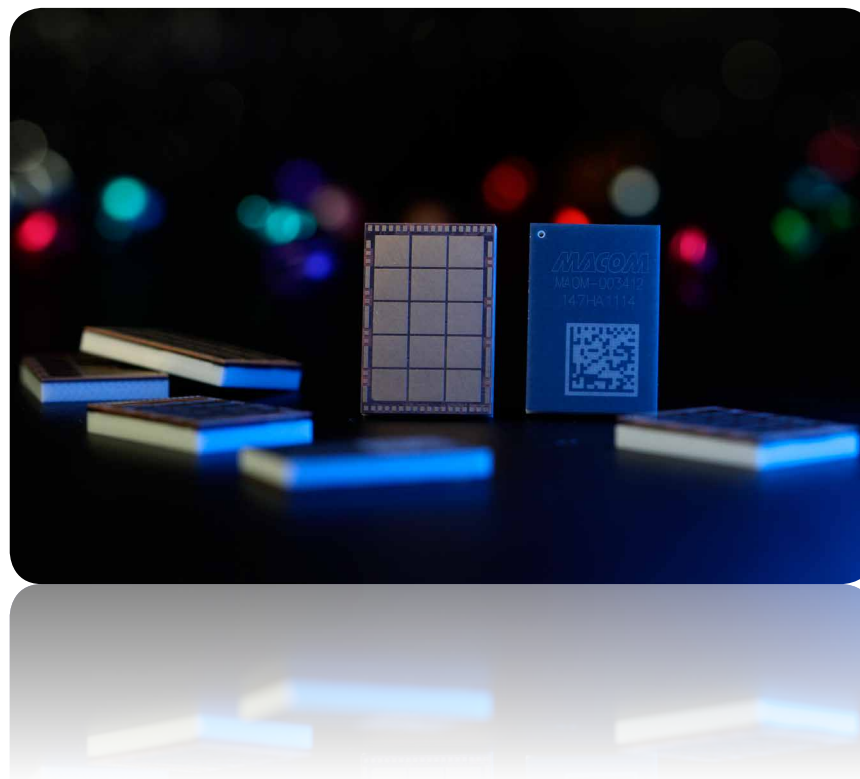
The Company's Whistleblowing Policy has been disclosed both in Thai and English on the Company's website www.hanagroup.com under the subject Investor Relation > Corporate Governance > CG Related Policies on the subject: Whistleblowing.

8.2 Report of the Audit Committee

The detail is shown on Attachment 6.

8.3 Report of the other Subcommittees

The detail is shown on Attachment 6.



9. Internal control and related party transactions

9.1 Internal Control

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 2021, 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 30 November 2021 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.

6. Different opinion between the Audit Committee and the Board of Directors regarding the internal control

- None -

7. 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. The information of the head of internal audit is shown on Attachment 3.

8. 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. The information of the head of compliance unit is shown on Attachment 3.

9.2 Related Party Transactions

According to the Note 7 on related party transactions of the consolidated financial statements for the year ended 31 December 2021, 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 2021, 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.

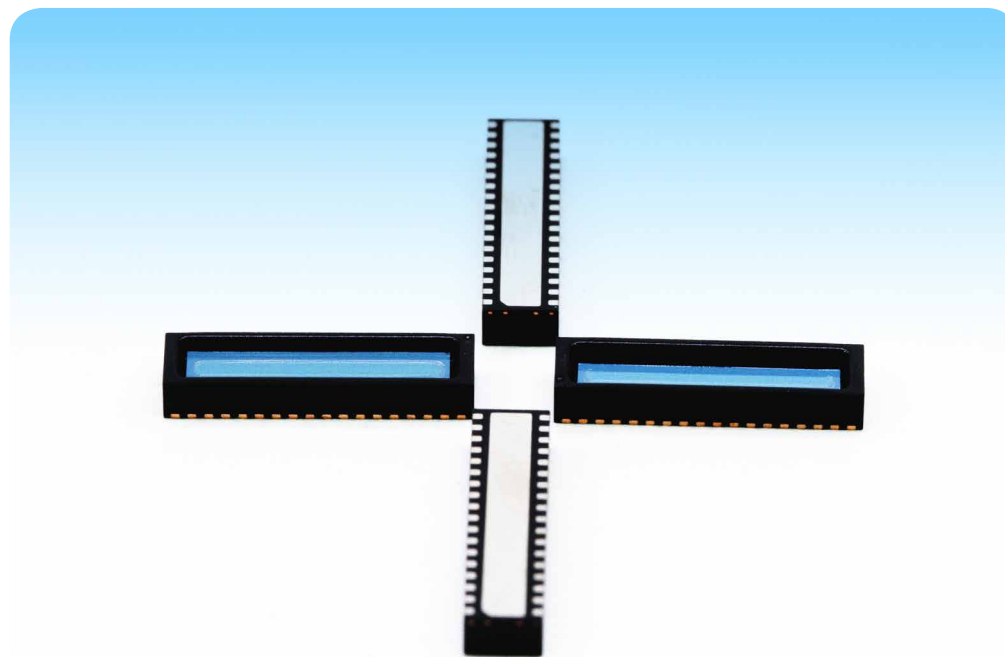
Policy of related transactions in future:

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.



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 Audit 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 2021 are materially accurate, complete, and reliable.



Mr. John Thompson
Chairman of the Board of Directors



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



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 2021, 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 2021, 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.

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.

Independent Auditor's Report

- 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 Note 4.3 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 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.

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.

Independent Auditor's Report

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

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

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

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

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

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

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

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material

misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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

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

Independent Auditor's Report

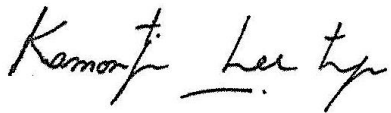
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

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

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

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

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

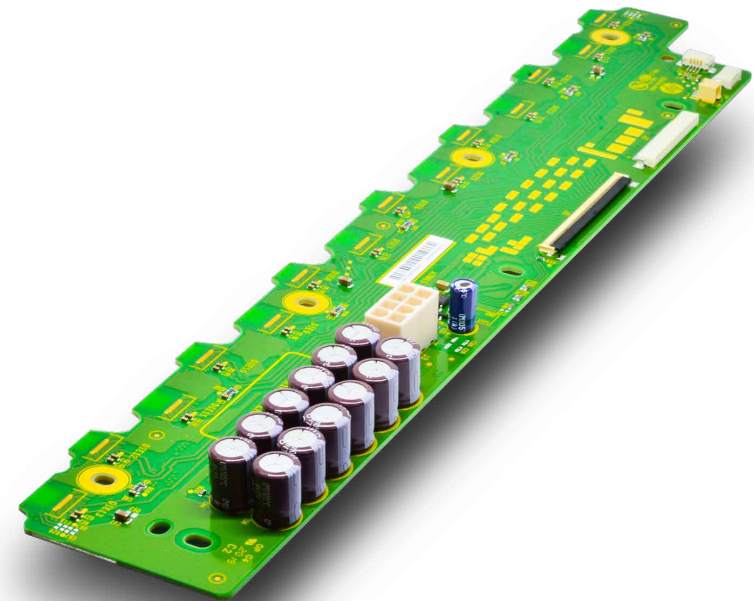


Kamontip Lertwitworatep

Certified Public Accountant (Thailand) No. 4377

EY Office Limited

Bangkok: 25 February 2022



Statements of financial position

Hana Microelectronics Public Company Limited and its subsidiaries as at 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Assets					
Current assets					
Cash and cash equivalents	6	3,304,172,702	5,400,260,504	245,586,626	642,883,118
Trade and other receivables	7, 8	4,552,782,805	3,460,919,582	1,630,770,552	1,593,935,281
Inventories	9	6,856,572,449	4,496,142,465	3,518,228,541	2,295,245,191
Other current financial assets	10	2,694,694,531	4,266,900,686	-	-
Other current assets		161,612,544	95,709,013	39,995,288	45,402,856
Total current assets		17,569,835,031	17,719,932,250	5,434,581,007	4,577,466,446
Non-current assets					
Investments in subsidiaries	11	-	-	3,583,449,264	3,583,449,264
Investment property	12	72,303,750	72,303,750	72,303,750	72,303,750
Property, plant and equipment	13	9,662,666,074	6,938,256,153	2,203,637,828	2,392,024,143
Intangible assets	14	421,905,522	362,263,817	55,232,475	62,963,928
Other non-current financial assets	15	153,600	97,000	97,000	97,000
Deferred tax assets	24	10,069,293	1,613,504	1,556,008	1,613,504
Other non-current assets		116,033,252	85,665,665	10,000	10,000
Total non-current assets		10,283,131,491	7,460,199,889	5,916,286,325	6,112,461,589
Total assets		27,852,966,522	25,180,132,139	11,350,867,332	10,689,928,035

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Liabilities and shareholders' equity					
Current liabilities					
Trade and other payables	7, 16	3,505,876,372	2,354,747,250	1,544,125,445	1,267,907,243
Current portion of lease liabilities	17	7,964,995	10,728,348	-	-
Short-term provisions	18	334,199,000	300,371,000	-	-
Income tax payable		20,527,631	12,337,830	7,147,420	4,500,116
Other current liabilities		160,410,024	127,928,278	25,534,339	25,303,636
Total current liabilities		4,028,978,022	2,806,112,706	1,576,807,204	1,297,710,995
Non-current liabilities					
Lease liabilities - net of current portion	17	2,884,261	7,910,821	-	-
Deferred tax liabilities	24	44,159,879	31,252,836	-	-
Provision for long-term employee benefits	19	718,850,938	721,243,292	332,488,256	333,195,962
Total non-current liabilities		765,895,078	760,406,949	332,488,256	333,195,962
Total liabilities		4,794,873,100	3,566,519,655	1,909,295,460	1,630,906,957

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

Statements of financial position (Cont.)

Hana Microelectronics Public Company Limited and its subsidiaries as at 31 December 2021

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Shareholders' equity					
Share capital					
Registered					
974,403,900 ordinary shares of Baht 1 each		974,403,900	974,403,900	974,403,900	974,403,900
Issued and fully paid-up					
804,878,860 ordinary shares of Baht 1 each		804,878,860	804,878,860	804,878,860	804,878,860
Share premium		1,723,218,982	1,723,218,982	1,723,218,982	1,723,218,982
Retained earnings					
Appropriated - statutory reserve	20	514,957,656	456,462,666	100,000,000	100,000,000
Unappropriated		19,343,952,539	19,239,559,857	6,813,474,030	6,430,923,236
Other components of shareholders' equity		671,085,385	(610,507,881)	-	-
Total shareholders' equity		23,058,093,422	21,613,612,484	9,441,571,872	9,059,021,078
Total liabilities and shareholders' equity		27,852,966,522	25,180,132,139	11,350,867,332	10,689,928,035

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

Income statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

Note		Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Revenues					
Sales	26, 27	23,780,179,227	19,282,520,274	10,391,133,710	8,768,172,468
Dividend income	11	2,066,188	1,991,642	280,071,972	536,071,957
Gain on exchange		-	127,490,948	132,233,231	62,134,934
Gain on derivatives		-	8,214,839	-	-
Other income	21	354,755,179	388,166,068	42,822,214	46,637,564
Total revenues		24,137,000,594	19,808,383,771	10,846,261,127	9,413,016,923
Expenses	23				
Cost of sales		20,492,976,951	16,734,326,257	8,647,160,357	7,415,150,815
Selling and distribution expenses		209,721,267	185,455,427	67,949,807	61,830,694
Administrative expenses		1,213,588,863	1,025,767,120	327,773,430	275,070,666
Loss on exchange		273,767,316	-	-	-
Loss on derivatives		34,888,040	-	-	-
Impairment loss on financial assets (reversal)	10	(525,780)	25,510,503	-	-
Loss on FVTPL equity instrument		421,023,339	-	-	-
Total expenses		22,645,439,996	17,971,059,307	9,042,883,594	7,752,052,175

(Unit: Baht)

Note		Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Operating profit	22	1,491,560,598	1,837,324,464	1,803,377,533	1,660,964,748
Finance income		113,952,749	139,610,372	789,900	1,207,651
Finance cost		(7,491,596)	(9,066,211)	(2,606,518)	(4,610,247)
Profit before income tax expenses	24	1,598,021,751	1,967,868,625	1,801,560,915	1,657,562,152
Income tax expenses		(52,708,390)	(60,127,306)	(17,688,770)	(8,644,302)
Profit for the year		1,545,313,361	1,907,741,319	1,783,872,145	1,648,917,850
Profit attributable to:					
Equity holders of the Company	25	1,545,313,361	1,907,741,319	1,783,872,145	1,648,917,850
Earnings per share					
Basic earnings per share					
Profit attributable to equity holders of the Company		1.92	2.37	2.22	2.05
Number of weighted average ordinary shares (shares)		804,878,860	804,878,860	804,878,860	804,878,860

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

Statements of comprehensive income

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

Note	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Profit for the year	1,545,313,361	1,907,741,319	1,783,872,145	1,648,917,850
Other comprehensive income:				
Other comprehensive income to be reclassified to profit or loss in subsequent periods:				
Exchange differences on translation of financial statements in foreign currency - net of income tax	24	1,350,757,322	195,408,630	-
Gain (Loss) on changes in value of debt instruments designated at fair value through other comprehensive income - net of income tax		(69,164,056)	74,831,556	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods - net of income tax		1,281,593,266	270,240,186	-

(Unit: Baht)

Note	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Other comprehensive income not to be reclassified to profit or loss in subsequent periods				
Actuarial gain - net of income tax	19, 24	26,112,316	11,450,616	7,216,654
Loss on changes in value of equity investments designated at fair value through other comprehensive income - net of income tax		-	(75,092,840)	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		26,112,316	(63,642,224)	7,216,654
Other comprehensive income for the year		1,307,705,582	206,597,962	7,216,654
Total comprehensive income for the year		2,853,018,943	2,114,339,281	1,791,088,799
Total comprehensive income attributable to:				
Equity holders of the Company		2,853,018,943	2,114,339,281	1,791,088,799

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

Statements of cash flows

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cash flows from operating activities				
Profit before tax	1,598,021,751	1,967,868,625	1,801,560,915	1,657,562,152
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Depreciation	1,285,171,182	1,162,234,580	378,584,932	406,006,714
Amortisation expenses	16,246,883	13,044,062	8,680,545	7,741,899
Allowance for expected credit losses	4,996,862	1,632,987	-	2,492,191
Reduction of inventories to net realisable value (reversal)	(16,784,464)	61,552,195	(27,081,894)	43,023,850
Write-off obsolete and damaged inventories	58,480,117	6,537,812	46,853,315	6,537,812
Dividend income from subsidiary companies	-	-	(279,999,972)	(535,999,957)
Dividend income from other companies	(2,066,188)	(1,991,642)	(72,000)	(72,000)
Loss on disposals/write-off of equipment and intangible assets	29,851,352	7,636,086	23,501,451	2,912,039

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Allowance for impairment loss on assets	34,299,909	-	34,299,909	-
Provision for vacation	6,552,045	4,012,245	2,880,757	1,635,437
Provision for long-term employee benefits	56,580,067	60,041,474	25,478,088	26,792,396
Gain on sales of debt instruments at fair value through other comprehensive income	(21,218,932)	(15,179,622)	-	-
Loss (gain) on fair value adjustments of financial instruments	421,023,330	(30,282,810)	-	-
Allowance for impairment loss on other current financial assets (reversal)	(525,780)	25,510,466	-	-
Unrealised loss on exchange	81,982,126	4,428,278	44,656,965	6,749,625
Unrealised loss (gain) on derivative assets	34,888,040	(8,214,839)	-	-
Finance income	(113,952,749)	(139,610,372)	(789,900)	(1,207,651)
Finance cost	86,088	1,593,822	-	2,206,616
Profit from operating activities before changes in operating assets and liabilities	3,473,631,639	3,120,813,347	2,058,553,111	1,626,381,123

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

Statements of cash flows (Cont.)

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Operating assets (increase) decrease				
Trade and other receivables	(1,092,088,089)	(117,080,535)	(15,860,601)	(96,678,342)
Inventories	(2,402,125,637)	(45,845,170)	(1,242,754,771)	(12,727,974)
Other current assets	(86,457,117)	9,935,224	(7,701,541)	24,715,280
Operating liabilities increase (decrease)				
Trade and other payables	1,065,267,655	(15,245,798)	199,596,700	(126,470,201)
Other current liabilities	25,929,701	19,562,615	(2,650,054)	1,940,227
Cash from operating activities	984,158,152	2,972,139,683	989,182,844	1,417,160,113
Cash paid for long-term employee benefits	(32,836,230)	(26,171,559)	(18,945,265)	(10,022,157)
Cash paid for income tax	(43,825,059)	(40,701,027)	(15,007,845)	(10,117,132)
Net cash from operating activities	907,496,863	2,905,267,097	955,229,734	1,397,020,824

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cash flows from investing activities				
Increase in other current financial assets	854,729,640	(718,002,835)	-	-
Increase in long-term fixed deposit	(56,600)	-	-	-
Interest received	116,724,532	138,699,534	790,541	1,198,369
Proceeds from sales of financial instruments	214,145,801	182,704,562	-	-
Dividend income from subsidiary companies	-	-	279,999,972	535,999,957
Dividend income from other company	2,066,188	1,991,642	72,000	72,000
Acquisitions of property, plant and equipment and intangible assets	(4,129,321,869)	(1,200,505,167)	(236,454,144)	(131,086,587)
Proceeds from disposals of equipment	32,693,098	33,546,491	11,603,410	22,418,607
Proceeds from redemption of debt instruments at amortised costs	-	62,669,933	-	-
Increase in other non-current assets	(30,367,587)	(61,780,594)	-	-
Net cash from (used in) investing activities	(2,939,386,797)	(1,560,676,434)	56,011,779	428,602,346

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

Statements of cash flows (Cont.)

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cash flows from financing activities				
Decrease in short-term loans from financial institutions	-	(500,000,000)	-	(500,000,000)
Decrease in short-term loan from related party	-	-	-	(210,000,000)
Payment of principal portion of lease liabilities	(11,385,170)	(22,822,212)	-	-
Interest paid	-	(2,038,185)	-	(3,608,870)
Dividend paid	(1,408,538,005)	(1,046,342,518)	(1,408,538,005)	(1,046,342,518)
Net cash used in financing activities	(1,419,923,175)	(1,571,202,915)	(1,408,538,005)	(1,759,951,388)
Increase (decrease) in cash and cash equivalents	(3,451,813,109)	(226,612,252)	(397,296,492)	65,671,782
Translation adjustment	1,355,725,307	191,893,747	-	-
Net increase (decrease) in cash and cash equivalents	(2,096,087,802)	(34,718,505)	(397,296,492)	65,671,782
Cash and cash equivalents at beginning of year	5,400,260,504	5,434,979,009	642,883,118	577,211,336
Cash and cash equivalents at end of year (Note 6)	3,304,172,702	5,400,260,504	245,586,626	642,883,118

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Supplemental cash flow information				
Non-cash related transactions from investing activities				
Net increase in accounts payable for purchases of plant and equipment	50,631,060	95,339,008	24,098,335	5,019,088
Revaluation gain (loss) on changes in fair value of debt instruments at FVOCI	(69,164,056)	74,831,556	-	-
Transfer equipment to intangible assets	-	35,126,287	-	35,126,287
Increase in right-of-use assets from lease agreement	2,361,121	42,836,396	-	-

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

Statements of changes in shareholders' equity

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

Note	Consolidated financial statements							
	Issued and paid up share capital	Share premium	Retained earnings		Other components of shareholders' equity			
			Appropriated - Statutory reserve	Unappropriated	Other comprehensive income			
					Fair value reserve of financial assets at FVOCI	Exchange differences on translation of financial statements in foreign currency	Total other components of shareholders' equity	Total shareholders' equity
Balance as at 1 January 2020	804,878,860	1,723,218,982	456,462,666	18,441,803,280	208,867,772	(1,089,615,839)	(880,748,067)	20,545,615,721
Profit for the year	-	-	-	1,907,741,319	-	-	-	1,907,741,319
Other comprehensive income for the year	-	-	-	(63,642,224)	74,831,556	195,408,630	270,240,186	206,597,962
Total comprehensive income for the year	-	-	-	1,844,099,095	74,831,556	195,408,630	270,240,186	2,114,339,281
Dividend paid	-	-	-	(1,046,342,518)	-	-	-	(1,046,342,518)
Balance as at 31 December 2020	804,878,860	1,723,218,982	456,462,666	19,239,559,857	283,699,328	(894,207,209)	(610,507,881)	21,613,612,484
Balance as at 1 January 2021	804,878,860	1,723,218,982	456,462,666	19,239,559,857	283,699,328	(894,207,209)	(610,507,881)	21,613,612,484
Profit for the year	-	-	-	1,545,313,361	-	-	-	1,545,313,361
Other comprehensive income for the year	-	-	-	26,112,316	(69,164,056)	1,350,757,322	1,281,593,266	1,307,705,582
Total comprehensive income for the year	-	-	-	1,571,425,677	(69,164,056)	1,350,757,322	1,281,593,266	2,853,018,943
Dividend paid	-	-	-	(1,408,538,005)	-	-	-	(1,408,538,005)
Unappropriated retained earnings transferred to statutory reserve	-	-	58,494,990	(58,494,990)	-	-	-	-
Balance as at 31 December 2021	804,878,860	1,723,218,982	514,957,656	19,343,952,539	214,535,272	456,550,113	671,085,385	23,058,093,422

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

Statements of changes in shareholders' equity (Cont.)

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Baht)

	Note	Separate financial statements				
		Issued and paid up share capital	Share premium	Retained earnings		Total shareholders' equity
				Appropriated Statutory reserve	Unappropriated	
Balance as at 1 January 2020		804,878,860	1,723,218,982	100,000,000	5,817,136,617	8,445,234,459
Profit for the year		-	-	-	1,648,917,850	1,648,917,850
Other comprehensive income for the year		-	-	-	11,211,287	11,211,287
Total comprehensive income for the year		-	-	-	1,660,129,137	1,660,129,137
Dividend paid	29	-	-	-	(1,046,342,518)	(1,046,342,518)
Balance as at 31 December 2020		804,878,860	1,723,218,982	100,000,000	6,430,923,236	9,059,021,078
Balance as at 1 January 2021		804,878,860	1,723,218,982	100,000,000	6,430,923,236	9,059,021,078
Profit for the year		-	-	-	1,783,872,145	1,783,872,145
Other comprehensive income for the year		-	-	-	7,216,654	7,216,654
Total comprehensive income for the year		-	-	-	1,791,088,799	1,791,088,799
Dividend paid	29	-	-	-	(1,408,538,005)	(1,408,538,005)
Balance as at 31 December 2021		804,878,860	1,723,218,982	100,000,000	6,813,474,030	9,441,571,872

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 2021

1. General information

1.1 General information of the Company

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

1.2 Coronavirus disease 2019 pandemic

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

2. Basis of preparation

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

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

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

2.2 Basis of consolidation

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

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2021	2020
			Percent	Percent
<u>Held by the Company</u>				
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	58	58
Hana Semiconductor (BKK) Company Limited	Holding company	Thailand	100	100
Omac Sales Limited	Purchasing of electronic components and equipment	Hong Kong	100	100
Hana Microelectronics International Company Limited	Holding company	British Virgin Islands	100	100
Hana Microelectronics Investments Company Limited	Holding company	British Virgin Islands	100	100
Hana Microelectronics (Cambodia) Company Limited	Manufacture and trading of electronic components	Cambodia	100	100
<u>Held through the subsidiary companies</u>				
Hana Semiconductor (Ayutthaya) Company Limited	Manufacture and trading of electronic components	Thailand	42	42

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2021	2020
			Percent	Percent
Hana Semiconductor International Limited	Trading of electronic components	British Virgin Islands	100	100
Hana Microelectronics Enterprises Company Limited	Holding company	British Virgin Islands	100	100
Hana Technologies, Inc.	Manufacture and trading of electronic components	USA	100	100
Hana Microelectronics, Inc.	Agent and customer services	USA	100	100
Hana Macao Commercial Offshore Limited	Customer services	Macao	100	100
Hana Microelectronics (Jiaxing) Company Limited	Manufacture and trading of electronic components	China	100	100
Power Master Semiconductor Company Limited	Manufacture and trading of electronic components	South Korea	100	100

- 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

3.1 Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2021. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

3.2 Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2022

The Federation of Accounting Professions issued a number of revised financial reporting standards, which are effective for fiscal years beginning on or after 1 January 2022. 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, for some standards, providing temporary reliefs or temporary exemptions for users.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

The management of Group believes that adoption of these amendments will not have any significant impact on the Group's financial statements.

4. Significant accounting policies

4.1 Revenue and expense recognition

Sales of goods

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

Interest income

Interest income is calculated using the effective interest method and recognised on an accrual basis. The effective interest rate is applied to the gross carrying amount of a financial asset, unless the financial assets subsequently become credit-impaired when it is applied to the net carrying amount of the financial asset (net of the expected credit loss allowance).

Dividends

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

Finance cost

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

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 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.

4.4 Investments in subsidiaries

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

4.5 Investment properties

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

No depreciation is provided on investment property in land.

4.6 Property, plant and equipment and depreciation

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

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

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

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.

4.7 Intangible assets

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

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

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

4.8 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. At the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group

recognises right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.

Right-of-use assets

Right-of-use assets is measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognised, initial direct costs incurred, and lease payments made at or before the commencement date of the lease less any lease incentives received.

Depreciation of right-of-use assets is calculated by reference to their costs on the straight-line basis over the shorter of their estimated useful lives and the lease term.

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

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

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

Lease liabilities

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease,

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

if the lease term reflects the Group exercising an option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expenses in the period in which the event or condition that triggers the payment occurs.

The Group discounts the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term.

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.

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 non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the property, plant and equipment right-of-use assets, investment properties and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount.

An impairment loss is recognised in the income statement.

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

4.12 Employee benefits

Short-term employee benefits

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

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

Post-employment benefits

Defined contribution plans

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

Defined benefit plans

The Group has obligations in respect of the severance payments they must make to employees upon retirement under labor law. The Group treats these severance payment obligations as a defined benefit plan.

The obligation under the defined benefit plan is determined based on actuarial techniques, using the projected unit credit method.

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

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

Provision for vacation

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

4.13 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits

will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Provision for product warranty

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

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 Group recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

The Group records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

4.15 Financial instruments

The Group initially measures financial assets at its fair value plus, in the case of financial assets that are not measured at fair value through profit or loss, transaction costs. However, trade receivables, that do not contain a significant financing component are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortised cost, fair value through other comprehensive income ("FVOCI"), or fair value through profit or loss ("FVTPL"). The classification of financial assets at initial recognition is driven by the Group's business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

Financial assets at amortised cost

The Group measures financial assets at amortised cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognised in the income statement when the asset is derecognised, modified or impaired.

Financial assets at FVOCI (debt instruments)

The Group measures financial assets at FVOCI if the financial asset is held to collect

contractual cash flows and to sell the financial asset and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

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

Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to irrevocably classify its equity investments which are not held for trading as equity instruments designated at FVOCI. The classification is determined on an instrument-by-instrument basis.

Gains and losses recognised in other comprehensive income on these financial assets are never recycled to the income statement.

Dividends are recognised as other income in the income statement, except when the dividends clearly represent a recovery of part of the cost of the financial asset, in which case, the gains are recognised in other comprehensive income.

Equity instruments designated at FVOCI are not subject to impairment assessment.

Financial assets at FVTPL

Financial assets measured at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognised in the income statement.

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

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Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

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

Classification and measurement of financial liabilities

Except for derivative liabilities, at initial recognition the Group's financial liabilities are recognised at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in the income statement when the liabilities are derecognised as well as through the EIR amortisation process. In determining amortised cost, the Group takes into account any discounts or premiums on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in the income statement.

Derecognition of financial instruments

A financial asset is primarily derecognised when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the income statement.

Impairment of financial assets

The Group recognises an allowance for expected credit losses ("ECLs") for all debt instruments not held at FVTPL. ECLs are based on the difference between the

contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).

The Group considers a significant increase in credit risk to have occurred when contractual payments are more than 30 days past due and considers a financial asset as credit impaired or default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to have a significant increase in credit risk and to be in default using other internal or external information, such as credit rating of issuers.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date.

ECLs are calculated based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

4.16 Derivatives

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

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

4.17 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation techniques that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

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

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

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

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

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

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.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

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.

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 2021 and 2020 as reflected in the statements of financial position and cash flows consist of the following:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cash	1,259	615,372	190	214
Bank deposits	2,935,295	3,426,752	245,397	642,669
Fixed deposits with maturity not over 3 months	367,619	1,358,137	-	-
Total cash and cash equivalents	3,304,173	5,400,261	245,587	642,883

As at 31 December 2021, bank deposits in savings accounts and fixed deposits carried interests between 0.001 and 0.500 percent per annum (2020: 0.001 and 0.900 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
	2021	2020	
Transactions with subsidiary companies (eliminated from the consolidated financial statements)			
Sales of goods	195	151	Prices agreed between the parties due to the uniqueness of products sold to each customer
Dividend income	280	536	Declared rate
Purchase of materials	480	318	Cost plus mark up
Management fee	10	9	Rates stipulated in the agreement
Service fee	2	-	Cost plus mark up
Purchase of assets	1	1	Cost plus mark up

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

As at 31 December 2021 and 2020, the balances of the accounts between the Company and those related parties are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Trade receivables (Note 8)				
Trade receivables - related parties				
Subsidiary companies	-	-	24,100	10,880
Total trade receivables - related parties	-	-	24,100	10,880
Trade and other payables (Note 16)				
Trade payables - related parties				
Subsidiary companies	-	-	519,073	623,083
Total trade payables - related parties	-	-	519,073	623,083
Other payables - related parties				
Subsidiary companies	-	-	2,115	-
Total other payables - related parties	-	-	2,115	-
Total trade and other payables	-	-	521,188	623,083

Directors and management's benefits

During the years ended 31 December 2021 and 2020, the Group had employee benefit expenses payable to its directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Short-term employee benefits	107.0	90.7	16.8	16.2
Post-employment benefits	2.0	2.0	0.8	0.7
Total	109.0	92.7	17.6	16.9

8. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Age of receivable				
Trade receivables - subsidiary companies				
Not yet due	-	-	16,662	6,077
Past due				
Up to 3 months	-	-	2,711	459
3 - 6 months	-	-	1,908	2,650
6 - 12 months	-	-	444	1,612
Over 12 months	-	-	2,375	82
Total trade receivables - subsidiary companies (Note 7)	-	-	24,100	10,880
Trade receivables - unrelated parties				
Not yet due	3,614,000	2,833,017	1,207,027	1,375,442
Past due				
Up to 3 months	638,339	485,573	324,128	187,186
3 - 6 months	52,465	18,861	27,357	962
6 - 12 months	5,720	3,203	459	2,876
Over 12 months	5,408	2,418	2,790	-
Total trade receivables - unrelated parties	4,315,932	3,343,072	1,561,761	1,566,466
Less: Allowance for expected credit losses	(11,114)	(6,117)	(2,492)	(2,492)
Total trade receivables - unrelated parties - net	4,304,818	3,336,955	1,559,269	1,563,974
Total trade receivables - net	4,304,818	3,336,955	1,583,369	1,574,854
Receivables from the Revenue Department	113,967	52,293	11,308	3,110
Other receivables - unrelated parties	133,998	71,672	36,094	15,971
Total other receivables	247,965	123,965	47,402	19,081
Trade and other receivables - net	4,552,783	3,460,920	1,630,771	1,593,935

The normal credit term is 30 to 60 days.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

9. Inventories

(Unit: Thousand Baht)

	Consolidated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2021	2020	2021	2020	2021	2020
Finished goods	1,032,919	747,733	(41,713)	(28,078)	991,206	719,655
Work in process	604,623	629,167	(3,181)	(4,708)	601,442	624,459
Raw materials	5,270,407	3,254,033	(154,840)	(183,732)	5,115,567	3,070,301
Goods in transit	148,357	81,727	-	-	148,357	81,727
Total	7,056,306	4,712,660	(199,734)	(216,518)	6,856,572	4,496,142

(Unit: Thousand Baht)

	Separate financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2021	2020	2021	2020	2021	2020
Finished goods	688,625	561,235	(18,040)	(24,697)	670,585	536,538
Work in process	215,365	223,946	(3,181)	-	212,184	223,946
Raw materials	2,660,621	1,601,283	(61,244)	(84,850)	2,599,377	1,516,433
Goods in transit	36,083	18,328	-	-	36,083	18,328
Total	3,600,694	2,404,792	(82,465)	(109,547)	3,518,229	2,295,245

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Balance at the beginning of the year	(216,518)	(154,966)	(109,547)	(66,524)
Add: Increase during the year	(189,049)	(158,168)	(117,902)	(88,217)
Less: Reversal during the year	207,863	96,691	144,984	45,194
Add: Translation adjustment	(2,030)	(75)	-	-
Balance at the ending of the year	(199,734)	(216,518)	(82,465)	(109,547)

10. Other current financial assets

(Unit: Thousand Baht)

	Consolidated financial statements	
	2021	2020
<u>Debt instruments at amortised cost</u>		
Fixed deposits	831,535	1,283,941
Total debt instruments at amortised cost	831,535	1,283,941
<u>Debt instruments at FVOCI</u>		
Overseas marketable corporate bonds	1,023,889	1,059,877
Overseas quoted bonds	758,192	697,813
Total		
Less: Allowance for expected credit losses	(24,984)	(25,510)
Total debt instruments at FVOCI - net	1,757,097	1,732,180
<u>Financial assets at FVTPL</u>		
Overseas marketable equity securities	86,898	1,196,726
Derivative assets (Note 32)	19,165	54,053
Total financial assets at FVTPL	106,063	1,250,779
Total other current financial assets - net	2,694,695	4,266,900

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

As at 31 December 2021, fixed deposits with financial institutions carried interests between 0.100 and 2.325 percent per annum (2020: 0.300 and 1.950 percent per annum).

In 2021, the Group reversed provision of Baht 0.53 million for expected credit losses on its debt instruments at FVOCI (2020: recognised provision of Baht 25.51 million).

In March 2021, Credit Suisse Asset Management (Switzerland) AG, a fund management company, announced the termination of Supply Chain Fund, in which the Group has the investment in securities of USD 37.3 million or equivalent to Baht 1,169.8 million as at date of termination. The pay back amounts by the fund were as follows:

Date received	Consolidated financial statements	
	(Million USD)	(Million Baht)
10 March 2021	11.7	365.4
15 April 2021	7.2	226.3
7 July 2021	0.6	17.6
6 August 2021	1.8	58.9
29 September 2021	1.8	62.5
15 December 2021	1.5	50.2
	24.6	780.9

The remaining will be paid after either the obligors pay the amounts outstanding to the fund or the insurance companies pay the amounts to the fund.

11. Investments in subsidiaries

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

(Unit: Thousand Baht)

Company's name	Paid up capital		Shareholding percentage		Cost		Dividend received during the year	
	2021	2020	2021	2020	2021	2020	2021	2020
			Percent	Percent				
Hana Semiconductor (Ayutthaya) Company Limited	1,200,000	1,200,000	58	58	2,142,910	2,142,910	280,000	266,000
Hana Semiconductor (BKK) Company Limited	1,000,000	1,000,000	100	100	1,011,100	1,011,100	-	270,000
Omac Sales Limited	325	325	100	100	273,492	273,492	-	-
Hana Microelectronics (Cambodia) Company Limited	155,947	155,947	100	100	155,947	155,947	-	-
Hana Microelectronics International Company Limited	-	-	100	100	-	-	-	-
Hana Microelectronics Investment Company Limited	-	-	100	100	-	-	-	-
Total investments in subsidiary companies					3,583,449	3,583,449	280,000	536,000

During the year 2020, Hana Microelectronics Enterprise Company Limited, an overseas subsidiary, additionally invested in 21,310,740 ordinary shares of Power Master Semiconductor Company Limited, in total amount of USD 9 million or equivalent to Baht 284.65 million.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

During the year 2021, the subsidiary additionally invested in 56,237,700 ordinary shares of Power Master Semiconductor Company Limited, in total amount of USD 24.5 million or equivalent to Baht 802.70 million.

As at 31 December 2021, the overseas subsidiary has invested in 101,706,697 ordinary shares of Power Master Semiconductor Company Limited, amounting to USD 43.99 million or equivalent to Baht 1,413.65 million (2020: 45,468,997 ordinary shares, amounting to USD 19.49 million or equivalent to Baht 610.95 million), representing 100% of the issued and paid-up share capital of that company.

12. Investment property

The net book value of investment property, representing land, as at 31 December 2021 and 2020 is presented below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cost	72,304	72,304	72,304	72,304
Net book value	72,304	72,304	72,304	72,304

As at 31 December 2021, the fair value of the investment property based on market price amounted to approximately Baht 96 million (2020: Baht 96 million).

13. Property, plant and equipment

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Net book value				
Property, plant and equipment	9,484,419	6,764,483	2,203,638	2,392,024
Right-of-use assets (Note 17)	178,247	173,773	-	-
Total	9,662,666	6,938,256	2,203,638	2,392,024

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

Movement of property, plant and equipment for the years ended 31 December 2021 and 2020 are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements								
	Land	Buildings	Leasehold improvement	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation	Total
Cost									
As at 1 January 2020	487,692	3,767,433	114,845	1,061,235	14,346,080	696,944	57,230	597,185	21,128,644
Additions	-	23,714	5,251	22,314	272,248	23,917	3,476	704,882	1,055,802
Disposals	-	-	-	(96)	(309,713)	(8,818)	(2,096)	-	(320,723)
Transfer in (out)	-	118,698	280	(2,440)	832,157	13,333	-	(1,007,805)	(45,777)
Translation adjustment	(509)	45,240	5,608	136	178,514	3,492	609	11,274	244,364
As at 31 December 2020	487,183	3,955,085	125,984	1,081,149	15,319,286	728,868	59,219	305,536	22,062,310
Additions	-	2,602	14,574	22,375	1,332,745	51,286	2,605	2,469,120	3,895,307
Disposals	-	(17,096)	-	(84,568)	(411,431)	(12,988)	(7,708)	-	(533,791)
Transfer in (out)	-	177,043	1,320	15,483	670,862	16,126	-	(880,834)	-
Translation adjustment	14,745	133,960	16,312	59	389,170	9,511	1,666	15,044	580,467
As at 31 December 2021	501,928	4,251,594	158,190	1,034,498	17,300,632	792,803	55,782	1,908,866	26,004,293
Accumulated depreciation									
As at 1 January 2020	15,940	1,829,040	93,608	785,134	10,721,923	599,611	40,983	-	14,086,239
Depreciation for the year	2,747	195,162	8,837	58,397	849,706	40,502	6,883	-	1,162,234
Accumulated depreciation for disposed assets	-	-	-	(96)	(268,966)	(8,517)	(1,961)	-	(279,540)
Transfer in (out)	-	-	-	(10,651)	(2,320)	2,320	-	-	(10,651)
Translation adjustment	(176)	24,867	4,381	4	108,565	2,621	504	-	140,766
As at 31 December 2020	18,511	2,049,069	106,826	832,788	11,408,908	636,537	46,409	-	15,099,048
Depreciation for the year	2,800	184,597	5,540	55,694	986,272	45,087	5,181	-	1,285,171
Accumulated depreciation for disposed assets	-	(6,882)	-	(72,771)	(371,752)	(12,347)	(7,494)	-	(471,246)
Translation adjustment	2,198	69,421	14,010	3	274,100	7,994	1,418	-	369,144
As at 31 December 2021	23,509	2,296,205	126,376	815,714	12,297,528	677,271	45,514	-	16,282,117
Allowance for impairment loss									
As at 1 January 2020	-	-	-	150	24,872	17	-	-	25,039
Decrease during the year	-	-	-	-	(25)	(1)	-	-	(26)
Translation adjustment	-	-	-	-	(7)	-	-	-	(7)
As at 31 December 2020	-	-	-	150	24,840	16	-	-	25,006
Increase during the year	-	-	-	-	34,300	-	-	-	34,300
Translation adjustment	-	-	-	-	204	-	-	-	204
As at 31 December 2021	-	-	-	150	59,344	16	-	-	59,510
Net book value									
As at 31 December 2020	468,672	1,906,016	19,158	248,211	3,885,538	92,315	12,810	305,536	6,938,256
As at 31 December 2021	478,419	1,955,389	31,814	218,634	4,943,760	115,516	10,268	1,908,866	9,662,666

Depreciation for the year

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

1,162,234

2021 (Baht 1,084 million included in manufacturing cost, and the balance in administrative expenses)

1,285,171

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Thousand Baht)

	Separate financial statements							Total
	Land	Buildings	Fixtures	Machinery and equipment	Office furniture and equipment	Vehicles	Construction in progress and machinery under installation	
Cost								
As at 1 January 2020	249,865	2,014,824	473,131	3,684,001	246,758	17,875	121,551	6,808,005
Additions	-	-	22,071	16,826	17,152	-	74,632	130,681
Disposals	-	-	(96)	(180,718)	(1,810)	(1,359)	-	(183,983)
Transfer in (out)	-	-	(2,440)	104,927	4,466	-	(152,730)	(45,777)
As at 31 December 2020	249,865	2,014,824	492,666	3,625,036	266,566	16,516	43,453	6,708,926
Additions	-	-	7,324	16,030	19,300	1,257	215,693	259,604
Disposals	-	(5,171)	(84,567)	(304,973)	(9,917)	(5,174)	-	(409,802)
Transfer in (out)	-	-	3,199	181,181	5,556	-	(189,936)	-
As at 31 December 2021	249,865	2,009,653	418,622	3,517,274	281,505	12,599	69,210	6,558,728
Accumulated depreciation								
As at 1 January 2020	-	888,537	292,744	2,684,368	199,804	14,745	-	4,080,198
Depreciation for the year	-	95,428	34,960	258,419	15,634	1,566	-	406,007
Accumulated depreciation for disposed assets	-	-	(96)	(155,427)	(1,771)	(1,358)	-	(158,652)
Transfer in (out)	-	-	(10,651)	(2,320)	2,320	-	-	(10,651)
As at 31 December 2020	-	983,965	316,957	2,785,040	215,987	14,953	-	4,316,902
Depreciation for the year	-	87,427	33,584	238,946	18,116	512	-	378,585
Accumulated depreciation for disposed assets	-	(4,993)	(72,771)	(282,192)	(9,567)	(5,174)	-	(374,697)
As at 31 December 2021	-	1,066,399	277,770	2,741,794	224,536	10,291	-	4,320,790
Allowance for impairment loss								
As at 1 January 2020	-	-	-	-	-	-	-	-
As at 31 December 2020	-	-	-	-	-	-	-	-
Increase during the year	-	-	-	34,300	-	-	-	34,300
As at 31 December 2021	-	-	-	34,300	-	-	-	34,300
Net book value								
As at 31 December 2020	249,865	1,030,859	175,709	839,996	50,579	1,563	43,453	2,392,024
As at 31 December 2021	249,865	943,254	140,852	741,180	56,969	2,308	69,210	2,203,638
Depreciation for the year								
2020 (Baht 382 million included in manufacturing cost, and the balance in administrative expenses)								406,007
2021 (Baht 357 million included in manufacturing cost, and the balance in administrative expenses)								378,585

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

As at 31 December 2021, 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 14,131 million (2020: Baht 10,947 million) and for the Company amounted to approximately Baht 2,509 million (2020: Baht 2,394 million).

14. Intangible assets

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

(Unit: Thousand Baht)

	Consolidated financial statements	Separate financial statements
Cost		
As at 1 January 2020	231,788	52,718
Additions	171,372	5,425
Transfer in	45,777	45,777
Translation adjustment	9,267	-
As at 31 December 2020	458,204	103,920
Additions	68,030	949
Translation adjustment	11,231	-
As at 31 December 2021	537,465	104,869
Accumulated amortisation		
As at 1 January 2020	70,854	22,563
Amortisation for the year	13,044	7,742
Transfer in	10,651	10,651
Translation adjustment	1,391	-
As at 31 December 2020	95,940	40,956
Amortisation for the year	16,247	8,681
Translation adjustment	3,372	-
As at 31 December 2021	115,559	49,637
Net book value		
As at 31 December 2020	362,264	62,964
As at 31 December 2021	421,906	55,232
Amortisation for the year		
2020	13,044	7,742
2021	16,247	8,681

15. Other non-current financial assets

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<u>Debt instruments at amortised cost</u>				
Fixed deposits	57	-	-	-
Total debt instruments at amortised cost	57	-	-	-
<u>Equity instruments designated at FVOCI</u>				
Local marketable equity securities	97	97	97	97
Total equity instruments designated at FVOCI	97	97	97	97
Total other non-current financial assets	154	97	97	97

16. Trade and other payables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Trade payables - subsidiary companies (Note 7)	-	-	519,073	623,083
Trade payables - unrelated parties	2,610,024	1,644,679	865,418	551,357
Other payables - subsidiary companies (Note 7)	-	-	2,115	-
Advance received from customers	294,510	213,311	63,195	26,725
Other payables for purchase of machinery	222,279	171,648	58,036	33,938
Accrued expenses	379,063	325,109	36,288	32,804
Total trade and other payables	3,505,876	2,354,747	1,544,125	1,267,907

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

17. Leases

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

a) Right-of-use assets (Note 13)

Movements of right-of-use assets for the years ended 31 December 2021 and 2020 are summarised below:

(Unit: Thousand Baht)

	Consolidated financial statements			
	Land	Buildings	Machinery and equipment	Total
1 January 2020	115,504	45,578	-	161,082
Additions	-	23,714	19,123	42,837
Depreciation for the year	(2,747)	(20,902)	(5,799)	(29,448)
Translation adjustment	(333)	189	(554)	(698)
31 December 2020	112,424	48,579	12,770	173,773
Additions	-	2,361	-	2,361
Depreciation for the year	(2,800)	(7,604)	(6,012)	(16,416)
Translation adjustment	12,547	4,787	1,195	18,529
31 December 2021	122,171	48,123	7,953	178,247

b) Lease liabilities

(Unit: Thousand Baht)

	Consolidated financial statements	
	2021	2020
Lease payments	10,941	18,744
Less: Deferred interest expenses	(92)	(105)
Total	10,849	18,639
Less: Portion due within one year	(7,965)	(10,728)
Lease liabilities - net of current portion	2,884	7,911

A maturity analysis of lease payments is disclosed in Note 32.1 under the liquidity risk.

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Depreciation expense of right-of-use assets	16,416	29,448	-	-
Interest expense on lease liabilities	86	458	-	-
Expense relating to short-term leases	10,564	9,629	346	341
Expense relating to leases of low-value assets	748	158	88	158

d) Others

The Group had total cash outflows for leases for the year ended 31 December 2021 of Baht 23 Million (2020: Baht 34 million), including the cash outflow related to short-term lease and leases of low-value assets.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

18. Short-term provisions

(Unit: Thousand Baht)

	Consolidated financial statements	
	Provision for product warranty	
As at 1 January 2020	301,540	
Translation adjustment	(1,169)	
As at 31 December 2020	300,371	
Translation adjustment	33,828	
As at 31 December 2021	334,199	

19. 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	
	2021	2020	2021	2020
Provision for long-term employee benefits at beginning of year	721,243	698,864	333,196	327,677
Included in the income statement:				
Current service cost	47,384	49,307	21,372	21,877
Interest cost	9,196	10,734	4,106	4,915
Included in other comprehensive income:				
Actuarial (gain) loss arising from				
Demographic assumptions changes	26,969	(47,618)	23,473	(24,810)
Financial assumptions changes	(66,431)	25,991	(41,133)	14,598
Experience adjustments	13,326	10,137	10,419	(1,039)
Benefits paid during the year	(32,836)	(26,172)	(18,945)	(10,022)
Provision for long-term employee benefits at end of year	718,851	721,243	332,488	333,196

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	
	2021	2020	2021	2020
Cost of sales	11,217	12,069	5,769	5,897
Selling and administrative expenses	45,363	47,972	19,709	20,895
Total expenses recognised in the income statements	56,580	60,041	25,478	26,792

The Group expects to pay Baht 69 million of long-term employee benefits during the next year (the Company only: Baht 32 million) (2020: Baht 48 million, the Company only: Baht 31 million).

As at 31 December 2021, the weighted average duration of the liabilities for long-term employee benefit is 13 years (the Company only: 14 years) (2020: 13 years, the Company only: 15 years).

Significant actuarial assumptions are summarised below.

	Consolidated financial statements		Separate financial statements	
	2021 (% per annum)	2020 (% per annum)	2021 (% per annum)	2020 (% per annum)
Discount rate	2.0 - 2.3	1.4	2.3	1.4
Future salary increase rate	4.0	4.0	4.0	4.0
Staff turnover rate (depending on age)	5.0 - 36.9	6.1 - 35.8	5.0 - 19.1	6.1 - 22.8

The results of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at 31 December 2021 and 2020 are summarised below.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Million Baht)

	31 December 2021			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(82)	98	(42)	51
Salary increase rate	97	(82)	50	(42)
	Increase 5%	Decrease 5%	Increase 5%	Decrease 5%
Staff Turnover rate	(101)	140	(66)	98

(Unit: Million Baht)

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

20. 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.

21. Other income

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Gain arising on FVTPL debt/equity instruments	-	31,770	-	-
Gain on sales of FVOCI debt instruments		15,306	-	-
Other income	333,536	341,090	42,822	46,638
Total	354,755	388,166	42,822	46,638

22. Finance income

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Interest income on bank deposits	29,515	51,617	790	1,208
Interest income on debt instruments measured at FVOCI	84,438	87,993	-	-
Total	113,953	139,610	790	1,208

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

23. Expenses by nature

Significant expenses classified by nature are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Raw materials and consumables used	14,987,429	12,037,726	6,711,702	5,692,848
Changes in inventories of finished goods and work in process	(266,593)	(98,823)	(122,285)	(77,056)
Salaries and wages and other employee benefits	4,091,350	3,425,090	1,304,876	1,172,042
Management benefit expenses	108,959	92,734	17,633	16,898
Depreciation and amortisation expenses	1,301,418	1,175,279	387,266	413,749

24. Income tax

Income tax expenses for the years ended 31 December 2021 and 2020 are made up as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Current income tax:				
Current income tax charge	52,949	28,830	15,460	9,256
Adjustment in respect of income tax of previous year	(935)	454	2,195	(1,234)
Deferred tax:				
Relating to origination and reversal of temporary differences	694	30,843	34	622
Income tax expenses reported in the income statements	52,708	60,127	17,689	8,644

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2021 and 2020 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Deferred tax relating to actuarial gain	24	40	24	40
Deferred tax relating to exchange differences on translation of financial statements in foreign currency	3,734	(70)	-	-
	3,758	(30)	24	40

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

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Accounting profit before tax	1,598,022	1,967,869	1,801,561	1,657,562
Applicable tax rate	0 - 30%	0 - 30%	20%	20%
Accounting profit before tax multiplied by income tax rate	429,506	374,726	360,312	331,512
Adjustment in respect of income tax of previous year	(935)	454	2,195	(1,234)
Effects of:				
Promotional privileges (Note 26)	(514,828)	(295,443)	(289,130)	(217,150)
Dividend income not subject to tax	(14)	(14)	(56,014)	(107,214)
Income not subject to tax	(3)	(316)	-	-
Unused temporary differences and tax losses	144,140	2,970	-	-
Non-deductible expenses	6,437	859	123	127
Additional expense deductions allowed	(8,631)	(5,930)	-	-
Others	(2,964)	(17,179)	203	2,603
Total	(375,863)	(315,053)	(344,818)	(321,634)
Income tax expenses reported in the income statements	52,708	60,127	17,689	8,644

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

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	
	2021	2020	2021	2020
Deferred tax assets				
Allowance for expected credit losses	620	9	8	9
Allowance for diminution in value of inventories	5,839	1,779	272	392
Allowance for asset impairment	113	-	113	-
Provision for long-term employee benefits	1,096	1,151	1,096	1,151
Provision for vacation	437	404	67	62
Accrued expenses	23,520	19,149	-	-
Others	13,227	-	-	-
Total	44,852	22,492	1,556	1,614
Deferred tax liabilities				
Accumulated depreciation - plant and equipment	(78,943)	(52,131)	-	-
Total	(78,943)	(52,131)	-	-
Deferred tax assets (liabilities) - net	(34,091)	(29,639)	1,556	1,614

(Unit: Thousand Baht)

	Statements of financial position as at 31 December			
	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Statements of financial position				
Deferred tax assets	10,069	1,614	1,556	1,614
Deferred tax liabilities	(44,160)	(31,253)	-	-
Deferred tax assets (liabilities) - net	(34,091)	(29,639)	1,556	1,614

As at 31 December 2021, the subsidiaries had deductible temporary differences and unused tax losses totaling Baht 395 million (2020: Baht 401 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 2031.

25. 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 2021

26. Promotional privileges

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

Particulars	The Company									
1. Certificate No.	2138(2)/2550	1887(1)/2552	1234(1)/2555	2620(1)/2555	2199(2)/2557	59-0178-0-00-1-0	60-1432-1-00-1-0	63-1072-1-00-1-0	64-0816-1-00-1-0	64-0104-1-00-1-0
2. Promotional privileges for	Production of PCBA	Production of Semiconductor i.e. Wireless Sensor	Production of Integrated Circuit (IC) and Die Testing	Production of Electronic Control Unit	Production of PCBA	Production of PCBA	Production of Telecommunication and Wafer Die Test	Production of Semiconductor i.e. Integrated Circuit	Production of Electro-Magnetic	Production of Semiconductor i.e. Wafer Testing and Wafer Sawing
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	8 years	8 years (tax exempted according with investment)	8 years (tax exempted according with investment)	6 years (tax exempted according with investment)	6 years (tax exempted according with investment)	4 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	-	-	-	-
3.3 Exemption from import duty on machinery as approved by the Board.	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted
3.4 2 times deduction of transportation, electricity and water expenses from the first earning operating income	10 years	10 years	10 years	10 years	10 years	10 years	-	-	-	-
4. Date of first earning operating income	3 December 2007	2 December 2009	26 February 2016	3 January 2014	3 April 2015	4 February 2020	1 January 2018	Had not yet started utilising the privileges	8 October 2021	Had 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 2021

Particulars	Subsidiary				
	Hana Semiconductor (Ayutthaya) Company Limited				
1. Certificate No.	1034(2)/2552	2371(1)/2553	2687(1)/2556	60-0686-1-00-1-0	61-1275-1-00-1-0
2. Promotional privileges for	Production of Wafer Saw, Integrated Circuit (IC) and Integrated Circuit Tested (IC Tested)	Production of Integrated Circuit (IC)	Production of Semiconductor	Production of Integrated Circuit (IC), Wafer sawing, Wafer Grinding and Wafer Testing	Production of Integrated Circuit (IC)
3. The significant tax privileges are					
3.1 Exemption from corporate income tax on net profit from promoted operations and exemption from income tax on dividends paid from the promoted operations which are tax exempted throughout the period in which the corporate income tax is exempted	8 years (Until 1 January 2021)	8 years (Until 27 November 2022)	8 years (Until 2 January 2026)	6 years (Until 31 December 2026)	6 years
3.2 50 % reduction of the normal corporate income tax rate for net income derived after the expiry date in 3.1	5 years	5 years	5 years	-	-
3.3 Exemption from import duty on machinery as approved by the Board.	Granted	Granted	Granted	Granted	Granted
3.4 2 times deduction of transportation, electricity and water expenses from the first earning operating income	10 years	10 years	10 years	-	-
4. Date of first earning operating income	2 January 2013	28 November 2014	3 January 2018	1 January 2021	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 2021

The Group's operating revenues for the years ended 31 December 2021 and 2020, divided between promoted and non-promoted operations, are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements					
	Promoted operations		Non-promoted operations		Total	
	2021	2020	2021	2020	2021	2020
Sales						
Domestic sales	279,937	260,258	132	790	280,069	261,048
Export sales	18,094,241	15,046,053	5,405,869	3,975,419	23,500,110	19,021,472
Total sales	18,374,178	15,306,311	5,406,001	3,976,209	23,780,179	19,282,520

(Unit: Thousand Baht)

	Separate financial statements					
	Promoted operations		Non-promoted operations		Total	
	2021	2020	2021	2020	2021	2020
Sales						
Domestic sales	226,433	191,945	132	790	226,565	192,735
Export sales	10,160,598	8,564,877	3,971	10,560	10,164,569	8,575,437
Total sales	10,387,031	8,756,822	4,103	11,350	10,391,134	8,768,172

27. Segments information

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

For management purposes, the Group is organised into business units based on 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.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

The following tables present revenue, profit and total assets information regarding the Group's operating segments for the years ended 31 December 2021 and 2020.

(Unit: Million Baht)

	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Others	Total reportable segments	Eliminations	Total
For the year ended 31 December 2021						
Revenue from external customers	13,425	9,343	1,012	23,780	-	23,780
Inter-segment revenue	3,096	739	1,112	4,947	(4,947)	-
Total revenue	16,521	10,082	2,124	28,727	(4,947)	23,780
Segment profit	2,221	1,194	(133)	3,282	5	3,287
Dividend income						2
Other income						355
Selling and distribution expenses						(210)
Administrative expenses						(1,214)
Loss on exchange rate						(274)
Loss on derivatives						(35)
Reversal of impairment loss on financial assets						1
Loss on FVTPL equity instrument						(421)
Finance income						114
Finance cost						(7)
Income tax expenses						(53)
Profit for the year						1,545
Segment total assets						
Additions to property, plant and equipment	825	1,080	1,990	3,895	-	3,895

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Million Baht)

	Printed Circuit Board Assembly (PCBA)	Integrated Circuit (IC)	Others	Total reportable segments	Eliminations	Total
For the year ended 31 December 2020						
Revenue from external customers	11,306	7,290	687	19,283	-	19,283
Inter-segment revenue	2,623	529	663	3,815	(3,815)	-
Total revenue	13,929	7,819	1,350	23,098	(3,815)	19,283
Segment profit	1,849	535	156	2,540	8	2,548
Dividend income						2
Gain on exchange rate						127
Gain on derivatives						8
Other income						388
Selling and distribution expenses						(185)
Administrative expenses						(1,026)
Impairment loss on financial assets						(25)
Finance income						140
Finance cost						(9)
Income tax expenses						(60)
Profit for the year						1,908
Segment total assets						
Additions to property, plant and equipment	277	266	513	1,056	-	1,056

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

Geographic information

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

(Unit: Million Baht)

	2021	2020
Revenue from external customers		
United States of America	5,088	4,410
Malaysia	4,763	3,850
Singapore	3,540	3,067
China	2,979	2,268
Taiwan	878	626
Others	6,532	5,062
Total	23,780	19,283

(Unit: Million Baht)

	2021	2020
Non-current assets (other than deferred tax assets)		
Thailand	4,965	4,643
Korea	3,064	1,159
China	1,601	1,061
Cambodia	408	398
United States of America	175	140
Hong Kong	58	55
Others	2	3
Total	10,273	7,459

Major customers

For the year 2021, the Group has revenue from 5 major customers in amount of Baht 10,730 million, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment, (2020: Baht 8,576 million, arising from sales by the Printed Circuit Board Assembly (PCBA) segment and the Integrated Circuit (IC) segment).

28. Provident fund

The Group and its employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. Both employees and the Group contribute to the fund monthly at the rates of 3.0 - 7.5 percent of basic salary. The fund, which is managed by SCB Asset Management Company Limited, will be paid to employees upon terminating in accordance with the fund rules. The contributions for the year 2021 amounting to approximately Baht 91 million (2020: Baht 88 million) and for the Company amounting to approximately Baht 46 million (2020: Baht 44 million) were recognised as expenses.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

29. Dividend paid

During the years 2021 and 2020, the Group had dividend payments as follows:

	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)
The Company			
<u>For the year 2021</u>			
Dividends on 2020 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 30 April 2021	604	0.75
Interim dividends in respect of the income for the period from 1 January 2021 to 30 June 2021	Board of Directors' Meeting on 15 October 2021	805	1.00
Total for the year 2021		1,409	1.75
<u>For the year 2020</u>			
Dividends on 2019 income and unappropriated retained earnings	Annual General Meeting of the shareholders on 30 April 2020	523	0.65
Interim dividends in respect of the income for the period from 1 January 2020 to 30 June 2020	Board of Directors' Meeting on 9 October 2020	523	0.65
Total for the year 2020		1,046	1.30

	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)
Subsidiary companies			
Hana Semiconductor (Ayutthaya) Company Limited			
<u>For the year 2021</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 7 April 2021	480	4.0
Total for the year 2021		480	4.0
<u>For the year 2020</u>			
Dividends on the unappropriated retained earnings	Annual General Meeting of the shareholders on 7 April 2020	456	3.8
Total for the year 2020		456	3.8
Subsidiary companies			
Hana Semiconductor (BKK) Company Limited			
<u>For the year 2020</u>			
Interim dividends in respect of the income for period from 1 January 2020 to 30 April 2020	Board of Directors' Meeting on 29 April 2020	270	2.7
Total for the year 2020		270	2.7

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

30. Commitments and contingent liabilities

30.1 Capital commitments

As at 31 December 2021, the Group had capital commitments relating to acquisitions of machinery totaling USD 11 million, CNY 12 million and Baht 123 million or equivalent to Baht 563 million (2020: USD 9.8 million, CNY 6 million and Baht 29 million or equivalent to totaling Baht 354 million) and the Company only of approximately Baht 123 million (2020: Baht 29 million).

30.2 Commitments under service agreements

The Group has future payments required under the service contracts as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Payable:				
In up to 1 year	67.9	100.8	33.6	35.7
In over 1 year and up to 5 years	10.6	11.6	8.4	1.5

30.3 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.

30.4 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.

30.5 Guarantees

As at 31 December 2021, there were outstanding bank guarantees of approximately Baht 27 million (2020: Baht 27 million) issued by the banks on behalf of the Group in respect of certain performance bonds as required in the normal course of business of the Group to guarantee electricity uses, among others, and the Company of approximately Baht 26 million (2020: Baht 26 million).

31. Fair value hierarchy

As at 31 December 2021 and 2020, the Group had the assets that were measured at fair value or for which fair value was disclosed using different levels of inputs as follows:

(Unit: Thousand Baht)

	31 December 2021		
	Consolidated Financial Statements		
	Level 1	Level 2	Level 3
Financial assets measured at fair value			
Financial assets at FVTPL			
Overseas marketable equity securities	86,898	-	86,898
Derivatives assets	-	19,165	19,165
Financial assets at FVOCI			
Marketable corporate bonds	1,023,889	-	1,023,889
Quoted bonds	733,208	-	733,208
Local marketable equity securities	97	-	97
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

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Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Thousand Baht)

	31 December 2020		
	Consolidated Financial Statements		
	Level 1	Level 2	Level 3
Financial assets measured at fair value			
Financial assets at FVTPL			
Overseas marketable equity securities	1,196,726	-	1,196,726
Derivatives assets	-	54,053	54,053
Financial assets at FVOCI			
Marketable corporate bonds	1,059,877	-	1,059,877
Quoted bonds	672,303	-	672,303
Local marketable equity securities	97	-	97
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

(Unit: Thousand Baht)

	31 December 2021		
	Separate financial statements		
	Level 1	Level 2	Level 3
Financial assets measured at fair value			
Financial assets at FVOCI			
Local marketable equity securities	97	-	97
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

(Unit: Thousand Baht)

	31 December 2020		
	Separate financial statements		
	Level 1	Level 2	Level 3
Financial assets measured at fair value			
Financial assets at FVOCI			
Local marketable equity securities	97	-	97
Assets for which fair value was disclosed			
Investment property	-	96,405	96,405

32. Financial instruments

32.1 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, trade and other receivables, investments and trade and other payables. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Group is exposed to credit risk primarily with respect to trade and other receivables deposits with banks and financial institutions and other financial instruments. The maximum exposure to credit risk is limited to the carrying amounts of receivables as stated in the statement of financial position.

Trade receivables

The Group manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. Outstanding trade receivables are regularly monitored.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

An impairment analysis is performed at each reporting date to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar credit risks. The Group classifies customer segments by customer type and rating. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables are written-off if past due for more than one year and not subject to enforcement activity.

Financial instruments and cash deposits

The Group manages the credit risk from balances with banks and financial institutions by making investments only with approved counterparties and within credit limits assigned to each counterparty. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through a counterparty's potential failure to make payments.

The credit risk on debt instruments and derivatives is limited because the counterparties are banks with high credit-ratings assigned by international credit-rating agencies.

Interest rate risk

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

As at 31 December 2021 and 2020, 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 2021					
	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	510	-	2,153	641	3,304	0.001 - 0.500
Trade and other receivables	-	-	-	4,553	4,553	-
Other current financial assets	2,051	625	-	19	2,695	0.100 - 7.720
	2,561	625	2,153	5,213	10,552	
Financial liabilities						
Trade and other payables	-	-	-	3,506	3,506	-
	-	-	-	3,506	3,506	

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

	Consolidated financial statements as at 31 December 2020					
	Fixed interest rate		Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	Within 1 year	1 - 5 years				
	(Million Baht)					
Financial assets						
Cash and cash equivalents	1,779	-	3,105	516	5,400	0.001 - 0.900
Trade and other receivables	-	-	-	3,461	3,461	-
Other current financial assets	3,667	546	-	54	4,267	0.300 - 7.720
	5,446	546	3,105	4,031	13,128	
Financial liabilities						
Trade and other payables	-	-	-	2,355	2,355	-
	-	-	-	2,355	2,355	

	Separate financial statements as at 31 December 2021				
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	(Million Baht)				
Financial assets					
Cash and cash equivalents	-	228	18	246	0.05 - 0.10
Trade and other receivables	-	-	1,631	1,631	-
	-	228	1,649	1,877	
Financial liabilities					
Trade and other payables	-	-	1,544	1,544	-
	-	-	1,544	1,544	

	Separate financial statements as at 31 December 2020				
	Fixed interest rate within 1 year	Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	(Million Baht)				
Financial assets					
Cash and cash equivalents	-	633	10	643	0.05 - 0.125
Trade and other receivables	-	-	1,594	1,594	-
	-	633	1,604	2,237	
Financial liabilities					
Trade and other payables	-	-	1,268	1,268	-
	-	-	1,268	1,268	

Foreign currency risk

The Group's exposure to foreign currency risk arises mainly from trading transactions that are denominated in foreign currencies. The Group seeks to reduce this risk by entering into forward exchange contracts when it considers appropriate. Generally, the forward contracts will mature within one year.

The balances of financial assets and liabilities denominated in foreign currencies as at 31 December 2021 and 2020 are summarised below.

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Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

Foreign currency	Financial assets as at 31 December		Financial liabilities as at 31 December		Average exchange rate as at 31 December	
	2021	2020	2021	2020	2021	2020
	(Million)	(Million)	(Million)	(Million)	(Baht per foreign currency unit)	
Cambodia Riel	1,694	2,370	-	-	0.0082	0.0074
US Dollar	102	98	56	63	33.4199	30.0371
Japan Yen	3	5	20	12	0.2906	0.2907
Hong Kong Dollar	2	2	-	-	4.2886	3.8753
Euro	1	-	1	-	37.8948	36.8764
Indian Rupee	-	40	-	-	0.4476	0.4091
Singapore Dollar	-	2	-	-	24.7357	22.6632

As at 31 December 2021 and 2020, the two overseas subsidiary companies had outstanding forward exchange contracts, of which details are presented below.

As at 31 December 2021		
Sold amount (Million USD)	Contractual maturity date	Contractual exchange rate for amount sold (Baht per USD)
120	31 January 2022 - 21 March 2022	33.2475 – 33.550

As at 31 December 2020		
Sold amount (Million USD)	Contractual maturity date	Contractual exchange rate for amount sold (Baht per USD)
120	25 January 2021 - 22 June 2021	29.720 - 31.284

Foreign currency sensitivity

The following tables demonstrate the sensitivity of the Group's profit before tax to a reasonably possible change in US dollar exchange rates, with all other variables held constant. The impact on the Group's profit before tax is due to changes in the fair value of monetary assets and liabilities including non-designated foreign currency derivatives as at 31 December 2021 and 2020. The Group's exposure to foreign currency changes for all other currencies is not material.

Currency	2021		2020	
	Change in FX rate	Effect on profit before tax Increase (decrease)	Change in FX rate	Effect on profit before tax Increase (decrease)
	(%)	(Million Baht)	(%)	(Million Baht)
US dollar	+1	15	+1	17
	- 1	(15)	- 1	(17)

Liquidity risk

The Group manages liquidity risk to meet its obligations and maintain cash balances to cover the liquidity needs. The Group has assessed that it has sufficient working capital to settle financial liabilities and concluded the risk to be low.

The table below summarises the maturity profile of the Group's non-derivative financial liabilities and derivative financial instruments as at 31 December 2021 and 2020 based on contractual undiscounted cash flows:

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Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

(Unit: Thousand Baht)

	As at 31 December 2021		
	Consolidated financial statements		
	Less than 1 year	1 to 5 years	Total
Non-derivatives			
Trade and other payables	3,505,876	-	3,505,876
Lease liabilities	8,031	2,910	10,941
Total non-derivatives	3,513,907	2,910	3,516,817

(Unit: Thousand Baht)

	As at 31 December 2021		
	Consolidated financial statements		
	Less than 1 year	1 to 5 years	Total
Non-derivatives			
Trade and other payables	2,354,747	-	2,354,747
Lease liabilities	10,797	7,947	18,744
Total non-derivatives	2,365,544	7,947	2,373,491

(Unit: Thousand Baht)

	As at 31 December 2021		
	Separate financial statements		
	Less than 1 year	1 to 5 years	Total
Non-derivatives			
Trade and other payables	1,544,125	-	1,544,125
Total non-derivatives	1,544,125	-	1,544,125

(Unit: Thousand Baht)

	As at 31 December 2020		
	Separate financial statements		
	Less than 1 year	1 to 5 years	Total
Non-derivatives			
Trade and other payables	1,267,907	-	1,267,907
Total non-derivatives	1,267,907	-	1,267,907

32.2 Fair value of financial instruments

Since the majority of the Group's financial instruments are short-term in nature or carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statement of financial position.

Notes to consolidated financial statements

Hana Microelectronics Public Company Limited and its subsidiaries for the year ended 31 December 2021

The estimated fair value of the derivatives is as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	As at 31 December 2021	As at 31 December 2020
	Fair value	Fair value
	gain	gain
Derivatives		
Forward exchange contracts	19.2	54.1

The methods and assumptions used by the Group in estimating the fair value of financial instruments are as follows:

- For financial assets and liabilities which have short-term maturity, including cash and cash equivalents, accounts receivable and accounts payable, their carrying amounts in the statement of financial position approximate their fair value.
- For debts and equity securities, their fair value is generally derived from quoted market prices, or based on generally accepted pricing models when no market price is available.
- For fixed deposits with financial institution carrying interest approximate to the market rate, their carrying amounts in the statement of financial position approximate their fair value.
- For derivatives, their fair value has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, yield curves of the respective currencies and interest rate yield curves. The subsidiaries have considered the counterparty credit risk when determining the fair value of derivatives

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

33. Capital management

The primary objective of the Group's capital management is to ensure that it has appropriate capital structure in order to support its business and maximise shareholder value. As at 31 December 2021, the Group's debt-to-equity ratio was 0.21:1 (2020: 0.16:1) and the Company's was 0.20:1 (2020: 0.18:1).

34. Event after the reporting period

On 25 February 2022, the meeting of the Board of Directors of the Company No. 1/2022 passed the resolution approving the final dividend payment for the year 2021 to the Company's shareholders at Baht 1.00 per share. Thus, including the interim dividend of Baht 1.00 per share, the total dividend payment for the year 2021 will be Baht 2.00 per share. The dividend payment will later be proposed for approval in the Annual General Meeting of the Company's shareholders.

35. Approval of financial statements

These financial statements were authorised for issue by the Company's Board of Directors on 25 February 2022.

Attachment 1: Profiles of Directors and Executives



Age:	57 years old
Date of appointment:	1 January 2017
Number of years as the director:	5 years
Working Experience:	<ul style="list-style-type: none"> • 2017 - present, Chairman of the Board of Directors, Independent Director and Chairman of Audit Committee Hana Microelectronics Public Co., Ltd. • 2007 - present, Executive Director NT Asset (Thailand) Co., Ltd. • 2005 - present, Independent Director and Audit Committee Bangkok Post Public Co., Ltd.

Education Background:	<ul style="list-style-type: none"> • Bachelor (Honours), London University, United Kingdom • Associate Chartered Accountant (ACA), The Institute of Chartered Accountants in England & Wales (ICAEW), United Kingdom
IOD Training Courses:	<ul style="list-style-type: none"> • Directors Accreditation Program (DAP) 57/2006
Other Trainings:	<ul style="list-style-type: none"> • The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by The Securities and Exchange Commission - November 2021

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

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 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Attachment 1: Profiles of Directors and Executives



Age:	64 years old
Date of appointment:	26 July 1993
Number of years as the director:	28 years
Working Experience:	<ul style="list-style-type: none"> • 2004 – present, Nomination Committee Hana Microelectronics Public Co., Ltd. • 1993 – present, Executive Vice Chairman and Chief Executive Officer Hana Microelectronics Public Co., Ltd.
Education background:	<ul style="list-style-type: none"> • B.A. Business Studies, Westminster, London, United Kingdom • M.B.A. (Marketing) City University, London, United Kingdom
IOD Training Courses:	<ul style="list-style-type: none"> • Directors Accreditation Program (DAP) 57/2006 • Understanding the Fundamental of Financial Statements (UFS) 4/2006
Other Trainings:	None

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

Subsidiaries of Hana	Non-listed Company	Listed Company
1. Hana Semiconductor (BKK) Co., Ltd. 2. Hana Semiconductor (Ayutthaya) Co., Ltd. 3. Hana Technologies, Inc. 4. Hana Microelectronics, Inc. 5. Hana Microelectronics (Jiaxing) Co., Ltd. 6. Hana Microelectronics Investment Co., Ltd. 7. Hana Microelectronics International Co., Ltd. 8. Hana Microelectronics Enterprise Co., Ltd. 9. Hana Semiconductor International Ltd. 10. Hana Macao Co., Ltd. 11. Omac Sales Ltd. 12. Hana Microelectronics (Cambodia) Co., Ltd. 13. Power Master Semiconductor Co., Ltd.	1. Omac (HK) Limited 2. Omac Limited 3. Rainbow Joy Limited	TBSP Public Company Limited – resigned (effective on 15 September 2021)
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 2021	Movement during the year		Spouse	Minor Child
	Acquisition	Disposition		
1,040,000 shares	-	-	None	None
			1,040,000 shares (0.129%)	

Attachment 1: Profiles of Directors and Executives



Age:	75 years old
Date of appointment:	26 July 1993
Number of years as the director:	28 years (resigned effective on 1 January 2022)
Working Experience:	<ul style="list-style-type: none"> • 1993 - present, Executive Director Hana Microelectronics Public Co., Ltd.
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Engineering, Cheng Kong University, Taiwan
IOD Training Background:	<ul style="list-style-type: none"> • Director Accreditation Program (DAP) 117/2015
Other Trainings:	None

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

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 (Cambodia) Co., Ltd.	None	None
Position: Executive Director		

Shareholding of Mr. Winson Moong Chu Hui				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
6,280,000 shares	40,000 shares	770,000 shares	5,550,000 shares (0.690%)	None	None

Attachment 1: Profiles of Directors and Executives



Age:	62 years old
Date of appointment:	26 July 1993
Number of years as the director:	28 years
Working Experience:	<ul style="list-style-type: none"> • 1993 - present, Executive Director Hana Microelectronics Public Co., Ltd.
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Economics, Macquarie University, CPA, Australia
IOD Training Background:	<ul style="list-style-type: none"> • Director Certification Program (DCP) 6/2001, Diploma
Other Trainings:	<ul style="list-style-type: none"> • Deep Dive into Climate Related Disclosures by The Securities and Exchange Commission and the UK government - March 2021
Continuing development course in accounting knowledge (Refreshment):	<ul style="list-style-type: none"> • Company valuation using Excel by CPA Australia Ltd. - November 2021 (3 hours) • Dashboarding with heat maps by CPA Australia Ltd. - November 2021 (3 hours) • Financial Dashboard design by CPA Australia Ltd. - November 2021 (4 hours)

Remark: Mr. Terrence Philip Weir, an executive director and Chief Financial Officer, has completed 3 courses of 2021 refreshment programs in financial and accounting totally 10 hours from CPA Australia Ltd. Those courses were reviewed by the Audit Committee to be beneficial to the Company and related to accounting principles/standards that are consistent with the nature of the Company's business.

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

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

Shareholding of Mr. Terrence Philip Weir				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
575,000 shares	-	50,000 shares	525,000 shares (0.065%)	None	None

Attachment 1: Profiles of Directors and Executives



Age:	60 years old
Date of appointment:	1 December 2013
Number of years as the director:	8 years
Working Experience:	<ul style="list-style-type: none"> • 2020 - present, Risk Management Committee Hana Microelectronic Public Co., Ltd. • 2013 - present, Independent Director, Audit Committee, Nomination Committee and Corporate Governance and Sustainability Committee Hana Microelectronic Public Co., Ltd. • 2009 - present, Financial and Accounting Consultant • 1992 - 2009, Accounting Manager S. Napa (Thailand) Co., Ltd. & Group Company
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Accounting, Thammasat University, Thailand

IOD Training Background:

- Risk Management for Committee Program (RMP) 2/2013
- Director Accreditation Program (DAP) 107/2014
- Director Certification Program (DCP) 205/2015
- Nomination Committee Best Practice Guideline (M-ND) 1/2017

Other Trainings:

- Preparation for post COVID-19 (once in a hundred-year crisis, opportunity and prospect offered post COVID-19) by EY Office Limited - October 2021
- The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by The Securities and Exchange Commission - November 2021

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

Subsidiaries of Hana	Non-listed Company	Listed Company
None	None	None

Shareholding of Mrs. Salakchitt Preedaporn				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Attachment 1: Profiles of Directors and Executives



6. MR. YINGSAK JENRATHA

- Independent Director
- Audit Committee
- Chairman of Nomination Committee
- Corporate Governance and Sustainability Committee
- Risk Management Committee

Age:	74 years old
Date of appointment:	1 December 2013
Number of years as the director:	8 years
Working Experience:	<ul style="list-style-type: none"> • 2013 – present, Independent Director Hana Microelectronics Public Co., Ltd. • 2010 – 2011, Management Advisor International Precision Product Co., Ltd. • 2008 -2009, Vice President and General Manager Hana Microelectronics Co., Ltd. (Jiaxing), China
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Art in Political Sciences, Chaingmai University, Thailand • Mini MBA, Kasetsart University, Thailand • Operation Management Certificate from GIBA (Graduated Institute of Business Administration), Chulalongkorn University, Thailand

IOD Training Background:

- Anti-Corruption for Executive Program (ACEP) 9/2014
- Director Accreditation Program (DAP) 111/2014
- Role of the Nomination and Governance Committee (RNG) 8/2016

Other Trainings:

- The Importance of Audit Committee in the Capital Market and Roles of Audit Committee in Good Corporate Governance by The Securities and Exchange Commission - November 2021

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

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

Shareholding of Mr. Yingsak Jenratha				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Attachment 1: Profiles of Directors and Executives



7. MR. WING KEUNG CHOW
• Vice President and General Manager
Hana-Lamphun

Age:	62 years old
Date of appointment:	1 January 2008 - 31 December 2021
Number of years as the executives:	14 years (resigned effective on 1 January 2022)
Working Experience:	<ul style="list-style-type: none"> 2008 - 2021, Vice President and General Manager Hana Microelectronics Public Co., Ltd. 2001 - 2007, Vice President Marketing & Customer Services Hana Microelectronics Public Co., Ltd.
Educational Background:	<ul style="list-style-type: none"> Master Degree of Management, SASIN, Chulalongkorn University, Thailand

IOD Training Background: None

Other Trainings: None

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

Subsidiaries of Hana	Non-listed Company	Listed Company
None	None	None

Shareholding of Mr. Wing Keung Chow				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
561,500 shares	-	172,000 shares	389,500 shares (0.048%)	None	None

Attachment 1: Profiles of Directors and Executives



8. MS. ACHARA CHAICHARNCHEEP
• Finance and Accounting Senior Manager

Age:	52 years old
Date of appointment:	14 October 2013
Working Experience:	<ul style="list-style-type: none"> 1996 – present, Finance and Accounting Senior Manager Hana Microelectronics Public Co., Ltd. (Headquarter)
Educational Background:	<ul style="list-style-type: none"> Bachelor of Accounting, Kasetsart University, Thailand
IOD Training Background:	None
Continuing development course in accounting knowledge (Refreshment):	<ul style="list-style-type: none"> Managerial Accounting for Planning and Decision Making By Dharmniti Seminar and Training Co., Ltd. - November 2021 (6.5 Hours) Withholding Tax Process By Dharmniti Seminar and Training Co., Ltd. - November 2021 (6.5 Hours)

Remark: Ms. Achara Chaicharncheep is the registered accountant and has qualifications and conditions in accordance with the rules specified in the notification of the Department of Business Development. She has completed the continual knowledge development program on professional accounting which shall be not lesser than 12 hours each calendar year which the number of hours of continuous knowledge development in the accounting profession shall be not lesser than 6 hours.

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

Subsidiaries of Hana	Non-listed Company	Listed Company
Finance and Accounting Senior Manager Hana Semiconductor (BKK) Co., Ltd.	None	None

Shareholding of Ms. Achara Chaicharncheep				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
30,000 shares	-	10,000 shares	20,000 shares (0.002%)	None	None

Attachment 1: Profiles of Directors and Executives



9. MS. JIRAPA KONGMANEE

- The Corporate Secretary
- Senior Manager of Internal Audit
- The Head of Compliance Unit

Age:	54 years old
Date of appointment:	11 August 2008
Working Experience:	<ul style="list-style-type: none"> • 1999 - present, Senior Manager of Internal Audit Hana Microelectronics Public Co., Ltd. • 2008 - present, Corporate Secretary Hana Microelectronics Public Co., Ltd. • 2013 - present, The Head of Compliance Unit Hana Microelectronics Public Co., Ltd.
Educational Background:	<ul style="list-style-type: none"> • Bachelor of Accounting, Bangkok University, Thailand • Master of Business Administration, Butler University, USA
IOD Training Background:	<ul style="list-style-type: none"> • Corporate Secretary Program (IOD) 19/2006 • Effective Minute Taking (IOD) 4/2006
Other Trainings:	<ul style="list-style-type: none"> • Mainstream Green Integration of Thailand: Transformation from Policy to Implementation by Office of Natural Resources and Environmental Policy and Planning, Ministry of Natural Resources and Environment - February 2021 • Workshop on Greenhouse Gas Emissions reporting for business sustainability by the Securities and Exchange Commission and Thailand Greenhouse Gas Management Organization (Public Organization) - February 2021 • Integrating Human Rights into Risk Management by Government Pension Fund, United Nations Environment Programme and the Stock Exchange of Thailand - March 2021 • THSI 2021 Sustainability Assessment by the Stock Exchange of Thailand - March 2021 • Sustainability Disclosure according to One Report by the Stock Exchange of Thailand - March 2021

Other Trainings: (continue)

- Deep Dive into Climate Related Disclosures by the Securities and Exchange Commission and the UK Government - March 2021
- Climate Change, risk that businesses should not be overlooked and Greenhouse Gas Emissions reporting in One Report by the Stock Exchange of Thailand - June 2021
- Sustainability Reporting Courses for Technology Industry Section by the Stock Exchange of Thailand - July 2021
- Plastic Footprint Reduction - Lessons Learned and the Way Forward by Solid Waste Management Association of Thailand - September 2021
- Sustainability, ESG and a company's reporting by EY Office Limited - September 2021
- Understanding Climate Change as Business Drivers by the Stock Exchange of Thailand - October 2021
- Guideline for the preparation of greenhouse gas emissions reports for listed companies by the Securities and Exchange Commission and Thailand Greenhouse Gas Management Organization (Public Organization) - October 2021
- Business and Human Rights in One Report by the Stock Exchange of Thailand - November 2021
- CGR Workshop 2021: CGR 2023 survey criteria by Thai Institute of Directors Association - November 2021
- ESG and Climate Change - IA Role in Sustainability Journey by IA Academy - November 2021
- Policy to support low-carbon business operations: to promote Thailand's climate change policy and carbon neutrality targets by the Securities and Exchange Commission, Thailand Greenhouse Gas Management Organization (Public Organization), Thai Listed Companies Association and PricewaterhouseCoopers ABAS Ltd. December 2021
- To ensure readiness before PDPA comes into force by the Securities and Exchange Commission - December 2021

Family relationship between Directors and Executives: None

Disciplinary record under the Securities and Exchange Act and the Derivatives Act: None

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

Subsidiaries of Hana		Non-listed Company		Listed Company	
None		None		None	
Shareholding of Ms. Jirapa Kongmanee				Indirect Shareholding	
Number of shares as of 1 January 2021	Movement during the year		Number of shares as of 31 December 2021	Spouse	Minor Child
	Acquisition	Disposition			
0 share	-	-	0 share (0%)	None	None

Attachment 2: Details of the Directors of Subsidiaries

The Company and its Subsidiaries															Related Companies		
The Company and its subsidiaries	Hana Microelectronics Public Co., Ltd.	Hana Semiconductor (BKK) Co., Ltd.	Hana Semiconductor (Ayutthaya) Co., Ltd.	Hana Technology, Inc.	Hana Microelectronics, Inc.	Hana Microelectronics (Jiaxing) Co., Ltd.	Omac Sales Ltd.	Hana Microelectronics Investment Ltd.	Hana Microelectronics International Ltd.	Hana Microelectronics Enterprises Co., Ltd.	Hana Semiconductor International Ltd.	Hana Macao Ltd.	Hana Microelectronics (Cambodia) Co., Ltd.	Power Master Semiconductor Co., Ltd.	Omac Ltd.	Omac (HK) Ltd.	Rainbow Joy Ltd.
Name list of directors and executives																	
1. Mr. John Thompson*	X																
2. Mr. Richard David Han	//	//	//	//	//	//	//	//	//	//	//	//	//	//	//	//	//
3. Mr. Winson Moong Chu Hui	//	//	//	//	//	//											
4. Mr. Terrence Philip Weir	//	//	//	//	//	//	//	//	//	//	//	//	//	//			
5. Mrs. Salakchitt Preedaporn*	/																
6. Mr. Yingsak Jenratha*	/																
7. Mr. Wing Keung Chow	///																
8. Ms. Achara Chaicharncheep	///	///															

X = Chairman of the Board

/ = Director

// = Executive Director

/// = Executive Management

* = Independent Director

Attachment 3: Details of the Head of the Internal Audit and Compliance Unit

Head of the Internal Audit and Compliance Units

Name: Ms. Jirapa Kongmanee

Educational Background:

- Bachelor of Accounting, Bangkok University, Thailand
- Master of Business Administration, Butler University, USA

Working Experience:

1999 – present: • Senior Manager of Internal Audit,
Hana Microelectronics Public Co., Ltd.

2008 – present: • Corporate Secretary, Hana Microelectronics Public Co., Ltd.

2013 – present: • The Head of Compliance Unit,
Hana Microelectronics Public Co., Ltd.

Training:

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.

Duties and responsibilities of the Head of Internal Audit:

- To prepare risk-based audit planning and propose the audit plan to the Audit Committee for approval
- To supervise the audit works according to the audit plan or adjust the audit scopes as deemed necessary
- To prepare the audit report and follow-up on internal audit with recommend improvement for effectiveness of internal control including coordinating with external auditors on matters related to the internal control system of the organization
- To evaluate existing fraud and corruption risk management framework with recommendation of potential gaps of anti-corruption controls in the processes

- To report the key audit results including major risks and management actions to senior management and the Audit Committee
- To perform other related assignments

Duties and Responsibilities of the Head of Compliance Unit:

- To prepare compliance audit planning and propose the audit plan to the Audit Committee for approval
- To supervise the compliance audit works according to the audit plan or adjust the audit scopes as deemed necessary
- To prepare the audit report with recommend improvement to be in line with established relevant regulations, applicable laws, internal policies and procedures and specification including ethical standards
- To report the compliance audit results and management actions to senior management and the Audit Committee
- To perform other related assignments

Attachment 4 Business Asset and Details of Asset Appraisal

As of 31 December 2021, the Company and its subsidiaries have major operating fixed assets of property, plant, machinery and equipment in the consolidated financial statements as below details.

1) Land and land improvement

Location	Company	Purpose of Use	Net Book Value (Million Baht)		Obligations
			Owned asset	Right of use under lease	
Bangkok, Thailand	Hana Microelectronics Public Co., Ltd.	Headquarters	123.6	-	None
Northern Region Industrial Estate, Lamphun, Thailand		PCBA Factory – Plant 1	51.0	-	None
Sahapat Group Industrial Park, Lamphun, Thailand		PCBA Factory – Plant 2	75.2	-	None
Hi-Tech Industrial Estate, Ayutthaya, Thailand	Hana Semiconductor (Ayutthaya) Co., Ltd.	IC Factory	106.4	-	None
Xingcheng Industrial Zone, Jiaxing, China	Hana Microelectronics (Jiaxing) Co., Ltd.	PCBA and IC Factories	24.9	-	None
Koh Kong Special Economic Zone, Koh Kong, Cambodia	Hana Microelectronics (Cambodia) Co., Ltd.	PCBA Factory	-	122.2	None
Total Net Book Value			381.1	122.2	

2) Building and leasehold improvement

Location	Company	Purpose of Use	Net Book Value (Million Baht)		Obligations
			Owned asset	Right of use under lease	
Bangkok, Thailand	Hana Microelectronics Public Co., Ltd.	Office/ Headquarters	103.0	-	None
Northern Region Industrial Estate, Lamphun, Thailand		PCBA Factory – Plant 1	190.3	-	None
Sahapat Group Industrial Park, Lamphun, Thailand		PCBA Factory – Plant 2	650.0	-	None
Hi-Tech Industrial Estate, Ayutthaya, Thailand	Hana Semiconductor (Ayutthaya) Co., Ltd.	IC Factory	243.2	-	None
Xingcheng Industrial Zone, Jiaxing, China	Hana Microelectronics (Jiaxing) Co., Ltd.	PCBA and IC Factories	221.0	-	None
Koh Kong Special Economic Zone, Koh Kong, Cambodia	Hana Microelectronics (Cambodia) Co., Ltd.	PCBA Factory	251.0	-	None
Twinsburg, Ohio, USA	Hana Technology Inc.	Microdisplay Factory	5.0	-	None

2) Building and leasehold improvement (Cont.)

Location	Company	Purpose of Use	Net Book Value (Million Baht)		Obligations
			Owned asset	Right of use under lease	
Cheongju-si Chungcheongbuk-do, Korea	Power Master Semiconductor Co., Ltd.	Office/Factory	236.1	-	None
Bucheon-si Gyeonggi-do, Korea		Sales and R&D	-	2.9	None
Hong Kong	Omac Sales Ltd.	Office	12.3	45.2	None
Macao	Hana Macao Ltd.	Office	2.2	-	None
Total Net Book Value			1,914.1	48.1	

3) Machinery and Equipment

Location	Company	Purpose of Use	Net Book Value (Million Baht)		Obligations
			Owned asset	Right of use under lease	
Northern Region Industrial Estate, Lamphun, Thailand	Hana Microelectronics Public Co., Ltd.	PCBA Factory – Plant 1	329.4	-	None
Sahapat Group Industrial Park, Lamphun, Thailand		PCBA Factory – Plant 2	411.8	-	None
Hi-Tech Industrial Estate, Ayutthaya, Thailand	Hana Semiconductor (Ayutthaya) Co., Ltd.	IC Factory	1,991.7	-	None
Xingcheng Industrial Zone, Jiaxing, China	Hana Microelectronics (Jiaxing) Co., Ltd.	PCBA and IC Factories	1,058.9	-	None
Koh Kong Special Economic Zone, Koh Kong, Cambodia	Hana Microelectronics (Cambodia) Co., Ltd.	PCBA Factory	31.9	-	None
Twinsburg, Ohio, USA	Hana Technology Inc.	Microdisplay Factory	135.1	7.9	None
Bucheon-si Gyeonggi-do, Korea	Power Master Semiconductor Co., Ltd.	R&D and production	977.1	-	None
Total Net Book Value			4,935.9	7.9	

Details of leasing agreement:
1. Land leasing agreement for Hana in China

Purpose of use: Factory

Counterparty: Xiuzhou District, China Government (Lessor) and Hana Microelectronic (Jiaxing) Co., Ltd. (Tenant)

Contract period: 1 December 2004 - 11 March 2054 (50 years)

2. Land leasing agreement of Hana in Cambodia

Purpose of use: Factory and Dormitory

Counterparty: Koh Kong Sez Co., Ltd. (Lessor) and Hana Microelectronic (Cambodia) Co., Ltd. (Tenant)

Contract period: 1 December 2013 - 30 November 2063 (50 years)

3. Land and office leasing agreement of Hana in USA

3.1 Purpose of use: Office

Counterparty: Oxford Business Park Limited (Lessor) and Hana Microelectronic, Inc. (Tenant)

Contract period: 1 October 2019 - 30 November 2021 (2 years)

Not renewal due to change to working from home permanent

3.2 Purpose of use: Factory

Counterparty: J.C.J. Co., Ltd. (Lessor) and Hana Technology, Inc. (Tenant)

Contract period: 1 April 2020 - 31 March 2023 (3 years)

4. Land leasing agreement of Hana Macao

Purpose of use: Office

Counterparty: Macao Special Administrative Region of the People's Republic of China (Lessor) and Hana Macao Co., Ltd. (Tenant)

Contract period: The contract ends on 19 December 2049 (50 years)

5. Land leasing agreement of Omac in Hong Kong

Purpose of use: Office

Counterparty: Hong Kong Special Administrative Region of the People's Republic of China (Lessor) and Omac Sales Ltd. (Tenant)

Contract period: The contract ends on 30 June 2047 (50 years)

6. Land leasing agreement of Power Master in Korea

6.1 Purpose of use: Office/Factory

Counterparty: Korean Government (Lessor) and Power Master Semiconductor Co., Ltd. (Tenant)

Contract period: 3 January 2019 – 2 January 2029 (renewal every 10 years)

6.2 Purpose of use: Sales and Research and Development

Counterparty: Entech E&C Co., Ltd. (Lessor) and Power Master Semiconductor Co., Ltd. (Tenant)

Contract period: 1) Floor 7th, 1 December 2021 - 30 November 2022 (1 year)
2) Floor 5th, 7 May 2021 - 6 May 2023 (2 year)

Attachment 5: The Company's Corporate Governance and Business Code of Conduct Policy

The Company has disclosed the policy of Corporate Governance, Business Code of Conduct, related policies and Charters of the Board and the Sub-Committees on the Company's website as follows.

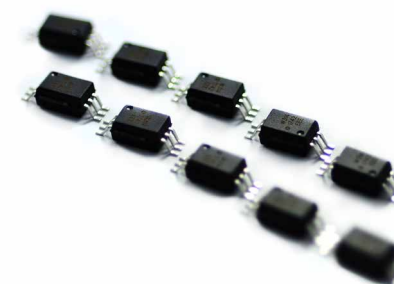
Corporate Governance Policy and related policies:

<https://www.hanagroup.com/cg.php?lang=en>

- Corporate Governance Policy
https://www.hanagroup.com/loadpdf.php?download=CGpolicy2021_en.pdf
- Corporate Code of Conduct
https://www.hanagroup.com/loadpdf.php?download=corporate-code-of-conduct2020_en.pdf
- Business Code of Conduct of the Board of Directors
https://www.hanagroup.com/loadpdf.php?download=code-of-conduct_en.pdf
- Anti-Corruption Policy
https://www.hanagroup.com/loadpdf.php?download=anti-corruption-policy_n_en.pdf
- Whistle Blowing Policy
https://www.hanagroup.com/loadpdf.php?download=Whistleblower2021_en.pdf

Charters of the Board and Sub-Committees:

<https://www.hanagroup.com/charters.php?lang=en>



Attachment 6: The Audit Committee Report



Dear Shareholder,

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 2021 with the following meeting attendance of each committee.

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 2021, 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 including the judgments used in preparing 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 2021 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, considering the risk assessment and risk control measures, as well as considering the qualification of the head of the internal audit department. From the review, the Audit Committee concluded that the Company has adequate internal control and risk management systems which are appropriate to the business and the head of the internal audit has the necessary education, experiences and relevant trainings appropriate to the performance of her duties.

Attachment 6: The Audit Committee Report

- 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 2021, 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 transaction give rise to potential conflict of interests.
- Review to ensure compliance with rules and regulations of the Securities and Exchange Commission and applicable regulatory requirements and the board policies. The Audit Committee concludes that the Company has complied with the applicable laws, regulations and established policies.
- Recommend the appointment of the external auditors and their remuneration by giving due consideration to their experience, knowledge, ability, reliability, staff and workload, as well as the independence of auditors in performing such duties. Such auditors must be approved by the Securities and Exchange Commission (SEC). The Audit Committee has proposed to the board to seek further approval from the shareholders' meeting. For financial year ending 31 December 2021, 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 2,450,000, and the non-audit service fees of Baht 620,000 for verifying the compliance with the conditions of Board of Investment tax privileges to obtain an income tax exemption for the accounting period ending 31 December 2021 including the inspection of the destruction of obsolete inventories whereby the non-audit fee is equivalent to 25% of the audit fees. The Audit Committee is of the opinion that the non-audit services have not affect the auditors' independence in the performance of the Company's financial statements as the auditors can plan the audits and use standard audit procedures to obtain sufficient evidence and express an opinion on the audit report independently.
- Communicate with the external auditors on important matters by convening a special meeting for consideration of problems or restrictions arising during the audits. For the financial year ending 31 December 2021, the auditors were able to perform their duties and exercise their independent judgment under relevant auditing standards with the Company's providing assistance and cooperation.

The Audit Committee concluded its satisfaction with the accuracy, completeness and creditability of 2021 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.



Mr. John Thompson

Chairman of Audit Committee

Attachment 6: The 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 2021, 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 2021, 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.

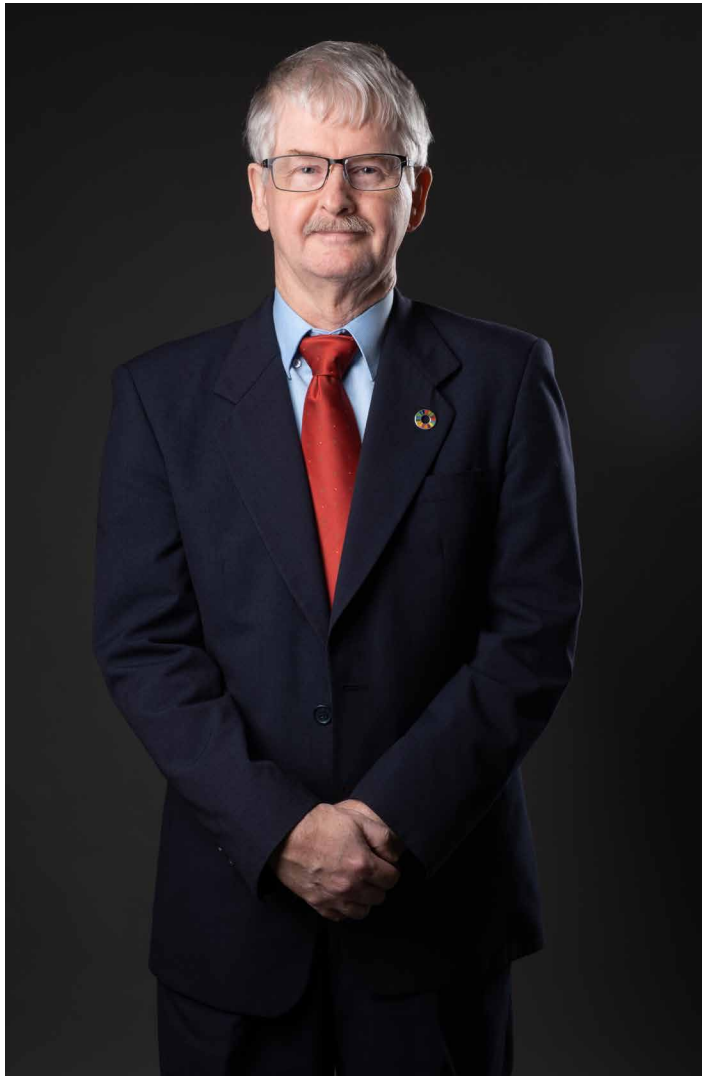
The Nomination Committee believes the candidate nomination for director appointment process is proper and transparent and in compliance of its Charter.



Mr. Yingsak Jenratha

Chairman of Nomination Committee

Attachment 6: The Risk Management Committee Report



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

In 2021, the Committee held 1 meeting and the meeting attendance of each committee is as follows.

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

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

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



Mr. Terrence Philip Weir

Chairman of Risk Management Committee

Attachment 6: The Corporate Governance and Sustainability Committee Report



In 2021, the Board of Directors has approved the change of the Corporate Governance Committee to be the Corporate Governance and Sustainability Committee in order to assist the Board in oversight of policy formulation, programs and operational guidelines to cover Environmental, Social and Governance dimensions. The Committee consists of three directors with the majority of independent directors and have the roles and responsibilities according to the Charter approved by the Board of Directors.

In 2021, 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

In 2021, the Committee conducted an annual review the corporate governance policy and reviewed the application of 2017 CG Code's Principles and Sub-Principles that are suitable for the Company's business, including corporate governance self-assessment with related checklists of the Thai Institute of Directors Association (IOD), the Stock Exchange of Thailand, the Office of the Securities and Exchange Commission and the Thai Investors Association.

The Committee reviewed the sustainability policy including approve the Company's material prioritization, review ESG risk assessment, considered and monitored operational results on environment and social responsibility activities of the Company in 2021.

Attachment 6: The Corporate Governance and Sustainability Committee Report

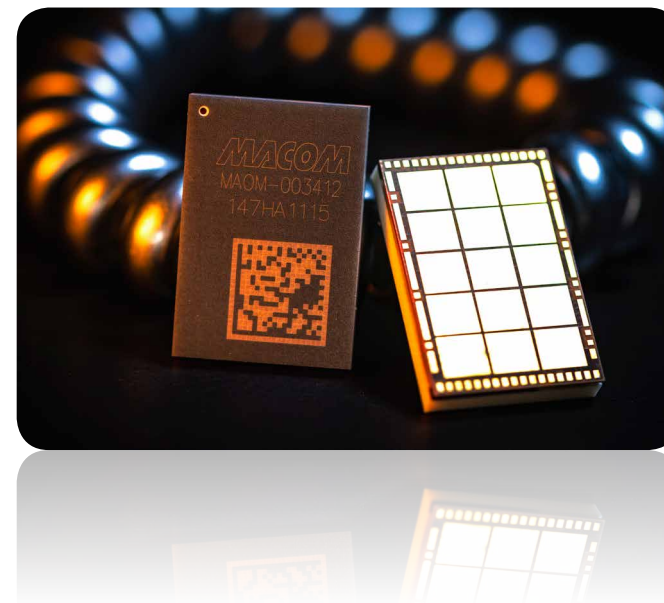
From our continuous ESG implementation and development, the Company has been assessed as “excellent” recognition level (5 stars) on corporate governance of Thai listed companies as evaluated by Thailand Institute of Directors (IOD) for eight consecutive years, since 2013. The Company qualified for THSI list (Thailand Sustainability Investment) in 2021 which was based on the annual sustainability assessment by the Stock Exchange of Thailand’s (SET), and also received Rising Star Sustainability Award in Sustainability Excellence category of 2021 SET Awards, as a recognition of the Company’s contribution to society and commitment to the environment with an emphasis on the principles of good governance. In addition, Hana is ranked among the top 100 listed companies, achieving the outstanding performance of ESG and we also received the Sustainability Disclosure Acknowledgement Award from Thaipat Institute, which recognized our outstanding effort towards sustainability disclosure and reporting of SDG target 12.6.

Despite potential uncertainties ahead, we look forward to uphold our commitment to the practice of good corporate governance with social and environmental responsibility in accordance to the national and international development goals.



Mr. Terrence Philip Weir

Chairman of Corporate Governance and Sustainability Committee





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