



**力成科技** 股份有限公司  
**PTI Powertech Technology Inc.**

# 2019 ANNUAL REPORT

**Powertech**  
TECHNOLOGY

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Information available on  
[http : //mops.twse.com.tw](http://mops.twse.com.tw)  
[http : //www.pti.com.tw](http://www.pti.com.tw)

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## I. Letter to Shareholders

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Annual General Meeting of Shareholders 2020

Dear Shareholders, Ladies and Gentlemen,

The first half of 2019 experienced a significant drop in PTI revenues due to a number of factors, including market uncertainty caused by the US-China trade conflicts, over-supply of memory products, and the slowdown in smartphone sales. Fortunately, the second half of the year experienced a robust rebound in the memory and logic segments due to lower inventory levels and continued strong demand. PTI's revenues and profitability for 2019 was therefore only slightly down from 2018. PTI outperformed the semiconductor industry.

In 2020, PTI expects to benefit from the strong demand driven from new applications for Artificial Intelligence (AI), 5G communications, Internet-of-Things (IoT), smart driving, and high-performance computing. PTI expects a positive revenue growth for 2020 underlining uncertain factors like COVID-19 epidemic and regional trade conflicts. COVID-19 spray appears to be under control in Mainland China. The Chinese supply chain has been recovered and mitigated impact on the world economy. European and North America cities lockdowns and international travel bans to prevent the spray of COVID-19 created a significant uncertainty for world economy.

PTI will remain committed to our strategy of focusing on the research and development of advanced packaging and testing technologies even at a tuff environment like now. PTI will focus even more on the goal of becoming the global leading provider of packaging and testing. In the future, PTI will intensify our investment in:

1. The research, development and manufacture of advanced technologies.
2. The recruitment and cultivation of quality talent.
3. Building closer partnership and win-win strategy with customers and suppliers.

PTI has been working as one of the best service providers of packaging and testing in the world. PTI wants to step up to be the world's top service provider of packaging and testing services by focusing on quality, technology and service enhancement. PTI believes that all the preceding efforts will shine through and recognized by customers. I sincerely look forward to PTI becoming a better global leader in packaging, testing, and manufacturing by 2025.

I thank you for your continue support as shareholders. Your supports provide motivation for PTI employees to work hard and deliver great results.

Once again, my gratitude goes out to all shareholders for your support!

I wish everyone all the best of health and success.

Sincerely,  
D.K. Tsai

PTI Chairman

# Powertech Technology Inc. 2019 Business Report

## I. 2019 Business Operations Report

According to the World Economic Outlook published by the International Monetary Fund (IMF) in January 2020, global economic growth in 2019 was 2.9% which grew the least since 2008 financial crisis. Major economic weakness was caused by trade conflicts between US and China, uncertainties of Brexit, and tension from multiple geopolitical regions. Raising prices of stocks, bonds, real estates, and other financial products stimulated by hot money from quantitative easing policy across central banks in US, Europe, and emerging countries.

2019 global semiconductor revenue was US\$418.3 billion which declined 31.5% from 2018 base on the study conducted by Garthner. The decrease was triggered by market uncertainties and weakening of memory product cycle. According to data published by Industrial Economics and Knowledge (IEK) in February 2020, Taiwan IC industry revenue in 2019 was NT\$2.67 trillion (US\$86.3 billion), 1.7% growth from 2018. Revenue of IC packaging sector was NT\$346.3 billion with 0.5% growth from 2018, and revenue of IC testing sector was NT\$154.4 billion with 4.0% growth from 2018. Taiwan semiconductor market outperformed the global semiconductor industry in 2019.

PTI 2019 revenue declined slightly from 2018. Second half of 2019 revenue robust recovered from normalizing inventory level and strong demand make up the revenue decline in first half 2019. PTI will continue to invest in technologies to provide excellent quality and services going forward. PTI 2019 accomplishment contributed by its excellent quality and services, operations efficiency improvement, efficient cost control, new technologies and products development, equipment investment, and strategic alliance strengthening.

Details of 2019 revenue and profitability are reported as follow:

### 1. 2019 Operations Results

PTI Consolidated revenue of 2019 was NT\$66.53 billion, showing 2.23% decrease from 2018 consolidated revenue of NT\$68.04 billion. 2019 net income belonged to parent company was NT\$5.84 billion which was a decrease of 6.35% from 2018 NT\$6.23 billion.

### 2. Financial Status

2019 Consolidated Statement of Cash Flow	(in NT\$1,000)
a. Net cash inflow from operating activities	17,832,243
b. Net cash outflow from investing activities	8,155,769
(Changes mainly from acquisition of machinery and equipment )	
c. Net cash outflow from financing activities	6,250,418
(Mainly for repayment of bank loans and distribution of cash dividends)	

### 3. Profitability Analysis

Analysis Items		2019	2018
Profitability	Operating Income / Capital Ratio	111.82%	125.57%
	Pre-tax Net Income / Capital Ratio	109.19%	121.10%
	Return on Assets	6.79%	7.67%
	Return on Equity	12.74%	14.62%
	Net Income (Loss) Ratio	8.78%	9.16%
	Net Income(Loss) Per Share	\$7.52	\$8.02

### 4. R&D Updates

PTI has been constantly devoted to new technologies and production technologies development to meet industry standards and customer demands. In addition to DRAM and NAND Flash products, PTI has been developing advanced packaging and testing technologies, such as Lead-Free Bump, Copper Pillar Bump, FCCSP, FCBGA, Hybrid CIS, SiP, 3DIC(TSV), BiO CSP(TSV) to provide PTI solid foundation for developing advanced Logic customers.

2019 R&D expenses were about NT\$1.91 billion which was equivalent to 2.86% of consolidated revenue. PTI has been aggressively investing in the research and develop of 3DIC (TSV), CIS CSP, Fan-Out Panel-Level Packaging (FOPLP), and Antenna in Package (AiP). PTI also set up a RF Lab to provide solutions for 5G communication, AIoT, Automotive, Networking, High Performance Computing (HPC), and AR/VR.

## II. 2020 Operations Plans

### 1. Plan Outlines:

- (1) Promise, Technology and Integration are our core values.
- (2) Focus on the assembly and final testing sectors in semiconductor industry in order to generate the profits together with our customers and vendors.
- (3) Devoted to the research and development of advanced technologies and launch new products to enhance corporate growth momentum.
- (4) Provide full services to customers with quality and exquisite technologies.
- (5) Integrated corporate resources to enhance operation performances and ensure corporate profitability and sustainability.
- (6) Provided employee trainings to talent, addressed employee benefits and interest of shareholders to create mutual benefits.

### 2. Sales Forecast Volume:

According to The World Semiconductor Trade Statistics (WSTS), global semiconductor market revenue will reach US\$426.0 billion in 2020, increase 4.8% from 2019. Based on

an estimation of Industry, Science and Technology International Strategy Center of Industrial Technology Research Institute (ISTI of ITRI), 2020 production value for Taiwan IC industry will grow around 7.0%. 2020 semiconductor industry outlook is more optimistic than 2019, with growth in both global and Taiwan market.

Despite a 38% sales decline in 2019, the DRAM market remained the largest of all IC product categories, according to IC Insights. The NAND flash market fell 32% in 2019. The sum of DRAM and NAND flash memory categories accounted for about 29% of total IC market in 2019. Memory market expects to rebound 17% in 2020 based on ISTI study which is higher than the average growth of overall semiconductor market. The 2020 DRAM and NAND flash market forecast to increase 13% and 32% accordingly to reach US\$70.8 billion and US\$58.0 billion. Based on IC Insights study, 36% of end application belonged to communication, followed by computer and consumer.

The deployment of 5G and related AI demands will be the major growth drives for the coming years. Global electronic device shipment, including PC, tablet and mobile phone, will increase 0.8% to reach 2.16 billion units in 2020 as Gartner pointed out. DIGITIMES Research estimated global smartphone shipments for 2020 will grow again to reach 1.4 billion units, increase 4.3% from 2019. Global data center market size is estimated to grow 10% to hit US\$206.2 billion in 2020.

However, the ongoing disputes between U.S. and China play a major uncertainty to slow down the global economy. China is the biggest consumer for semiconductor products. China's effort on building a self-sufficient semiconductor supply chain post a high risk of balancing supply and demand. These risks disrupt fair competition for existing manufacturers.

PTI projects good 2020 revenue growth in DRAM, NAND Flash, Logic, and advanced packaging.

2020 Sale forecast volume:

Item	Sale Forecast Volume
Assembly	12.5 billion packages
Final Test	8.0 billion packages
Bumping	900 K wafers
CP	2.5 million wafers
SSD+SiP	95.0 million pieces



### 3. Production and Marketing Policies:

- (1) Provide the turn-key and drop-shipment services to customers to reduce the cycle time and save on the transportation costs.
- (2) Increase the revenue weight from commodity DRAM, Mobile DRAM, NAND Flash, UFS, and Logic products.
- (3) Continue developing Logic business and enhancing technology development for Flip-Chip, Solid State Drive (SSD), Wafer Level Packaging (WLP), Chip Probing (CP), and Fan-Out Panel Level (FOPLO) to create business growth.
- (4) Developing new customers, new markets, and new products at the same time enhancing the relationship with existing customers.
- (5) Improve corporate competitive advantages by cost reduction and resources integration.

Chairman: D.K. Tsai

President: J.Y. Hung

Head of Accounting: Evan Tseng

## II. Company Milestones

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### I. Date Established: May 15, 1997

### II. Company Milestone

- |             |       |   |
|-------------|-------|---|
| <b>1997</b> | May   | -- Powertech Technology Inc. established, with paid-in Capital of NT\$ 600 million.   |
|             | Aug   | -- Received Powerchip's DRAM and Macronix's FLASH testing order and started memory IC testing services.   |
| <b>1998</b> | Feb   | -- Received Securities and Futures Commission, Ministry of Finance approval for public offering.<br>-- Started construction for PTI's Hsinpu Plant.   |
|             | March | -- Cash Injection of NT\$ 600 million, Paid-in Capital of NT\$ 1.2 billion.   |
|             | May   | -- Passed ISO 9002 Quality Management System Certification (Testing).   |
| <b>1999</b> | Jan   | -- Mr. Duh Kung Tsai from the Kingston Group joined as Chairman.  |
|             | May   | -- Cash injection of NT\$ 800 million, Paid-in Capital of NT\$ 2.0 billion.   |
|             | June  | -- Stage One of PTI Hsinpu Plant completed, rented to Powerchip's Chubei Branch.  |
|             | Aug   | -- Construction started on Stage two of PTI Hsinpu Plant.<br>-- Received testing order from Toshiba for DRAM and SST for Flash.   |
| <b>2000</b> | April | -- Report prepared for the Taiwan Stock Exchange and GreTai Securities Market, started to receive guidance for listing on TSE and OTC.  |
|             | June  | -- PTI Hsinpu Plant completed and relocated to new plant.   |
|             | Oct   | -- Purchase backend equipment from Powerchip's Chubei Branch and added packaging business. Then obtained Powerchip's DRAM packaging orders and started to provide customers turnkey packaging and testing services. |
| <b>2001</b> | Jan   | -- Become listed as bonded factory.   |
|             | April | -- Received quality certification from Mitsubishi.  |
|             | May   | -- Received ISO 9002: 1994 Quality Management System Certification (Packaging, Testing).  |
|             | Aug   | -- Surplus and Capital Reserve Capital Increase of NT\$ 218 million, Paid-in Capital of NT\$ 2.218 billion.   |
| <b>2002</b> | Jan   | -- Received quality certification from Hitachi.   |
|             | March | -- Received quality certification of testing and packaging from TOSHIBA.<br>-- Received TOSHIBA FLASH packaging and testing orders, provide turnkey services for TOSHIBA packaging and testing.                     |
|             | June  | -- Passed quality certification from Sun Microsystems.  |
|             | Sept  | -- Cash Injection of NT\$ 119 million, Surplus Capital Increase of NT\$ 134.229 million, Paid-in Capital of NT\$ 2.463129 billion.<br>-- Purchased Hukuo Plant's Land and Plant of FICTA.                           |
|             | Oct   | -- Company Shares listed for trading as Emerging Stock of Gretai Securities   |

		Market.
	Nov	-- Received quality certification from M-Systems and Sankyo.
<b>2003</b>	Jan	-- Received ISO 14001:1996 Environmental Management Systems Certification.
	March	-- Received quality certification from Sony.
	April	-- Company Shares listed for trading on Greta Securities Market. -- Company headquarters moved to Hukuo Plant in Hsinchu Industrial Park . -- Received quality certification from ProMos.
	May	-- Received quality certification from IBM.
	July	-- Received quality certification from Hynix and received Hynix orders. -- Formally received ProMos orders.
	Aug	-- Received ISO 9002: 2000 Quality Management System Certification
	Sept	-- Surplus Capital Increase of NT\$ 149.371 million, Paid-in Capital of NT\$ 2.6125 billion.
	Dec	-- Received quality certification from Xanavi.
<b>2004</b>	Jan	-- WBGA packaging formally into volume production.
	April	-- Received land from the Hukuo Industrial Park about 3000 pings, for expansion of future operations. -- Received quality certification from Renesas.
	July	-- DDR2 formally into volume production.
	Sept	-- Cash Injection of NT\$ 300 million, Surplus Capital Increase of NT\$ 467.5 million, Paid-in Capital of NT\$ 3.38 billion. -- Received OHSAS 18001 : 1999 Occupational Health and Safety Management certification. -- Started construction on Plant 3.
	Oct	-- Received quality certification from Elpida.
	Nov	-- Company Shares listed for trading on the Taiwan Stock Exchange. -- Foundry grade testing formally into mass production.
<b>2005</b>	Feb	-- Implemented Green Product (GP) Management System.
	March	-- Received quality certification from IBM (uBGA). -- Received quality certification from Sharp.
	May	-- Received quality certification from Sony Green Partner.
	Sept	-- Surplus Capital Increase of NT\$ 625 million, Paid-in Capital of NT\$ 4.005 billion. -- Tera Probe, Inc., a joint venture formed in Japan with Elpida, Advantest and Kingston Technology Japan.
	Dec	-- Use the "Purchase Method" for simplified merger of 100% owned company, Lijia Investment Ltd. -- MCP packaging process into volume production. -- Started production of MicroSD Card. -- Received ISO 14001 : 2004 Environmental Management System Certification.

- 2006** Jan -- R&D Technology Center Established.  
-- Headquarters (Plant 3) completed for use.  
-- First time issuance of Global Depository Receipts (old shares), listed for trading on the Bourse de Luxembourg.
- Aug -- Surplus Capital Increase of NT\$ 750 million, Paid-in Capital of NT\$ 4.711 billion.  
-- Received ISO/TS 16949: 2002 Certification.
- Nov -- Received land from the Hukuo Industrial Park about 1089 pings, for expansion of future operations.
- Dec -- Received the “2006 Industrial Innovation Outcome Commendation” from the Ministry of Economic Affairs Department of Industrial Technology (MOEA DOIT).
- 2007** Feb -- Started construction of Hukuo Plant 2B
- March -- Issued for the first time the private placement domestic unsecured convertible bonds, with amount issued of NT\$ 3.412 billion.
- July -- Successful developed the wBGA DDP technology, providing the best DRAM stacking solution.
- Aug -- Surplus Capital Increase of NT\$ 853 million, Paid-in Capital of NT\$ 5.563 billion.  
-- Monthly Revenue exceed NT\$ 2 billion formally, packaged volume exceeding 100 million chips.  
-- Received the “2006 Golden Commerce Award” from the MOEA Bureau of Foreign Trade (BFT) for Being Tenth in Actual Import/Export.
- Nov -- Received the “Eight Industrial Elite Award” from the MOEA BFT.
- 2008** Jan -- Hukuo Plant 2B completed for operation.
- March -- Started to provide packaging services for Logic IC.
- June -- Received license from IBM for Metal Post Solder-Chip Connection (MPS-C2) technology. This is a key technology for fine-pitch Flip Chip packaging.
- Aug -- Surplus Capital Increase of NT\$ 7.45 million, Paid-in Capital of NT\$ 6.694 billion.  
-- Formed joint venture, TeraPower Technology Inc, with Japanese company Tera Probe, Inc, with paid-in capital of NT\$ 750 million, and our company holding 49% of the JV.
- Sept -- Received the “2007 Golden Commerce Award” from the MOEA Bureau of Foreign Trade (BFT) for Being Ninth in Actual Import/Export.
- Nov -- Received land from the Hukuo Industrial Park about 5,953 pings, for expansion of future operations.
- 2009** July -- Surplus Capital Increase of NT\$ 386 million, Paid-in Capital of NT\$ 6.694 billion.
- Aug -- Received the “2008 Golden Commerce Award” from the MOEA Bureau of Foreign Trade (BFT) for Being Fifth in Actual Import/Export.  
-- Formed overseas subsidiary Powertech Holding( B.V.I.) Inc.

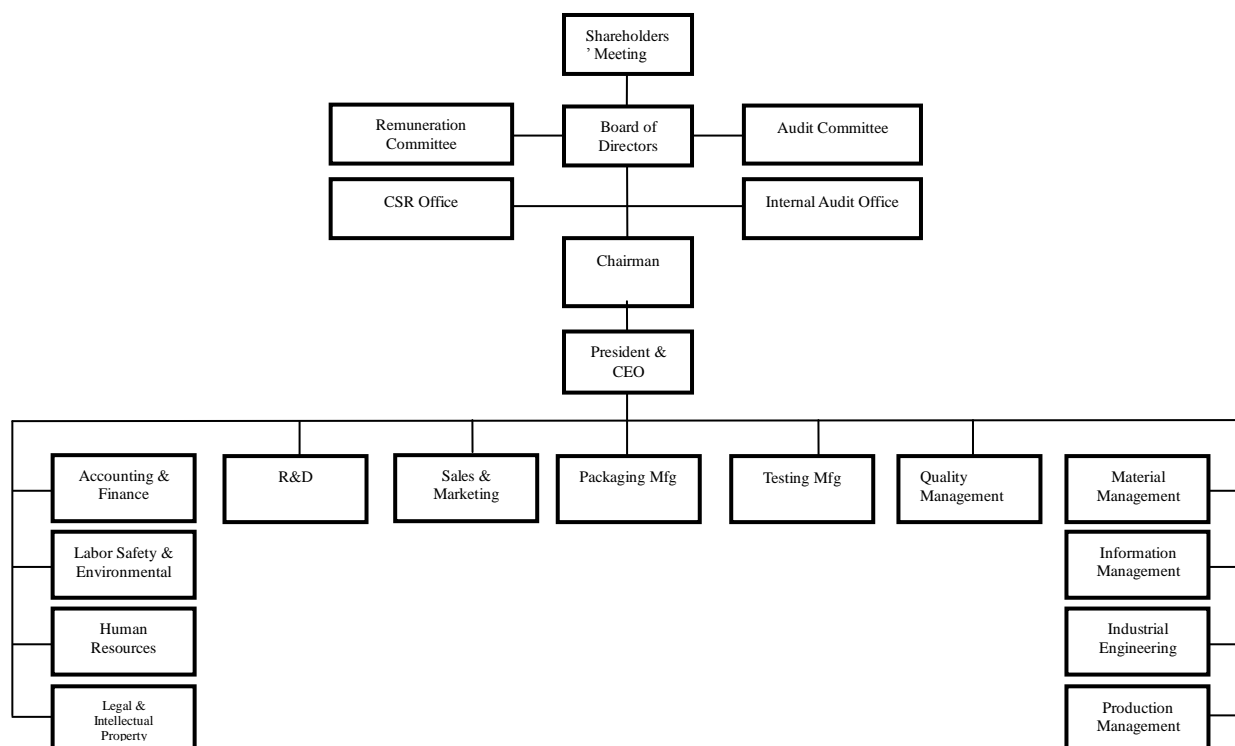
	Sept	-- Acquired Spansion Holdings (Singapore) Pte. Ltd. (name changed to PTI Technology (Singapore) Pte. Ltd.) through Powertech Holding(B.V.I.) Inc., and indirectly obtaining Spansion's MCP packaging and testing plant in Suzhou, China. The China plant was renamed Powertech Technology (Suzhou) Ltd., and the Company formally entered China as a packaging and testing company.
<b>2010</b>	March	-- Formed subsidiary in the Hsinchu Science Park, Macrotech Technology Inc. -- Established US subsidiary Powertech Technology (USA), Inc through overseas subsidiary Powertech Holding ( B.V.I.) Inc. to serve as overseas sales and service center.
	April	-- Paid-in capital increased to NT\$ 7,042,366,680 after conversion into common shares by convertible bonds .
	Sept	-- Paid-in capital increased to NT\$ 7,153,668,040 after conversion into common shares by convertible bonds . -- Received the "2009 Golden Commerce Award" from the MOEA Bureau of Foreign Trade (BFT) for Being Fifth in Actual Import/Export. -- Received the "Outstanding Innovation Company Award" portion of the 18 <sup>th</sup> Industry Technology Development Award from the MOEA DOIT.
	Dec	-- Paid-in capital increased to NT\$ 7,264,969,400 after conversion into common shares by convertible bonds.
<b>2011</b>	May	-- New Plant in Hukuo started construction.
	Aug	-- Surplus Capital Increase of NT\$ 7,264,969,400. Paid-in Capital of NT\$ 7,991,466,340. -- Received the "Creating Employment Contribution Award" from the Executive Yuan.
	Sept	-- Received the "2010 Golden Commerce Award" from the MOEA Bureau of Foreign Trade (BFT) for Being Sixth in Actual Import/Export.
	Dec	-- Established Remuneration Committee.
<b>2012</b>	Feb	-- Acquired 44% of Greatek Electronics through public tender offer.
	Apr	-- During re-election at the extraordinary shareholders' meeting, PTI formally become part of the Greatek Electronics' management. -- Institutional director Shiren Investment Company sold more than 50% of company shares owned when it was elected director, so naturally dismissed as company director.
	Aug	-- Purchased of company's treasury stocks for the first time, with a capital reduction of NT\$ 200 million, Paid in Capital reduced to NT\$ 7,791,466,340.
	Dec	-- For effective use of company resources and tax considerations, liquidated US subsidiary Powertech Technology USA Inc.
<b>2013</b>	Jul	-- Elpdia Memory Inc. acquired by Micron Technology Inc. and changed the trading entity to Micron Japan.

	Sep	-- Received 2012 Golden Trade Award for 10 <sup>th</sup> place.
	Nov	-- Grand Opening for plant 3C, and relocated HQ to the new plant.
<b>2014</b>	Feb	-- Legal settlement reached with Tessera Inc. to early terminate product license agreement which help reducing future services costs.
	Jul	-- Acquired 100% shares of Nepes Pte. Ltd. Singapore and changed name to Powertech Technology (Singapore) Pte. Ltd.
	Dec	-- Signed investment agreements with Micron Inc. for providing package services in Xian, China. -- Merged Macrotech Technology Inc. and established Hsinchu Science Park branch on the site.
<b>2015</b>	Apr	-- Became a member of Electronic Industry Citizenship Coalition (EICC).
	May	-- Established Powertech Semiconductor (Xian) Co., Ltd.
	Oct	-- Signed strategic alliance agreement with Tsinghua Unigroup through private placement.
<b>2016</b>	Apr	-- Received 2015 Golden Trade Award for 4 <sup>th</sup> place.
	Nov	-- Received 2016 Taiwan Top 50 Corporate Sustainability Report Golden Award in Electronic Information Category. -- Certified for ISO 27001 Data Security Management System.
	Dec	-- Certified for SA8000 Social Responsibility Management System.
<b>2017</b>	Jan	-- Established Powertech Technology Japan Ltd. -- Mutual agreement among Powertech Technology Inc. and Tsianghua Unigroup Co., Ltd., and Tibet TouZhanChaungXin Investment Co., Ltd. authorized to terminate share subscription agreement. -- Became a member of Taiwan Alliance for Sustainable Supply and participate in Taiwan packaging and testing industry eco-cloud development program.
	Apr	-- Contracted with Micron Inc to acquire its 39.6% holding of Tera Probe, Inc. shares by public tender offer and 100% Micron Akita Inc. operations.
	Jun	-- Tera Probe, Inc. became a PTI subsidiary after completed acquisition of Tera Probe, Inc. with 59.44% consolidated holding.
	Aug	-- Completed the acquisition of 100% Micron Akita Inc. and name changed to Powertech Technology Akita Inc.
	Nov	-- Received 2017 Taiwan Top 50 Corporate Sustainability Report Golden Award in Electronic Information Category.
<b>2018</b>	Jan	-- Named Top 100 Global Technology Leader by Thomson Reuters.
	Sep	-- Groundbreaking for Hsin Chu Science Park Plant III as the Fan-Out Panel-Level Packaging (FOPLP) facility.
	Nov	-- Board of Directors appointed Mr. DK Tsai as Chief Strategy Officer and Mr. JY Hung as Chief Executive Officer. -- Received 11 <sup>th</sup> Annual Taiwan Institute for Sustainable Energy Top 50 Corporate Sustainability Report Platinum and Top 50 Corporate Sustainability.

- 2019 May -- Received "Preferred Quality Supplier Award" and "Good Partner Award" from key customer.
- Nov -- Received 2019 Annual Taiwan Institute for Sustainable Energy Top 50 Corporate Sustainability Report Platinum and Top 50 Corporate Sustainability.
- Dec -- Certified ISO 5001 Energy Management System
- 2020 Apr -- Board approved additional investment of US\$28 million for Powertech Technology (Suzhou) Ltd., a subsidiary of Powertech Technology Inc.. Powertech Technology (Suzhou) Ltd. total register capital became US\$100 million after the addition.

### III. Corporate Governance

#### 1. Company Organization



#### Responsibilities of Major Sections:

Major Section	Responsibilities
Chairman	Leading corporate strategies and objectives. Execute and monitor for continuing improvement.
President	Management of corporate strategies, objectives, execution of overall business and operations.
CSR Office	Responsible for corporate social responsibility regulation and execution. Risk management and emergency handling.
Internal Audit Office	Responsible for reviewing and assessing the effectiveness of the implementation of the Company's internal control system.
Accounting & Finance	Responsible for finance, accounting and shareholder services.
Labor Safety & Environmental Protection	Responsible for factory safety and labor's occupational health and hazard.
Human Resources	Responsible for Human Resources regulation creation and execution. Employee welfares and relationships.
Legal & Intellectual Property	Responsible for contract review, legal matters, and intellectual property management.
Research & Development	Responsible for development of new products.
Sales & Marketing	Responsible for market survey, development, and customer contact and coordination.
Packaging Manufacturing	Responsible for product packaging production and related process analysis, equipment maintenance.
Testing Manufacturing	Responsible for the production and related product testing process analysis, equipment maintenance.
Quality Management	Responsible for quality management policies, the design and implementation of quality indicators, customer complaints, reliability testing and equipment calibration.
Materials Management	Responsible for production scheduling, raw material procurement, warehousing and transportation management.
Information Management	Responsible for setting up and maintaining the information system.
Industrial Engineering	Responsible for facility layout planning and efficiency enhancement.
Production Management	Responsible for production capacity planning and scheduling.



## 2. Board of Directors, Independent Directors, CEO, Vice Presidents, Assistant Vice Presidents, Head of Each Department and Subsidiaries

### (1) Information Regarding Board of Directors and Independent Directors

#### Information Regarding Directors and Independent Directors (I)

Mar 30, 2020

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Chairman	D.K. Tsai	Republic of China	5/26/2017	Male	3 years	6/23/1999	4,010,000	0.51 %	4,010,000	0.51 %	-	0.00%	-	0.00 %	Industrial Engineering, Taipei Institute of Technology General Manager, Kingston Technology Far East Corp. Chairman, Kingston Technology Far East Corp.	CSO of Powertech Technology Inc. Chairman of Greatek Electronics Inc. Director of Powertech Holding (B.V.I.) Inc. Director of PTI Technology (Singapore) Pte. Ltd. Director of Powertech Technology (Singapore) Pte. Ltd. Legal Representative Director of Powertech Technology (Suzhou) Ltd. Executive Director of Powertech Technology Japan Ltd. Director of Tera Probe, Inc. Director of Powertech Technology Akita Inc. Independent Director of Compal Electronics, Inc. Independent Director of Chicony Power Technology Co., Ltd. Chairman of PTI Education Foundation	-	-	-

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Director	J.Y. Hung	Republic of China	5/26/2017	Male	3 years	5/26/2017	221,000	0.03 %	200,000	0.03 %	0	0.00 %	0	0.00 %	Master, Industrial and Information Management, National Cheng Kung University, Sr. VP, Siliconware Precision Industries Co. Ltd., President, Powertech Technology Inc.	President & CEO of Powertech Technology Inc. Chairman of Tera Probe, Inc. Director of PTI Technology (Singapore) Pte. Ltd. Director of Powertech Technology (Singapore) Pte. Ltd. Legal Representative Director of Powertech Technology (Suzhou) Ltd. Legal Representative Director of Powertech Semiconductor (Xi'an) Co., Ltd. Director of PTI Education Foundation			
Director	Kingston Technology Corp. Investment Account Rep: Shigeo Koguchi	U.S.A.	5/26/2017	Male	3 years	5/26/2017	29,875,000	3.83 % 0.00 %	29,875,000	3.83 % 0.00 %	0	0.00 %	0	0.00 %	Master, Engineering, University of Florida Master, Engineering, Hokkaido University, Japan Sr. Executive VP. Of Toshiba Corp. Director and Senior Advisor of Toshiba Corp.	None	-	-	-

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Director	Kingston Technology Corp. Investment Account Rep: Daphne Wu	U.S.A	5/26/2017	Female	3 years	5/26/2017	29,875,000	3.83% 0.00%	29,875,000 9,000	3.83% 0.00%	0	- 0.00%	0	- 0.00%	Bachelor, Accountancy, National Chengchi University Director of Asia Pac Finance of Kingston Technology Far East Corp.	Director of Asia Pac Finance of Kingston Technology Far East Corp. Supervisor of Kingston Solution Inc. Supervisor of Panram Co., Ltd. Supervisor of Orient Semiconductor Electronics Ltd.	-	-	-
Director	Kingston Technology Corp. Investment Account Rep: J.S. Leu	Republic of China	5/26/2017	Male	3 years	5/26/2017	29,875,000 146,356	3.83% 0.02%	29,875,000 62,356	3.83% 0.01%	0	- 0.00%	0	- 0.00%	Bachelor, Mechanical Engineering, Feng Chia University Deputy Director, Packaging Manufacturing, Powerchip Technology Corp.	Chairman of Powertech Technology (Suzhou) Ltd. Chairman of Powertech Semiconductor (Xian) Co., Ltd Sr. VP of Powertech Technology Inc. Packaging Operations Legal Representative Director of Greatek Electronics Inc.	-	-	-

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Director	Kingston Technology Corp Investment Account Rep: Evan Tseng	U.S.A	5/26/2017	Male	3 years	5/26/2017	29,875,000 12,000	3.83% 0.00%	29,875,000 12,000	3.83% 0.00%	0	- 0.00%	0	- 0.00%	Master, Accountancy, Soochow University Sr. AVP, Systex Corp.	Sr. VP & CFO of Powertech Technology Inc. Director of Powertech Technology (Singapore) Pte. Ltd. Legal Rep Supervisor of Powertech Technology (Suzhou) Pte. Ltd. Legal Rep Director of Powertech Semiconductor (Xi'an) Co., Ltd. Director of Tera Probe, Inc. Legal Rep Director of TeraPower Technology Inc. Director of Powertech Technology Akita Inc. Legal Rep Director of Greatek Electronic Inc. Director of Tsai Lin Pu Social Welfare Foundation	-	-	-
Director	Toshiba Memory Semiconductor Taiwan Corp. Rep: Kenjiro Hara	Republic of China	5/26/2017	Male	3 years	6/14/2005	3,655,309 0	0.47% 0.00%	3,655,309 0	0.47% 0.00%	0	- 0.00%	0	- 0.00%	Master, Mechanical Engineering, Tokyo University of Science Director of Procurement, Toshiba Memory Corporation	Chairman of Koxia Memory Semiconductor Taiwan Corp.			

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Independent Director	Jim W.L. Cheng	Republic of China	5/26/2017	Male	3 years	6/13/2008	331,614	0.04 %	231,614	0.03 %	0	0.00 %	0	0.00 %	Bachelor, Business Administration, Fu-Jen Catholic University Vice President of Finance, Yungtay Engineering Co., Ltd. President, Taiwan Calsonic Co. Ltd.	Chairman of Taiwan Calsonic Co. Ltd. Chairman of Yong Lien Corp. Chairman of Glory Biotech Co. Ltd. Director of Browwave Corp. Director of Center Laboratories Inc. Legal Representative Director of Lumosa Therapeutics Co. Ltd. Legal Representative Director of Yu-Cheng Consulting Co. Ltd. Legal Representative Director of Yu-Cheng Biotech Co. Ltd. Legal Representative Director of Uni-Calsonic Co., Ltd.. Institutional Director Rep. of Chuang-Yi Biotech Co., Ltd.. Legal Representative Director of Galc Biotech Co., Ltd.. Supervisor, Yungtay Engineering Co., Ltd. Director of Polstar Technologies Inc. Institutional Supervisor Rep. of TPG biologics Inc. Legal Representative Director of Yu Sheng Venture Capital Company Institutional Supervisor Rep. of Mycenax Biotech Inc.	-	-	-

Title	Name	Nationality	Date On-Board	Gender	Term	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Directors or Independent Directors Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
							Shareholding	%	Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Independent Director	Quincy Lin	Republic of China	5/26/2017	Male	3 years	6/20/2002	0	0.00%	0	0.00%	0	0.00%	0	0.00%	Ph.D., Business Administration, University of Kentucky MBA, National Chiao Tung University Sr. VP., Taiwan Semiconductor Manufacturing Company Chairman of Neo Solar Power Corp.	Chairman of General Energy Solutions Inc. Chairman of V5 Technologies Inc. Chairman of Rafael Micron Inc. Director of Neo Solar Power Corp. Independent Director of Chroma ATE Inc.	-	-	-
Independent Director	Philips Wei	Republic of China	5/26/2017	Male	3 years	5/26/2017	0	0.00%	0	0.00%	0	0.00%	0	0.00%	Master, Finance, National Cheng Chi University Bachelor, Transportation Study, National Cheng Kung University Chairman, China Airline Inc.	Chairman of Fortune Information System Corp. Director of CyberSoft Digital Service Corp. Legal Representative Director of China Electronics Corp. Supervisor, Tai Hsin Insurance Agency Non-Profit Organization	-	-	-
Independent Director	Pei-Ing Lee	Republic of China	5/26/2017	Male	3 years	5/26/2017	0	0.00%	0	0.00%	0	0.00%	0	0.00%	Ph. D, Syracuse University Chairman of Inotera Memories, Inc.	Director & President of Nanya Technology Corp.	-	-	-

For Directors or Committee Members that are representatives of Institutional Shareholders, the main shareholders of the Institutional Shareholders (the Top Ten Shareholders)

March 30, 2020

<b>Name of Institutional Shareholder</b>	<b>Main Shareholders of the Institutional Shareholders</b>
Kingston Technology Corporation Investment Account	John Tu (50%), David Sun (50%)
Kioxia Memory Semiconductor Taiwan Corp.	Kioxia Corporation (100%)

The main shareholders of the Institutional Shareholders in Table above whose main shareholders are Institutional Shareholders:

March 30, 2020

<b>Name of Institution</b>	<b>Main Shareholders of the Institution</b>
Kioxia Corporation	Kioxia Holdings Corporation (100%)

# Information Regarding Board of Directors (II)

Mar 30, 2020

Criteria  Name	Meet One of the Following Professional Qualification Requirements, together with at least five years of work experiences			Conform to Independent Status (Note 1)										Number of Other Taiwan Public Companies Concurrently Serving as an Independence Status
	An instructor or Higher Position in a Department of Commerce, Law, Finance, Accounting, or Other Academic Dept related to the Business Needs of the Company in a public or private Junior College, College, or University	A Judge, Public Prosecutor, Attorney, Certified Public Accountant, or Other Professional or Technical Specialists Who has passed a National Examination and been Awarded a certificate in a Profession necessary for the Business of the Company	Have work Experience in the area of Commerce, Law, Finance, Accounting, or Otherwise necessary for the business of the Company	1	2	3	4	5	6	7	8	9	10	
D.K. Tsai			✓				✓	✓	✓	✓	✓	✓	✓	Independent Directors of Compal Electronics, Inc., and Chicony Electronics CO., Ltd
J.Y. Hung			✓			✓	✓	✓	✓	✓	✓	✓	✓	
Kingston Technology Corporation Rep. : Shigeo Koguchi			✓	✓			✓	✓	✓	✓	✓	✓	✓	
Kingston Technology Corporation Rep.:Daphne Wu			✓	✓			✓		✓	✓	✓	✓	✓	
Kingston Technology Corporation Rep. : J.S. Leu			✓				✓	✓	✓	✓	✓	✓	✓	
Kingston Technology Corporation Rep.: Evan Tseng			✓				✓	✓	✓	✓	✓	✓	✓	
Kioxia Semiconductors Taiwan Corp. Rep.: Kenjiro Hara			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Jim W.L. Cheng			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Quincy Lin			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Independent Director of Chroma ATE Inc.
Philip Wei			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pei-Ing Le			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Note 1: Board of Directors and Independent Directors during the two years before being elected or during the term of office, meet any of the following



conditions, please tick the appropriate corresponding boxes:

- (1) Not an employee of the Company or any of its affiliates.
- (2) Not a director or independent director of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent company, or any subsidiary in which the Company holds, directly or indirectly, more than 50% of the voting shares.
- (3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of 1% or more of the total number of outstanding shares of the Company or ranking in the top 10 in holdings.
- (4) Not a spouse, relative within the second degree of kinship or lineal relative within the third degree kinship, of any of the persons in the preceding three subparagraphs.
- (5) Not a director, supervisor, or employee of a corporate/institutional shareholder that directly holds 5% or more of the total number of outstanding shares of the Company or that holds shares ranking in the top five in holdings.
- (6) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares of a specified company or institution that has a financial or business relationship with the Company.
- (7) Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof. However, this does not include member of the remuneration committee acting of behalf of Article 7 based on the shares being publicly listed and trading at a commercial brokerage.
- (8) Not having a marital relationship, or a relative within the second degree of kinship of any other director of the Company.
- (9) Not been a person of any conditions defined by Article 30 of the Company Law.
- (10) Not a governmental, juridical person or its representative as defined in Article 27 of the Company Law.

(2) Information Regarding President, Vice Presidents, Assistant Vice Presidents, and Department Managers

Mar 30 2020 / Unit: share

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Chairman	D.K. Tsai	Republic of China	Male	6/23/1999	4,130,000	0.530%	-	-	-	-	Industrial Engineering, Taipei Institute of Technology General Manager, Kingston Technology Far East Corp. Chairman, Kingston Technology Far East Corp.	Chairman of Powertech Technology Inc. Chairman of Greatek Electronics Inc. Director of Powertech Holding (B.V.I.) Inc. Director of PTI Technology (Singapore) Pte. Ltd. Director of Powertech Technology (Singapore) Pte. Ltd. Legal Representative Director of Powertech Technology (Suzhou) Ltd. Executive Director of Powertech Technology Japan Ltd. Board Director of Tera Probe, Inc. Board Director of Powertech Technology Akita Inc. Chairman of PTI Education Foundation Independent Director of Compal Electronics, Inc. Independent Director of Chicony Power Technology Co. Ltd.	-	-	-
President & CEO	J. Y. Hung	Republic of China	Male	11/8/2013	200,000	0.026%	-	-	-	-	Master, Industrial and Information Management, National Cheng Kung University, Sr. VP, Siliconware Precision Industries Co. Ltd., President, Powertech Technology Inc. Chairman & CEO of Simaiko Co. Ltd.	Board Director of Powertech Technology Inc. Chairman of TeraPower Technology Inc. Legal Rep Director of Powertech Technology (Singapore) Pte. Ltd. Legal Rep Director of Powertech Technology (Suzhou) Ltd. Legal Rep Director of Powertech Semiconductor (Xian) Co., Ltd. Board Director of PTI Education Foundation	-	-	-

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Operations Sr. VP	J.S. Leu	Republic of China	Male	10/01/2000	62,356	0.008%	-	-	-	-	Bachelor, Mechanical Engineering, Feng Chia University Deputy Director, Packaging Manufacturing, Powerchip Technology Corp.	Legal Rep Director of Powertech Technology Inc. Chairman of Powertech Technology (Suzhou) Ltd Chairman of Powertech Semiconductor (Xian) Co., Ltd. Legal Rep Director of Greatek Electronics Inc.	-	-	-
Quality Assurance Sr VP.	John Wang	Republic of China	Male	12/12/2002	86,056	0.011%	-	-	-	-	MBA, National Chia Tung University Assistant VP, R&D, Kingpak Technology Inc.	Board Director of PTI Education Foundation	-	-	-
Information and Materials Management Sr. VP.	John Chang	Republic of China	Male	07/10/2012	35,000	0.004%					Master, Mechanical Engineering, University of Texas at Arlington Master, Management Sciences, National Chiao Tung University VP. of Purchasing, Chien Kuo Construction Corp. Deputy Director of Purchasing, ProMOS Technologies Ltd.	None			

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Singapore Operation Sr. VP	Tonwey Cheng	Republic of China	Male	8/82017	429	0.000%					Bachelor, Electronic Engineering, National Sun Yat-sen University VP of King Yuan Electronic Co., Ltd. VP of Powertech Technology Inc.	President of Powertech Technology (Singapore) Pte. Ltd. Sales VP of Greatek Electronic Inc.			
Sales Strategy Sr.VP	Phu Le	U.S.A.	Male	4/1/2011	0	0.000%					Bachelor, Mechanical Engineering, Shibaura Institute of Technology, Tokyo, Japan Assembly Package Engineering Manager, Toshiba Microelectronics America Corp. Director of Assembly Package Operations, Payton Technology Corp. Sales Director, Kingston Technology Corp.	None			
Sr. VP & CFO	Evan Tseng	Republic of China	Male	5/1/2015	12,000	0.002%					Master, Accountancy, Soochow University Sr. AVP, Systex Corp.	Legal Rep Director of Powertech Technology Inc. Board Director of Powertech Technology (Singapore) Pte. Ltd. Legal Rep Supervisor of Powertech Technology (Suzhou) Ltd. Legal Rep Director of Powertech Semiconductor (Xian) Co., Ltd. Board Director of Tera Probe, Inc. Legal Rep Director of TeraPower Technology Inc. Board Director of Powertech Technology Akita Inc. Board Director of Tsai Lin Pu Social Welfare Foundation			

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Packaging Mfg VP	Y. C. Chen	Republic of China	Male	3/9/2010	0	0.000%					Bachelor, Industrial Engineering, Chung Yuan Christian University Manager, PowerChip Technology Corp.	Board Director of PTI Education Foundation			
Packaging Global Operations Planning VP	Paul Wu	Republic of China	Male	3/9/2010	0	0.000%					Bachelor, Mechanical Engineering, Tamkang University Director, Amkor Taiwan	Board Director of PTI Education Foundation			
Testing Mfg VP	Wilber Wu	Republic of China	Male	3/9/2010	15,786	0.002%					Master, Industrial Engineering, Chung Yuan Christian University Manager, PowerChip Technology Corp.	Board Director of PTI Education Foundation			
Memory Testing Operations VP	Y.C. Chi	Republic of China	Male	5/10/2012	0	0.000%					EMBA, National Central University Manager, PowerChip Technology Corp.	None			
Memory Packaging R&D VP	David Fang	Republic of China	Male	5/1/2015	0	0.000%					Bachelor, Electronics Engineering, Chung Yuan Christian University Manager, Texas Instrument Inc. Deputy Manager, PowerChip Technology Corp.	None			

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
Plant Affairs VP	Perry Lin	Republic of China	Male	5/10/2012	92,715	0.012%					Associate, Mechanical Engineering, Minghsin Institute of Science & Technology Manager, Kingston Technology Far East Corp.	None			
Human Resources & Legal Affairs VP.	Yohan Lin	Republic of China	Male	1/11/2019	180,000	0.023%					J.D, Law School, Golden Gate University Senior Manager, PricewaterhouseCoopers Legal Taiwan	Board Director of PTI Education Foundation			
Logic Testing AVP	Vic Chen	Republic of China	Male	5/10/2012	87,000	0.011%					Master, Electrical Engineering, National Taiwan Science & Technology University AVP, Verigy Ltd. AVP, Agilent Technology Taiwan Ltd.	None			
Packaging Mfg AVP	Gary Chang (Note 1)	Republic of China	Male	8/1/2014	0	0.000%					Bachelor, Industrial Engineering, Feng Chia University Deputy Manager, PowerChip Technology Corp.	None			

Title	Name	Nationality	Gender	Date On-Board	Shareholding		Shareholding Under Spouse and Minor Children		Shareholding Under 3 <sup>rd</sup> Party Name		Education & Selected Past Positions	Selected Current Positions at PTI & Other Companies	Managers Whose Spouses or within Second-degree Relative of Consanguinity to Each Other or other Managers		
					Shareholding	%	Shareholding	%	Shareholding	%			Title	Name	Relation
WLP AVP	Victor Tung	Republic of China	Male	3/1/2016	0	0.00%	3,000	0.00%			Master, Industrial Engineering, Yuan Ze University Sr. Director, Amkor Taiwan	None			

Note 1: Job position change for packaging mfg AVP Gary Chang on Mar 16, 2019. The disclosure data was as of Feb 29 2020.

### (3) Remuneration Paid to Directors, CEO, and Vice Presidents

#### 1. Remuneration Paid to Directors

Unit : NT\$ Thousands

Title	Name (Note 1)	Director's Remuneration								Total Remuneration (A+B+C+D) as % of 2017Net Income (Note 10)		Compensation Earned by Director Who is also an Employee of PTI or PTI's Consolidated Entities								Total Compensation (A+B+C+D+E+ F+G) as % of 2017 Net Income (Note 10)		Compensa tion Paid to Directors from Nonconsoli dated Affiliates
		Base Compensatio n (A)(Note 2)		Severanc e Pay and Pensions (B)		Compensatio n to Directors (C) (Note 3)		Allowances (D) (Note 4)				Base Compensation, Bonuses, and Allowances (E) (Note 5)		Severance Pay and Pensions (F)		Employee Profit Sharing (G) (Note 6)						
		From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI(%)	From All Consolidated Entities(%)	From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI		From All Consolida ted Entities		From PTI(%)	From All Consolidated Entities(%)	
																Cash	(Fair Market Value)	Cash	(Fair Market Value)			
Chairman	D.K. Tsai (Note 12)	0	0	0	0	78,822	90,507	840	1,200	1.36	1.57	43,848	43,848	0	0	13,893	0	13,893	0	2.35	2.56	NA
Director	J.Y. Hung																					
Director	Kingston Technology Corporation Rep: Shigeo Koguchi																					
Director	Rep: Daphne Wu																					
Director	Rep: JS Leu																					
Director	Rep: Evan Tseng	7,200	7,200	0	0	0	0	480	480	0.13	0.13	0	0	0	0	0	0	0	0	0.13	0.13	NA
Director	Kioxia Memory Semiconductors Taiwan Corp. Rep: Kenjiro Hara																					
Independent Director	Jim W.L Cheng																					
Independent Director	Quincy Lin																					
Independent Director	Philips Wei																					
Independent Director	Pei-Ing Lee																					
1.Independent director's compensation policy, procedure, standard and structure are dependent on liability, risk, and time involved: Base on the Article of Incorporation, independent director compensation will be distributed monthly exclude from annual board compensation. Independent director compensation will be dependent on contribution and involvement of operations and approved by board. The approved compensation should also be reasonable with domestic and international peers. 2.Additional compensation for services for company disclosed in the annual report(such as outside consultant): NA																						



Remuneration Paid to Directors Grade Table

Grade Scale of Remuneration paid to each director of PTI	Name of Director			
	Total Remuneration (A+B+C+D)		Total Remuneration (A+B+C+D+E+F+G)	
	From PTI (Note 8)	From All Consolidated Entities (Note 9)	From PTI (Note 8)	From All Consolidated Entities (Note 9)
Under NT\$ 2,000,000	Jim WL Cheng, Quincy Lin, Philips Wei, Pei-Ing Lee	Jim WL Cheng, Quincy Lin, Philips Wei, Pei-Ing Lee	Jim WL Cheng, Quincy Lin, Philips Wei, Pei-Ing Lee	Jim WL Cheng, Quincy Lin, Philips Wei, Pei-Ing Lee
NT\$ 2,000,000 ~ NT\$ 4,999,999	—	—	—	—
NT\$ 5,000,000 ~ NT\$ 9,999,999	Kingston Technology Corporation Investment Account (Rep: Shigeo Koguchi, Daphne Wu, JS Leu, Evan Tseng) —	Kingston Technology Corporation Investment Account (Rep: Shigeo Koguchi, Daphne Wu, JS Leu, Evan Tseng —	Kingston Technology Corporation Investment Account (Rep: Shigeo Koguchi, Daphne Wu)	Kingston Technology Corporation Investment Account (Rep: Shigeo Koguchi, Daphne Wu)
NT\$ 10,000,000 ~ NT\$ 14,999,999	Kioxia Memory Semiconductor Taiwan Corp.	Kioxia Memory Semiconductor Taiwan Corp.	Kingston Technology Corporation Investment Account (Rep: Evan Tseng) Kioxia Memory Semiconductor Taiwan Corp.	Kingston Technology Corporation Investment Account (Rep: Evan Tseng) Kioxia Memory Semiconductor Taiwan Corp.
NT\$ 15,000,000 ~ NT\$ 29,999,999	JY Hung	JY Hung	Kingston Technology Corporation Investment Account Rep: JS Leu	Kingston Technology Corporation Investment Account Rep: JS Leu
NT\$ 30,000,000 ~ NT\$ 49,999,999	D.K. Tsai	D.K. Tsai	J.Y. Hung, D.K. Tsai	J.Y. Hung
NT\$ 50,000,000 ~ NT\$ 99,999,999	D.K. Tsai	—	—	D.K. Tsai
Over NT\$ 100,000,000	—	—	—	—
Total	11	11	11	11

Note 1: The names of all directors are listed individually (institutional shareholders by the name of institutional shareholders and its representatives). The remuneration is disclosed by summary for each item. Because two directors or representatives serve as CEO and president, they are excluded from this table and will be listed in Table 3 below.

Note 2: Remuneration paid for 2019. According to the latest Article of Incorporation, independent directors' compensation will be paid monthly and no longer in title to annual profits sharing plan.

Note 3: Remuneration paid for 2019 profit sharing plan before the amendment of Board remuneration plan.

Note 4: Compensation for traveling.

Note 5: Includes 2019 salaries, wages, allowances, pensions, severance pay, bonuses, incentives, traveling expenses, special expenses, allowances, dormitories, vehicles and other offers received as both employees and directors.

Note 6: The amount was employees served as Board members and received employee's profit sharing. The amount was estimated by ratio of year of 2018 actual amount multiple by year of 2019 distribution rate because the actual amount was pending for shareholders meeting approval.

Note 7: Discloses the total remuneration by item paid to company's directors from all consolidated entities (including PTI).

Note 8: The total remuneration paid to each director by item from PTI, including the grade and disclosure of director's name.

Note 9: The total remuneration paid to each director by item from all consolidated entities (including PTI), including the grade and disclosure of director's name.

Note 10: After-tax net income refers to the after-tax net income of the PTI financial statements for 2019.

Note 11: One dedicated fulltime employee served as Chairman driver who was eligible for wages, bonuses, and benefits.

## 2. Remuneration Paid to President and Vice President

Unit : NT\$ Thousands

2. Remuneration Paid to President and Vice President															Unit: NT\$ Thousands			
Title	Name (Note1)	Salary (A) (Note 2)		Severance Pay and Pensions (B)		Bonuses and Allowances(C) (Note 3)		Employee Profit Sharing (D) (Note 4)				Total Remuneration (A+B+C+D) as % of 2017 Net Income (%)		Compensation Received from Non-consolidated Affiliates				
		From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI	From All Consolidated Entities	From PTI		From All Consolidated Entities		From PTI	From All Consolidated Entities					
								Cash	Stock (Fair Market Value)	Cash	Stock (Fair Market Value)							
CSO	D.K. Tsai	44,800	48,160	0	0	64,292	64,546	25,837	0	25,837	0	2.31%	2.37%	NA				
President & CEO	J.Y. Hung																	
Operations Sr. VP.	J.S. Leu																	
Quality Assurance Sr. VP.	John Wang																	
Information and Materials Management Sr. VP.	John Chang																	
Singapore Operation Sr. VP.	Tonwey Cheng																	
Sales Management Sr. VP.	Phu Le																	
Sr. VP. & CFO	Evan Tseng																	
Packaging Manufacturing VP.	Y.C. Chen																	
Packaging Manufacturing VP.	Paul Wu																	
Testing Operations VP.	Wilber Wu																	
Module Operations VP.	Y.C. Chi																	
Research & Development VP	David Fan																	
Plant Affairs VP	Perry Lin																	
Human Resources & Legal Affairs VP.	Yohan Lin																	

# Remuneration Paid to President and Vice President Grade Table

Grade Scale of Remuneration paid to each of PTI's CEO, President, and Vice Presidents	Name	
	From PTI (Note 6)	From All Consolidated Entities (Note 7)
Under NT\$ 2,000,000	—	—
NT\$ 2,000,000 ~ NT\$ 4,999,999	Tonwey Cheng	—
NT\$ 5,000,000 ~ NT\$ 9,999,999	John Wang, John Chang, Wilber Wu, YC Chi, Phu Le, Paul Wu, Evan Tseng, David Fan, YC Chen, Perry Lin, Yohan Lin	John Wang, John Chang, YC Chen, Wilber Wu, YC Chi, Phu Le, Paul Wu, Evan Tseng, David Fan, Perry Lin, Yohan Lin, Tonwey Cheng
NT\$ 10,000,000 ~ NT\$ 14,999,999	J.S. Leu	J.S. Leu
NT\$ 15,000,000 ~ NT\$ 29,999,999	D.K. Tsai, J.Y. Hung	D.K. Tsai, J.Y. Hung
NT\$ 30,000,000 ~ NT\$ 49,999,999	—	—
NT\$ 50,000,000 ~ NT\$ 99,999,999	—	—
Over NT\$ 100,000,000	—	—
Total	16	16

Note 1: The names of CEO, President, and Vice Presidents are separately listed, and total remuneration disclosed for each item paid. Director serving as CEO and President are listed in this table and Table 1.

Note 2: Remuneration included President and Vice President Payrolls and incentives.

Note 3: Remuneration included President and Vice President Bonuses, transportation incentives, special allowances, and other incentives. .

Note 4: The amount was estimated using 2019 profit sharing ratio and approved by 2018 Board Meeting. Details listed in Table 3.

Note 5: The amount was the summary remuneration paid to company's CEO, President, and Vice Presidents from all consolidated entities.

Note 6: Each executive management compensation was disclosed in range.

Note 7: All compensation from consolidated statements was disclosed by range for each executive management.

Note 8: After tax net income refers to the after tax net income of the PTI financial statements for 2019.

### 3. Bonuses Paid to Management

Date: Dec 31 2019

	Title	Name	Stock (Fair Market Value)	Cash(NTD K)	Total(NTD K)	Total as % of 2019 Net Income
Management	CSO	D.K. Tsai	0	29,058	29,058	0.50%
	President & CEO	J.Y. Hung				
	Operations Sr. VP.	J.S. Leu				
	Quality Assurance Sr. VP.	John Wang				
	Information and Materials Management Sr. VP.	John Chang				
	Singapore Operations Sr. VP.	Tonwey Cheng				
	Packaging Global Operations Marketing Assistant Sr. VP.	Paul Wu				
	Finance & Investment Management Sr. VP. & CFO	Evan Tseng				
	Packaging Manufacturing VP.	Y.C. Chen				
	Sales Management VP.	Phu Le				
	Testing Operations VP.	Wilber Wu				
	Module Operations VP.	Y.C. Chi				
	Memory Packaging R&D VP.	David Fang				
	Plant Affairs Engineering VP.	Perry Lin				
	Human Resources & Legal Affairs VP.	Yohan Lin				
	Logic Testing Assistant VP.	Vic Chen				
	Packaging Manufacturing Assistant VP.	Gary Chang (Note)				
	Wafer Level Packaging Assistant VP.	Vic Dong				

Note: Packaging Manufacturing Assistant VP Gary Chang position change on Mar 16 2020.

Note 1: The 2019 profit sharing amount was approved by Board of Directors but pending for Shareholders' Meeting approval. The estimation was based on 2019 actual amount multiple by proposed ratio for 2018. Net income after tax for 2019 was referred to 2019 PTI financial statement net income after tax.

Note 2: Applicable grades for management are based on ruling of FSC Letter No. 0920001301 MOF March 27, 2003. The grades are listed below:

- 1) President or equivalent grade
- 2) Vice Presidents or equivalent grade
- 3) Assistant Vice President or equivalent grades
- 4) Head of Finance Department
- 5) Head of Accounting Department
- 6) Other Corporate management affairs or have signing authority

Note 3: For Directors, President, and Vice President who received employee profit sharing, in addition to filling related tables, information is contained in this table.

### 4. The percentage of compensation to Board, Supervisor, President, Vice President:

Title	2019 Compensation Percentage of Net Income after Tax		2018 Compensation Percentage of Net Income after Tax	
	PTI Alone	Consolidated	PTI Alone	Consolidated
Board of Director (Including Independent Director)	1.49%	1.70%	1.49%	1.69%
President and Vice President	2.31%	2.37%	2.14%	2.29%

- (1) Compensation for Board of Directors were based on the percentage defined in Article of Incorporation. 2019 compensation was based on revised Article of Incorporation which was less than 1.5% of before tax income deducted annual board and employee compensation. Independent Directors were paid monthly and not entitled to board compensation.

- (2) Compensation for President and vice President were based on corporate payroll policy and employee profit sharing policy considering individual seniority, experiences, performance, and contribution. Compensation proposal will be reviewed by Remunerations Committee and approved by Board.
- (3) Weight of 2019 Board compensation over net income were similar with 2018 due to including salary compensation of one employee who served as additional Legal Representative Director. Weight of 2019 management compensation over net income were lower than 2018 due to 2019 employee headcount increased.

#### 4. Corporate Governance Status

##### (I) Board of Directors Meeting Status:

##### Board of Directors Meeting Status

6 Board Meetings took place in 2019. The attendance status as follows:

Title	Name	Attend In Person	Attend By Proxy	Attendance Rate	Note
Chairman	D.K. Tsai	6	0	100%	
Director	JY Hung	6	0	100%	
Director	Kingston Technology Corp. Rep: Shigeo Koguchi	6	0	100%	
Director	Kingston Technology Corp. Rep: Daphne Wu	4	2	66.7%	
Director	Kingston Technology Corp. Rep : JS Leu	6	0	100%	
Director	Kingston Technology Corp. Rep : Evan Tseng	6	0	100%	
Director	Kioxia Memory Semiconductors Taiwan Corp Rep : Kenjiro Hara	5	0	83.3%	
Independent Director	Jim W.L. Cheng	6	0	100%	
Independent Director	Quincy Lin	6	0	100%	
Independent Director	Philips Wei	6	0	100%	
Independent Director	Pei-Ing Lee	4	2	66.7%	
Accumulated Average Attendance		61	4	92.42%	

##### Other Remark:

- Any of the following situation should be clearly stated board meeting date, term, proposal details, all opinions from independent directors, and responses from the Company reading Independent Director opinion:

- Items listed by Article 14-3 of Securities and Exchange Act :

Audit Committee has been set up complied with Article 14-3 of Securities and Exchange Act and approved by Board. Details operations of Audit Committee can be found in Audit Committee Meeting Status in next section.

- (2) Other written opinion or objection from Independent Directors regarding Board approval items: None.
2. Independent Directors should leave during discussion for matters with conflict of interest. Name of directors, proposal details, reason of conflicts and voting results:
- (1) Board Meeting on Jan 11, 2019
- Item 1: Management promotion and compensation raise
- Senior VP Evan Tseng was excused from the meeting due to conflict of interests. All participated directors approved the proposal.
- (2) Board Meeting on Mar 14, 2019
- Item 4: Proposal for management compensation raise
- DK Tsai, JY Hung, JS Leu, and Evan Tseng were excused from the meeting due to conflict of interests. All participated directors approved the proposal.
- Item 12: Proposal for removal of non-compete clause for board of director
- JY Hung and Kenjiro Kara were excused from the meeting due to conflict of interests. All participated directors approved the proposal.
- Item 13: Proposal for removal of non-compete clause for management
- JY Hung was excused from the meeting due to conflict of interests. All participated directors approved the proposal
- (3) Board Meeting on Aug 2, 2019
- Item 1: Proposal for 2018 management compensation plan
- DK Tsai, JY Hung, JS Leu, and Evan Tseng were excused from the meeting due to conflict of interests. All participated directors approved the proposal.
3. Self-professional targets set up for the Board (ex, set up of Audit Committee, improve corporation transparency) and keep track of progress:

Review Frequency	Once a year
Review Schedule	2020 review should be completed by first quarter of 2021.
Scope	Individual performance evaluation for director of board, audit and remuneration committee.
Evaluation Method	Each director will be reviewed by internal and self-evaluations. Or any other proper performance evaluation method.
Review Key Items	1.Board Operation Efficiency: Evaluation should include board's dedication, quality of decision making, quality of elected member, commitment of continuing education, and quality of internal control.
	2.Individual Director Performance : Realization of director responsibility, Awareness of corporate goals and progresses, involvement of operations, establishment of corporate communication, and improvement on professional learning and internal control.
	3.Functional Director Performance : Involvement of corporate operation, realization of director responsibility, quality of decision-making and elected members, and quality of internal control.

4. Recent or current year goals for reinforce Board performance (ex, set up of Audit Committee, improve corporation transparency) and progress of execution:

Six board meetings were held in 2019 and major resolutions were disclosed on MOPS in both Chinese and English on the event date for improving corporate transparency. Press release and conference will be available for public if any major event defined by regulation took place.

Performance indicators were established for board efficiency improvement to meet corporate governance guidance. Board performance evaluation procedure was approved on Mar 10 2020 board meeting. Annual evaluation should be completed by first quarter of the following year.

5. Successor plan for Chairman (or Board of directors) and executives, including successor task training and scheduling:

1. Organization restructure and tasks rotation

- (1) New position added for Chief Strategy Officer and new appointed Chief Execution Officer :

Mr. DK Tsai was named CSO and Mr. JY Huang was named as CEO in 2018. Newly appointed leaders were realizing the successor plan and pass on the leadership philosophy for smooth transformation.

- (2) Job rotation for top management :

Top management were assigned as Chairman or executives for overseas subsidiaries to gain foreign experiences and corporate strategy planning.

- (3) Establish Plant Manager Position:

Plant manager position was created for manufacturing operation. The management position is to provide opportunity for gaining firsthand experiences in executive level planning and managing. The position is a good way of preparation to develop qualified successor candidates.

2. Carry out of corporate culture and experience

- (1) Standardized management culture and experience:

Standardized procedure and document for existing corporate culture and management experiences to build core management structure.

- (2) Establish and participate routine meetings:

Top and mid-level management can comprehend corporate core value and growth strategy through participating routine semi annual sales meeting, weekly sales meeting, weekly capacity meeting, periodically R&D updates, and etc.

### 3. Successor plan for all levels and training plans

#### (1) Successor plan for all levels

All level management identify successor candidates throughout the annual performance reviewing process

#### (2) Training plan for successor candidates

All candidates are encouraged to take internal and external educational courses to enhance technical and management skills. All candidates participate for internal meetings and discussion to understand corporate value and management style.

### (II) Audit Committee Meeting Status:

4 meetings were hold during 2019 and the attendance status as follow:

Title Name	Attendance	In Person	By Proxy	Attendance Rate	Note
Independent Director	Jim W.L. Cheng	4	0	100%	
Independent Director	Quincy Lin	3	1	75%	
Independent Director	Philips Wei	4	0	100%	
Independent Director	Pei-Ing Lee	4	0	100%	

### Other Remark:

#### 1. Audit Committee annual key performance indicators:

Audit Committee composed of four independent directors who are authorized to supervise the flow and control quality and reliability of accounting, auditing, financial reporting. 2019 major review items including:

- (1) Policy and Procedure of financial reporting and accounting policies.
- (2) Execution efficiency on internal audit plans and internal control procedures.
- (3) Domestic share trade
- (4) Lending to subsidiaries and execution of guarantee endorsement for subsidiaries
- (5) Earnings distribution proposal
- (6) Financial derivatives execution
- (7) Amendment of Code of Business Conduct and Ethics
- (8) Subsidiaries operation improvement plans
- (9) Legal verdict of violation of Code of Business Conduct



(10) Execution of risk management

(11) Evaluation of CAP independence and competence

(12) Insider trading

▲ Audit Financial Reports

Board proposed 2019 business operation plan, audited financial reports, and earnings distribution plan for review. 2019 audited financial reports were completed and issued unqualified opinion by Deloitte Taiwan. Audit Committee approved 2019 business operation plan, audited financial reports, and earnings distribution plan after evaluation.

▲ Evaluation of Internal Audit Efficiency

Audit Committee reviewed the regular reporting from audit department, certified public accountant, and management to understand the efficiency of internal control policy and procedures. Audit Committee believed internal audit and risk management were necessary and effective to prevent and correct legal misconduct.

▲ Evaluation of CAP independence and competence

Audit Committee was authorized to supervise the independency of audited CPA firm to ensure the fair representation of the financial reporting. Audit CPA firm can only provide tax related and approval-based services. Special approval service items need to be authorized by Audit Committee. Audit Committee will evaluate audit CPA for independence, specialty, and competence base on the Article 47 of The Norm of Professional Ethics for CPA of ROC. CPA Yu-Feng Huang and CPA Su-Li Fang both qualified and approved by Audit Committee and Board Directors on Mar 16 2018.

2. Any of the following situation should be clearly stated board meeting date, term, proposal details, all opinions from independent directors, and responses from the Company reading Independent Director opinion:

(1) Items Subject to Article 14-5:

Board Meeting	Proposal Details & Follow Ups	Subject to Article 14-5	Proposal Approved by more than 2/3 of Board Members without Audit Committee Approval
8th Term 11 <sup>th</sup> Meeting (Mar 14, 2019)	1. Review 2018 Operations Report and Financial Reports.	√	
	2. Authorized 2018 Internal Audit Report Declaration.	√	
	3. Revised Internal Control Procedures and Internal Audit Procedures.	√	
	4. Revised Procedures for Acquired and Dispose Assets.	√	
	5. Revised Procedure for Financial Divertive Transaction	√	
	6. In order to reduce currency exchange risks, proposed to extend trade long term forward exchange term with existing US\$100 m credit limit.	√	
	7. Remove Non-Competing Clause for Board of director	√	
	8. Approved to issue no more than 87 million common shares or GDR for private placement or CDB to fund long term expansion.	√	
	9. Review the independence and competence of hired CPA firm	√	
	All members of audit committee approved the proposals in the meeting on Mar 14, 2019.		
	All members of attended board members agreed with the conclusion reached by Audit Committee.		
8th Term 12 <sup>th</sup> Meeting (May 3, 2019)	1. Reviewed 1Q19 Financial Reports.	√	
	2. Review 2018 earnings distribution proposal.	√	
	3. Proposed to lend Powertech Technology (Suzhou) Ltd. no more than US\$24 b and Powertech Technology (Singapore) Pte. Ltd. no more than US\$30 b. Lending period less than one year and annual interest at 3.0%.	√	
	All members of audit committee approved the proposals in the meeting on May 3, 2019.		
	All members of attended board members agreed with the conclusion reached by audit committee.		
8th Term 14 <sup>th</sup> Meeting (Aug 2, 2019)	1. Reviewed 2Q19 Financial Reports.	√	
	2. Proposed to renew endorse guarantee for Powertech Technology (Singapore) Pte. Ltd. for US\$20 m at China Trust Bank. Proposed to renew endorse guarantee for Powertech Technology (Suzhou) Ltd. US\$15 m at Mega Commercial Bank Suzhou Branch.	√	
	All members of audit committee approved the proposals in the meeting on Aug 2, 2019.		
	All members of attended board members agreed with the conclusion reached by audit committee.		
8th Term 15 <sup>th</sup> Meeting (Nov 5, 2019)	1. Reviewed 3Q19 Financial Reports.	√	
	2. Approved 2020 Internal Audit Plan.	√	
	3. In order to reduce currency exchange risks, proposed to renew trade long term forward exchange term with existing US\$50 m credit limit.	√	
	All members of audit committee approved the proposals in the meeting on Nov 5, 2019.		
	All members of attended board members agreed with the conclusion reached by audit committee.		

(2) **Proposal Approved by more than 2/3 of Board Members without Audit Committee Approval: None.**

2. Independent Directors should leave during discussion for matters with conflict of interest.

Name of directors, proposal details, reason of conflicts and voting results: **None**

3. Communication between Independent Directors and CPA (ex. Issues regarding corporate financial, business operations, methods, results, and etc.):

(1) Internal audit department email audit reports to independent directors in a monthly basis. The head of internal audit should specified major findings during Audit Committee meetings.

(2) Summarized quarterly consolidated and standalone financial statements information should be delivered and communicated with independent directors during Audit Committee meetings in order to comply with regulations defined in No 39 Statements of Auditing Standards and No.0930105373 of Securities and Futures Bureau.

(3) No less than 1 Audit Committee meeting per quarter. Summarized communication among independent directors, head of internal audit, and CPA:

Date	Meeting Summary	Conclusion
Mar 14 2019	<p>Matters communicated at the 8th session of the 2nd Audit Committee were as follow:</p> <ol style="list-style-type: none"> <li>1. Report on the results of the internal audit for 2018 Q4.</li> <li>2. Discussion of the results from the 2018 internal control review and self-assessment. A statement on the effective design and execution of internal controls was also issued.</li> <li>3. Revision of the PTI “Internal Control System” and “Internal Audit System.”</li> <li>4. Approval for the issue of ordinary shares for cash to sponsor the issuance of depositary receipts (DRs), and/or issue of ordinary shares for cash, and/or private placement of ordinary shares for cash, and/or private placement of overseas or domestic convertible bonds.</li> <li>5. Accountant’s report on the</li> </ol>	<p>There were no other recommendations than the items communicated on the left.</p> <p>The results from the internal audit for 2018 Q4 were reported to the Board of Directors; Statement on the effective design and execution of internal controls for 2018, as well as the 2018 separate and consolidated financial statements were submitted to the Board of Directors for approval. Once approved, they were published and filed with the competent authorities on time.</p>

Date	Meeting Summary	Conclusion
	<p>content and outcomes from their audit of the 2018 separate and consolidated financial statements. (including explanation of key audit matters in the audit report). Discussion and communication of major accounting estimate issues as well as recent amendments to tax and securities management regulations. In addition, review/audit planning for 2019 were also presented by the accountant. There was also discussion and communication over major audit risk items already identified by PTI.</p> <p>Communication with independent directors and recommendations:</p> <ol style="list-style-type: none"> <li>1. A customer failed to make full payment and this was treated as bad debt. An independent director questioned this and asked what control measures were in place. The CFO and chief internal auditor explained the reason and measures subsequently taken to reduce risk.</li> <li>2. A number of independent directors raised concerns over the risk of insider trading from item 4 in the preceding section. They recommended that PTI pay particular attention to maintaining confidentiality; the strategic investors should also be chosen with care. The protection of employees' interests should also be considered.</li> </ol>	
May 3 2019	<p>Matters communicated at the 9th session of the 2nd Audit Committee were as follow:</p> <ol style="list-style-type: none"> <li>1. Report on the results of the internal audit for 2019 Q1.</li> <li>2. Report on settlement of civil lawsuit with a former employee of the company suspected of unethical behavior.</li> <li>3. Accountant's report on the content and outcomes from their audit of the 2019 Q1 consolidated</li> </ol>	<p>There were no other recommendations than the items communicated on the left. The results of the 2019 Q1 internal audit and the 2019 Q1 consolidated financial statement were presented to the Board of Directors. The financial statements were then published and filed with the competent authorities on time.</p>

Date	Meeting Summary	Conclusion
	financial statements. Discussion and communication of major accounting estimate issues.	
Aug 2 2019	<p>Matters communicated at the 10th session of the 2nd Audit Committee were as follow:</p> <ol style="list-style-type: none"> <li>1. Report on the results of the internal audit for 2019 Q2.</li> <li>2. Accountant's report on the content and outcomes from their audit of the 2019 Q2 consolidated financial statements. Discussion and communication of major accounting estimate issues.</li> </ol> <p>Communication with independent directors and recommendations: Where there are reservations in the review report for subsidiaries according to the equity method, an independent director required an explanation of how critical it is to the company and its importance to revenues to be included from the next quarter onwards.</p>	<p>There were no other recommendations than the items communicated on the left.</p> <p>The results of the 2019 Q2 internal audit and the 2019 Q2 consolidated financial statement were presented to the Board of Directors. The financial statements were then published and filed with the competent authorities on time.</p>
Nov 5 2019	<p>Matters communicated at the 11th session of the 2nd Audit Committee were as follow:</p> <ol style="list-style-type: none"> <li>1. Report on the results of the internal audit for 2019 Q3.</li> <li>2. Formulation of the 2020 internal audit plan.</li> <li>3. Accountant's report on the content and outcomes from their audit of the 2019 Q3 consolidated financial statements. Discussion and communication of major accounting estimate issues as well as recent amendments to tax and securities management regulations. The accountant also outlined and discussed the key audit matters for PTI.</li> </ol> <p>Communication with independent directors and recommendations: The chief internal auditor reported that the purchasing department should continue strengthening its management of delivery times to</p>	<p>There were no other recommendations than the items communicated on the left.</p> <p>The results of the 2019 Q3 internal audit and the 2019 Q3 consolidated financial statement were presented to the Board of Directors. The financial statements were then published and filed with the competent authorities on time.</p> <p>The 2020 internal audit plan was submitted to the Board of Directors for approval and published on schedule.</p>

Date	Meeting Summary	Conclusion
	<p>prevent the risk of material shortages or production delays. An independent director asked a number of questions and made several suggestions. The chief internal auditor was then asked to discuss the matter further with the relevant units and drawn up proposals for improvement before submitting the matter to the Audit Committee again.</p>	

(III) Variances and Reasons between PTI Corporate Governance Practices and Corporate Governance Best Practice Principles for TWSE/GTSM Listed Companies:

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
1. Does Company follow “Taiwan Corporate Governance Implementation” to establish and disclose its corporate governance practices?	√		PTI Corporate Governance Best Practice Principles has followed “Corporate Governance Best Practice Principles for TWSE/GTSM Listed Companies” and approved by Board of Directors on Nov 5 2014 and amended on Feb 9, 2015 board meeting. The document was disclosed in PTI company website and MOPS.	Complied with Regulation.
2. Shareholding Structure & Shareholders’ Rights				
(1)Does Company have Internal Operation Procedures for handling shareholders’ suggestions, concerns, disputes and litigation matters? If yes, has these procedures been implemented accordingly?	√		1. PTI has dedicated spokesman and shareholders affairs department to handle inquiries for shareholders. Contact information is available on company website. Legal inquiries will be handling by legal department.	Complied with Regulation.
(2)Does Company possess a list of major shareholders and beneficial owners of these major shareholders?	√		2. Regular reports and shareholder lists will be provided by stock transfer agent. PTI has disclosed information required by authority and kept good communication with major shareholders.	
(3)Has the Company built and executed a risk management system and “firewall” between the Company and its affiliates?	√		3. Procedures for activities with related parties has been established and followed.	
(4)Has the Company established internal rules prohibiting insider trading on undisclosed information?	√		4.”Prohibition against Insider Trading” policy has been established to educate and prevent insiders trading for who has access to significant internal information.	
3. Composition and Responsibilities of the Board of Directors:				
(1)Has the Company established a diversification policy for the composition of its Board of Directors and has it been implemented accordingly?	√		1. Each director qualifies for requirements defined by Corporate Governance Best Practice Principles. 11 Board Directors met professional requirements, including no less than 4 and no less than 1/3 as independent directors. One of director is female.	Complied with Regulation.
(2)Other than the Remuneration Committee and the Audit Committee which are required by law, does the Company plan to set up other Board committees?	√		2. The company has set up the Remuneration Committee and Audit Committee as directed by law. Other committees will be set up as needed.	

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)						
	Yes	No	Explanation							
(3)Has the Company established methodology for evaluating the performance of its Board of Directors, on an annual basis?	√		3 .Board of Directors have been performed at highest standards. There is no evaluation of performance in place now. Evaluation will be established as needed.							
(4)Does the Company regularly evaluate its external auditors’ independence?	√		4. Starting from 2015, annual independence review of CAP will be performed and major items are: a. Review CAP qualification and experiences. b. Declaration of Independence from CPA including audit team members and their spouses and dependents don’t have conflict of interests to influence their independency. c. Search on internet for records of employed CPA breach of independence. d. Evaluate employed CAP independency using check list defined by No. 10 Article 23 of Certified Public Accountant Act.. e. Reviewed on Feb 22, 2017 Audit Committee meeting. f. Present the evaluation for Board of Directors on Feb 22, 2017.							
4. Has the Company established dedicated person(s) or department to handle corporate governance issues (including but not limited to provide evaluation data for board of directors and supervisors hold board meeting and shareholder meeting, apply incorporation registration and modification, and record meeting minutes for board meetings and shareholder meetings)?	√		The Stock Affairs Department is in charge of corporate governance related issues and major tasks were: Plan annual shareholder and board meetings agenda and schedule. Planning for board meetings details and notify attendance directors board meeting agenda 7 days before the meeting. Remind conflict of interests attendance to leave when necessary. Meeting minutes recording. Copy directors and file the meeting minute document within 20 days of meeting. Register for annual shareholder meeting with authorization with completed meeting notice, meeting agenda, annual report and meeting minutes within required period. File for amendment within 15 days after annual shareholder meeting. Public announcement of board and shareholder meeting conclusions comply with regulation and investor interests. Assist Directors for continue education programs.							
5. Has the Company established a means of communicating with its Stakeholders or created a Stakeholders Section on its Company website? Does the Company respond to stakeholders’ questions on corporate responsibilities?	√		<table><tr><td colspan="2">Stakeholders communication methods as below:</td></tr><tr><td>Related Party</td><td>Communication Method</td></tr><tr><td>Shareholders/Investors</td><td>Shareholders’ Meeting Financial Reports Host Quarterly Institutional Investor Conference Established spokesman and Investor Relations Department Company Website</td></tr></table>	Stakeholders communication methods as below:		Related Party	Communication Method	Shareholders/Investors	Shareholders’ Meeting Financial Reports Host Quarterly Institutional Investor Conference Established spokesman and Investor Relations Department Company Website	Complied with Regulation.
Stakeholders communication methods as below:										
Related Party	Communication Method									
Shareholders/Investors	Shareholders’ Meeting Financial Reports Host Quarterly Institutional Investor Conference Established spokesman and Investor Relations Department Company Website									



Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
			<div>Employees</div> <div>Employees Benefits Committee Electronic Platform &amp; Announcement Procedures for Improvement Proposal Reviewing Employee and Employer Meeting Suggestion Box Psychological Consultant and Aids</div> <div>Customers</div> <div>Sales Department Customer Satisfaction Survey Customer Service</div> <div>Suppliers</div> <div>Electronic Procurement Platform Procurement Contract Management Supplier Management Meeting Supplier Audit Procedure Supplier Evaluation</div> <div>Government</div> <div>Emails and Official Notice in Mail Seminars and Public Hearings Host by Officials Supplement Documents from Officials</div> <div>Community</div> <div>Company Website General Affairs Contact Window</div> <div>Media</div> <div>Press Release Interview</div> <div>PTI has set up a section for stakeholders on the company website to disclose corporate social responsibilities, and CSR hotline and email account. Dedicated staff will take care of reported problems.</div>	
6.Has the Company outsource professional stock affair organization for assistance?	√		Concord Securities Co. Ltd assisted PTI for shareholder affairs.	Complied with Regulation.
7. Information Disclosure				
(1)Has the Company established a corporate website to disclose information regarding its financial and corporate governance status?	√		Company website has been set up and well maintained. Financial and Corporate Governance information will be disclose on the website upon occurrence.	Complied with Regulation.
(2)Does the Company use other information disclosure channels (e.g. maintaining an English-language website, designating staff to handle information collection and disclosure, appointing spokespersons,	√		The Company has dedicated personnel in charge of disclosure on MOPS following authority regulations. Investor Relations section under company website discloses information in both Chinese and English. Spokesman and deputy spokesman are in place. The Company has been hosting physical quarterly Institutional Investor Conference. Live webcasting and replay of conference available on company website for investors.	

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
webcasting investors' conference etc.)?				
8. Has the Company disclosed other information to facilitate a better understanding of its corporate governance practices (e.g. including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing insurance for directors)?	√		<p>1. The Company has set up Corporate Social Responsibility Practice Guidelines and Corporate Social Responsibility Office to review and monitor CSR progress every 6 months.</p> <p>2. Employees Rights and Employees Care: Please refer to CSR Status Item 3 A-E on Page 3.</p> <p>3. The Company has set up multiples communication channels with investors or shareholders, such as spokesman, Investor Relations Department, quarterly institutional investor conference, investor seminars upon request by security firms.</p> <p>4. The Company has established "Operations Sustainability Policy" and "Promotion Committee". Annual Risk Assessment Meeting will evaluate and manage the impacts from emergency events.</p> <p>5. Supplier Management: Please refer to CSR Status Item 3 H-I on page 3.</p> <p>6. Schedule Board of Directors and managements attending training sections. Please refer to table below for training details.</p> <p>7. The Company has enrolled Board of Directors (including independent directors) and management for liability insurance. The previous coverage expired on Aug 26, 2018 and policy was renewed with Chubb Insurance Taiwan Ltd. with US\$30 m premium at annual costs of US\$40,000. Period from Aug 26, 2019 to Aug 26, 2020. Insurance coverage and details was reviewed on Nov 5, 2019 board meeting.</p> <p>8. PTI has been working actively to build to a secure and reliable information security management system to effectively protect the intellectual property and assets of our company and customers. ISO 27001 information security management system certification was obtained in October 2016. Please refer to Item 4 of the table below for the operation of our company's information security management.</p>	Complied with Regulation.
<p>9. Please describe improvements made in response to the results of the Corporate Governance Evaluation System in recent years, and propose what areas and measures will be prioritized for future improvements.</p> <p>PTI did not receive points for certain items in 5th Corporate Governance Evaluation (for 2018). Improvements made for the 6th Corporate Governance Evaluation (for 2019) are outlined below:</p>				

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	

Type of Indicator	Indicator Description	Improvement	Explanation for non-improvement or improvement
Protecting Shareholder Rights and Interests, and Treating Shareholders Equitably	1.6 Did the company hold the general shareholders' meeting (AGM) before the end of May?	Yes	
Enhancing Board Composition and Operation	2.5 Is it true that the number of the directors on the company's board of directors who are employees of the company or of its parent, subsidiary, or sister company is less than or equal to one-third of the total number of directors?	No	Under the Articles of Incorporation, there must be at least 4 independent directors and they must account for no less than 1/3 of all Board sets. PTI therefore exceeds the statutory requirements.
	2.13 Did the Remuneration Committee convene at least twice a year and did each of its members attend at least two times?	Yes	
	2.14 Did the company have any functional committees other than statutorily required committees, and did such functional committees have not less than three members, with at least half of the members being independent directors, and did the company disclose the organization, functions, and operations of such committees?	No	Shall be established in the future if they are required by the company.
	2.2 Has the company appointed dedicated corporate governance personnel to oversee corporate governance matters? Is the function and operation of the unit explained in the annual report and corporate website?	No	Expected to be completed in 2020.
Enhancing Board Composition and Operation	2.22 Have the rules adopted by the company for assessing the performance of the board of directors been passed by the board, and has it furthermore carried out self-assessment at least once a year, and disclosed the assessment results on its website or in its annual report?	No	Rules for assessing the performance of the Board of Directors should be completed in 2020 and used as the basis for assessments.

Assessment Item		Implementation Status			Non-implementation and Its Reason(s)
		Yes	No	Explanation	
		2.23	Have the rules adopted by the company for assessing the performance of the board of directors been passed by the board, with the express requirement that an external assessment be carried out at least once every three years, and has it furthermore carried out the assessment within the time limit under its rules, and disclosed the implementation status and assessment results on its website or in its annual report?	No	Rules for assessing the performance of the Board of Directors should be completed in 2020 and used as the basis for assessments.
		2.24	Did all of the company's directors and supervisors complete the number of hours of continuing education required by the <i>Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies</i> ?	No	Some of the directors were unable to meet their continuing education obligations due to work commitments or were foreign nationals. They have already been reminded to cooperate as much as possible on the completion of their continuing education.
		2.25	Did all of the company's independent directors complete the number of hours of continuing education required by the <i>Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies</i> ?	No	One of the independent directors was unable to meet the continuing education obligations due to work commitments. The independent director has been reminded to cooperate as much as possible.
		2.30	Did at least one of the company's internal auditors possess a certificate of qualification as a Certified Internal Auditor, Certified Information Systems Auditor, or Certified Public Accountant?	No	Internal auditors will be asked to do their best to obtain certification.
	Increasing Information Transparency	3.4	Did the company file its annual financial reports within 2 months from the end of the fiscal year?	No	Our CPA was unable to assist with this due to their scheduling.
		3.13	Did the company voluntarily disclose the individual remuneration details of each director and supervisor in its annual report?	No	Privacy concerns for directors meant that no disclosure will be provided until we can obtain the consent of all directors.

Assessment Item		Implementation Status			Non-implementation and Its Reason(s)
		Yes	No	Explanation	
	3.14			Did the company disclose the connection between director performance assessment and remuneration in its annual report?	No No rules and methods for assessing the performance of the Board of Directors have been formulated yet. Assessments will be carried out in the future if necessary.
Putting Corporate Social Responsibility into Practice	4.7			Did the company sign a collective agreement with the labor union in accordance with the <i>Collective Agreement Act</i> ?	No A comprehensive employee benefits scheme has been developed by PTI already. There is no need for the establishment of a labor union and the signing of collective agreements at present.

1. Policy to encourage board of directors to enroll in well-rounded programs:

Article of Incorporation 20-3 stated: board members should not be discriminated against gender; all members should be capable in knowledge, skills, and mind set. All board of directors should be capable in:

1. Operational judgments;
2. Financial analysis;
3. Management skills;
4. Crisis management;
5. Industry knowledge;
6. International perspectives;
7. Leadership skills;
8. Decision Making.

Execution Status:

Name	Nationality	Gender	Employee of PTI	Age Range			Independence Director Seniority (Years)			Operational Judgment	Financial Analysis	Management Skills	Crisis Management	Industry Knowledge	International Perspectives	Decision Making
				51-60	61-70	71-80	<3	3-9	>9							
DK Tsai	ROC	Male	√		√					√		√	√	√	√	√
J.Y. Hung	ROC	Male	√		√					√		√	√	√	√	√
Shigeo Koguchi	Japan	Male				√				√		√	√	√	√	√
Daphne Wu	ROC	Female		√						√	√	√	√			
J. S. Leu	ROC	Male	√		√					√		√	√	√	√	√
Evan Tseng	ROC	Male	√	√						√	√	√	√	√		
Kenjiro Hara	Japan	Male		√						√		√	√	√	√	√
Jim W.L. Cheng	ROC	Male			√				√	√	√	√	√			√
Quincy Lin	ROC	Male			√				√	√		√	√			√
Philips Wei	ROC	Male				√		√		√	√	√	√			√
Pei-Ing Lee	ROC	Male			√		√			√		√	√	√	√	√

## 2. Evaluation of independency of CPA Yu-Feng Huang and Cheng-chih Lin:

Events Influence CPA Independency:	Yes	No
1. Do the CPAs have direct and major financial relationship with the Company?		√
2. Do the Company or any board member lend or endorsement guarantee to CPAs?		√
3. Do the CPAs lend or endorsement guarantee to the Company?		√
4. Do the CPAs have frequent business relationship with the Company?		√
5. Do the CPAs have frequent business relationship with any board or management members?		√
6. Do the CPAs employee by the Company as board of director, management, or any position could significantly impact on audit now or last 2 years?		√
7. Are the CPAs going to be employed by the Company as board of director, management, or any position could significantly impact on audit in the future?		√
8. Do the CPAs as family members of board of director, management, or any position could significantly impact on audit?		√
9. Do the CPAs receive any significant valuables or gifts from board of director or management?		√
10. Do the CPAs employed by the Company for consecutive 7 years?		√

3. Status of 2019 Continue Education for Board of Directors and Management:

Title	Name	Date	Host By	Course	Duration (Hours)
Chairman	DK Tsai	2019/11/13	Taiwan Corporate Governance Association	Anti-Money Laundering and Countering the Financing of Terrorism: Introduction and Case Studies	3
				Next Generation Corporate Threat Management and Prevention: Big Data Analysis and Detection of Corporate Fraud	3
Independent Director	Jim W.L. Cheng	2019/05/02	Taiwan Corporate Governance Association	Insider Trading Case Studies	3
				The Reforms and Prospects for Corporations under the Amendments of the Company Act.	3
Independent Director	Philips Wei	2019/06/25	Securities & Futures Institute	Deciphering Financial Information for Directors and Supervisors	3
		2019/10/29		How Directors and Supervisors Can Carry Out Their Duties	3
Independent Director	Pei-Ing Lee	2019/11/15	Dharma Drum Mountain Humanities and Social Improvement Foundation	Innovations in Corporate Values	3
			Securities & Futures Institute	Avoiding Securities and Exchange Act Missteps -- On Financial Fraud and Insider Trading	3
Independent Director	Quicy Lin	2019/10/15	Securities & Futures Institute	Remuneration Committee and Growth Strategy Committee in Practice	3
CFO & Sr. VP	Evan Tseng	2019/08/15 2019/08/16	Accounting Research and Development Foundation	Continuing Education Class for Principal Accounting Officers of Issuers, Securities Firms and Securities Exchanges	12
Internal Audit	Teressa Tseng	2019/08/23	Accounting Research and Development Foundation	Business Impact of the New "Labor Incident Act" and Compliance	6

Title	Name	Date	Host By	Course	Duration (Hours)
				Audits in Practice	
		2019/09/06		Audit Trends in a Digital Technology Environment	6

4 : The operation of our company's information security management is shown below:

#### 1. Purpose of information security:

This information security policy was established to comply with the relevant laws and regulations, and to protect the information assets (including data, software and hardware equipment) related to the business and information systems of Powertech Technology Inc. (PTI). The policy is intended to protect against the risk of tampering, disclosure, damage or loss due to external threats, or their improper management and use by internal personnel.

#### 2. Information security guidelines:

PTI followed the "Plan-Do-Check-Act" (PDCA) model set out in the ISO/IEC 27001:2013 specifications for the development, maintenance, continuous improvement and documentation of an information security management system. This included laying down of principles for the functions of the management organization, document record management, and various information security control measures. The focus of the information security management system is on protecting the information assets of key company businesses. All activities must be documented or logged in an appropriate manner to ensure effective cooperation. The relevant steps are set out in each chapter.

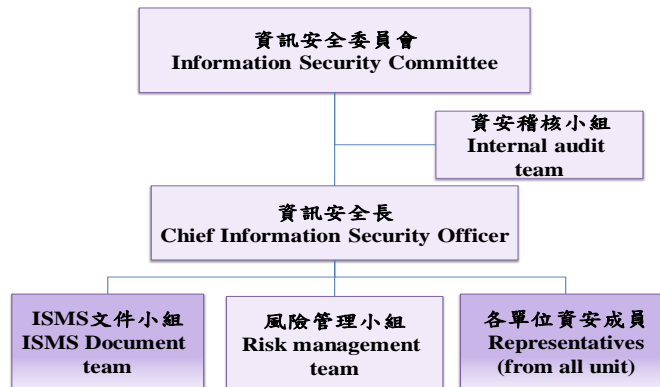


#### 3. Information security governance system:

The "Information Security Management Committee" ("Infosec Committee") was established in February 2016 to ensure the information security of PTI. The Infosec



Committee is responsible for promoting and managing the deployment, operation and maintenance of the information security management system. Effective communication is to be conducted in accordance with the “ISMS Communication Checklist” with the state of information security governance reported to the management regularly.



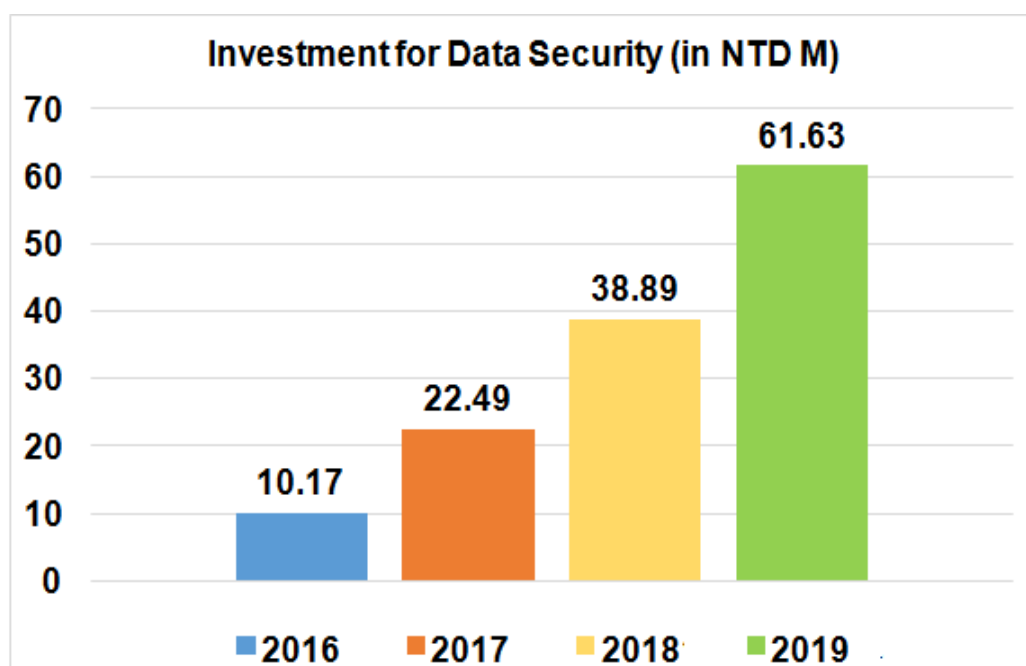
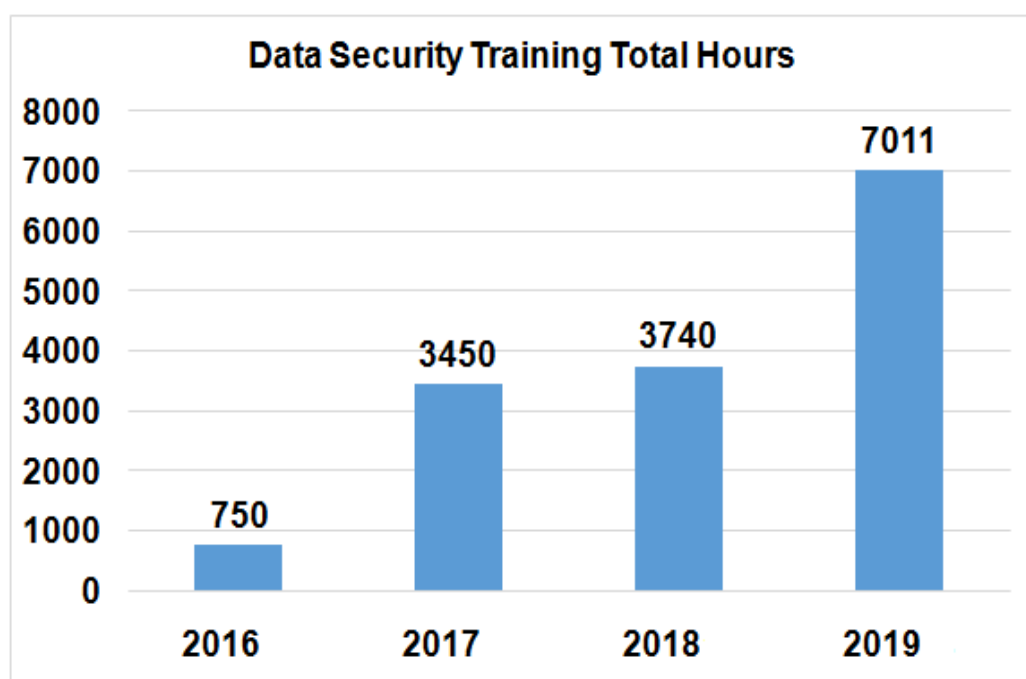
Scope of Information Security Committee:

- (1) Composition of Infosec Committee: The unit reports directly to the President according to the PTI organization chart. The top managerial officers in the unit make up the Infosec Committee.
- (2) The top managerial officer of the information department is also the Chief Information Security Officer (CISO) of the Infosec Committee.
- (3) The audit team is composed of personnel from the audit unit and information management department. A representative assigned by the Audit Office serves as the team leader. The team is responsible for internal audits related to ISMS< PIMS and trade secrets.
- (4) The document team is composed of personnel from legal affairs and information management department. A representative is assigned as the team leader. The team is responsible for preparing documentation related to ISMS< PIMS and trade secrets, as well as matters related to security awareness, education and training.
- (5) The risk management team is composed of personnel from legal affairs, information management department, and packaging & testing RD department. A representative is assigned as the team leader. The team is responsible for matters related to asset registries, risk management, and emergency response.
- (6) The information security personnel of each unit are designated by the head of each unit. They assist with the promotion of tasks related to ISMS< PIMIS and trade secrets.
- (7) A list of all members is maintained by the CISO in the “Infosec Committee Membership List” and kept up to date when there is a change in membership.

#### 4. Information security management mechanism:

ISO 27001 certification in October 2016 was obtained by PTI and internal controls based on the standard put into place. A variety of methods including management review, internal audit, risk assessment, corrective and preventive measures for example were used to establish an information security management mechanism, strengthen information security protections, and enhance the standard of information security.

#### 5. Investment on Data security Trend:



#### 6. Information security risk management:

PTI has devised rules and procedures for information security risk management.

- (1) Different assets may have different risks. Methods for assessing or calculating asset value were adjusted to make them more appropriate to the nature of the unit.
- (2) The basic information security requirements are data confidentiality, integrity and usability.
- (3) Information security insurance is an emerging risk type that involves information security rating organizations, claim assessment organizations, and no-compensation clauses. We will therefore evaluate the practicality of purchasing information security insurance in the future.

### (III) Remuneration Committee Members and Attendance

## 1. Information Regarding Remuneration Committee Members

[illegible]

Note 1: Remuneration Committee members during the two years before being elected or during the term of office. Meet any of the following conditions; please mark the appropriate corresponding boxes:

(1) Not an employee of the Company or any of its affiliates.

(2) Not a director or supervisor of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent company, or any subsidiary in which the Company holds, directly or indirectly, more than 50% of the voting shares.

(3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of 1% or more of the total number of outstanding shares of the Company or ranking in the top 10 in holdings.

(4) Not a spouse, relative within the second degree of kinship or lineal relative within the third degree kinship, of any of the persons in the preceding three subparagraphs.

(5) Not a director, supervisor, or employee of a corporate/institutional shareholder that directly holds 5% or more of the total number of outstanding shares of the Company or that holds shares ranking in the top five in holdings.

(6) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares of a specified company or institution that has a financial or business relationship with the Company.

(7) Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof. However, this does not include member of the remuneration committee acting on behalf of Article 7 based on the shares being publicly listed and trading at a commercial brokerage.

(8) Not been a person of any conditions defined by Article 30 of the Company Law.

## 2. Operations of Remuneration Committee

(1) Total 3 members of Remuneration Committee.

(2) Service Term: Jun 8, 2017 to May 25, 2018.

3 meetings took place during 2019, and attendance status as below:

Title Name	Attendance	In Person	By Proxy	Attendance Rate	Note
Chair	Jim W.L. Cheng	3	0	100%	
Member	Quincy Lin	2	1	67%	
Member	Philip Wei	3	0	100%	

### Annotations:

I. The meeting minutes should clearly indicated Board meeting date, proposal details, decision, and opinions from Remuneration Committee when Board Meeting rejected or amended proposals from Remuneration Committee:

No such incident.

II. The meeting minutes should clearly indicated Remuneration Committee decision, date of the meeting, proposal details, and all members' opinions when any of the members rejected or disagree with the decision:

No such incident.

Date	Meeting Summary	Conclusion	Follow Up Action
3 <sup>rd</sup> Annual 4 <sup>th</sup> Meeting Jan 11 2019	1. Review of promotion and salary adjustment proposals for managerial officers.	Passed unanimously by all members of the Committee in attendance	Submitted to the Board and passed unanimously by all directors in attendance
3 <sup>rd</sup> Annual 5 <sup>th</sup> Meeting Mar 14 2019	1. Review of PTI's 2018 remuneration distribution proposal for Board directors and employees. 2. Review of adjustments to Company managerial officers' salaries for 2019.	Passed unanimously by all members of the Committee in attendance	Submitted to the Board and passed unanimously by all directors in attendance
3 <sup>rd</sup> Annual 6 <sup>th</sup> Meeting Aug 2 2019	1. PTI's remuneration distribution proposal for managerial officers and employees for 2018.	Passed unanimously by all members of the Committee in attendance	Submitted to the Board and passed unanimously by all directors in attendance

Regular review of directors'/managerial officers' performance evaluation and other information such as salary policy, system, standard and structure.

- (1) Information from PTI's review and assessment of remuneration in 2019 is as shown in the above table.
- (2) The Remuneration Committee shall exercise the care of a prudent manager to fulfill the following duties, and submit recommendations to the board of directors for discussion.
  - A. PTI remuneration rules are regularly reviewed and amendments proposed.
    - a. Establish and regularly review the annual and long-term performance targets for directors and managerial officers, as well as the policies, systems, standards, and structure for their remuneration.
    - b. PTI directors and managerial officers are regularly assessed on their ability to meet performance targets. The content and amount of their individual remuneration are set accordingly.
- (3) The PTI Remuneration Committee shall carry out its duties in accordance with the following principles:
  - A. Ensure that the remuneration arrangements of the Company conform to the law and are sufficient to attract quality talent.
  - B. The performance evaluation and remuneration of directors, supervisors and executives should take prevailing industry standards into account and take into consideration the amount of personal time invested, responsibilities, personal target completion, performance in other roles and company compensation for other people in equivalent roles in recent years. The achievement of the company's short-term and long-term business objectives as well as the company's finances are used to evaluate the correlation between personal performance, company business performance and future risks.
  - C. The remuneration plan should not entice directors and managers into exceeding the Company's capacity for risk in pursuit of personal remuneration.
  - D. Short-term performance bonuses for directors and senior managerial officers, and the timing of variable salary payments/remunerations shall be set with reference to the particular industry characteristics and the nature of the Company's business.
  - E. Whether the content and amount of director and managerial officers' remuneration is reasonable should be taken into account. It is inadvisable for the remuneration decided for directors and managerial officers to diverge excessively from financial performance.
  - F. Members of the Committee may not participate in the discussion and voting on their personal remuneration.

## V. CSR Status

Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
I. Did the company have a designated unit in charge of promoting corporate social responsibility that, following the principle of materiality, conducted risk assessment on environmental, social, or corporate governance issues related to the company's operations, and adopted relevant risk management policies or strategies?	✓		<p>I. A “Corporate Responsibility Office” has been established by PTI under the Board of Directors and reports to the Board every year. As the designated unit for corporate social responsibility and risk management, the Office oversees the CSR Promotion Team, the Business Continuity Management Committee and other functional organizations.</p> <p>The CSR Promotion Team used experience from past engagements with different stakeholders and the four reporting principles (materiality, stakeholder inclusiveness, sustainability context and completeness) of GRI Standards as a reference. The process for identification of material issues is used to analyze sustainability issues and establish their materiality. These provide an important reference for determining the strategy and goals in CSR promotion.</p> <p>The Business Continuity Management (BCM) Committee convenes the risk identification meeting every year to examine potential emergencies or impacts on business continuity, Risk management policies or strategies that encompass management goals, organizational structure and accountability are then formulated. Risk management and response are then strengthened through effective identification, measurement and execution.</p> <p>The risk assessments encompassed environmental, social, and corporate governance issues related to the company operations. Potential risks were identified for seven issues in 2019, namely “regulatory change”, “IT information”, “environmental and climate change”, “business and production technology”, “supply chain management”, “capital market volatility” and “human resources.”</p> <p>Dedicated personnel were assigned to manage and respond to different categories of risk. Early warning, response, crisis management, business continuity plan and recovery operations were used to establish a safety net that ensures the continuity of operations. The content of relevant risks were also reported to the Board of Directors.</p>	Complied with the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX-listed Companies.”

Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
II. Did the company have a dedicated (ad-hoc) unit in charge of promoting corporate social responsibility that reports to the board of directors with its implementation delegated by the board of directors to the senior management?	✓		II. A dedicated “CSR Office” was established by PTI on August 1, 2014, to ensure proper CSR management, and was approved by the Board of Directors on February 9, 2015. The CSR Office reports to the Board of Directors and is responsible for the development and execution of CSR policy, system, related management policies and action plans. The “CSR Committee” is convened every quarter to brief senior managerial officers on current progress. An annual report is also made to the Board of Directors.	Complies with the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX-listed Companies.”
III. Environmental issues (I) Did the company establish a proper environmental management system based on the characteristics of the industry?	✓		(I) PTI has established an environmental management system based on the characteristics of our industry to fulfill our corporate responsibility on environmental protection as well as look after the safety and health of our employees. Certification for ISO 14001 environmental management system was obtained in 2003, followed by OHSAS 18001 (now ISO 45001) occupational safety and health management system in 2004. Environmental, safety and health management activities are now conducted in accordance with these standards. Environmental, safety and sustainability goals are now set and reviewed on a regular basis. The operation of the international standard management systems enable PTI to effectively control emissions, water pollution and waste from the production process.	Complied with the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX-listed Companies.”
(II) Was the company committed to improving the efficient use of each resource and the use of recycled materials with a low impact on the environment?	✓		In addition, IECQ QC08000 hazardous substance management system certification was obtained in 2008. The certification ensured that PTI products do not contain substances harmful to human health or the environment, and complied with international regulations and customer requirements, reducing the environmental impact of our products and increasing their competitiveness.  (2) Refer to Note 1	



Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
(III) Did the company evaluate the potential risks and opportunities to its business from climate change now and in the future, and take appropriate measures to counter climate change issues?	✓		(3) Refer to Note 2	
(IV) Did the company disclose the annual emissions of greenhouse gases (GHG), water consumption, and total weight of waste for the past 2 years, and set management policies for energy conservation, reduction of GHG emissions, water use and other wastes?	✓		(4) Refer to Note 3 °	
IV. Social issues (I) Did the Company formulate management policies and procedures based on the relevant laws, regulations and the International Bill of Human Rights?	✓		<p>(I) The “Responsible Business Alliance” (RBA) is committed to supporting the rights and well-being of workers and communities worldwide affected by the global supply chain. The “RBA of Conduct” is a set of standards on social, environmental and ethical issues in the global industry supply chain that references key international human rights standards including the “United Nations Guiding Principles on Business and Human Rights”, the “Declaration of Fundamental Principles and Rights at Work” of International Labor Organization (ILO), and “Universal Declaration of Human Rights.” The “RBA Code of Conduct” introduced by PTI in 2009 covers labor, health and safety, environment, ethics and management systems. PTI became a formal member of RBA on April 20, 2015.</p> <p>The Social Accountability 8000 International Standard (SA8000) was formulated with reference to ILO, UN Convention on the Rights of the Child, and Universal Declaration of Human Rights. It is a management standards system for the protection of labor rights, occupational environments and labor conditions. PTI has been working actively to introduce the SA8000 social responsibility management system and certification was achieved in 2016.</p> <p>PTI is committed to providing employees</p>	Complies with the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX-listed Companies.”

Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
			with safe and healthy working environment where employees can realize their true potential; to fulfill this commitment, we comply with local laws and regulations, and have also formulated the relevant management policies and procedures based on the RBA Code of Conduct and the international labor/human rights standards set out in SA8000.	
			.	
(II) Has the company formulated and implemented reasonable employee benefits (including salary, leave, and other benefits), and ensured that business performance or results are adequately reflected in employee remuneration?	✓		(2) Refer to Note 4	
(III) Did the company provide employees with a safe and healthy working environment, and administer safety and health training on a regular basis?	✓		(3) Refer to Note 5	
(IV) Has the company established an effective career development and training program for employees?	✓		(IV) PTI's planning of the education and training system ensures our training investment is aligned with business philosophy. The interaction between different training mechanisms provide employees with a complete blueprint for training and career development. Training tailored to each role and grade ensure that our talent cultivation and development will meet PTI's needs for business growth.	
(V) Did the company's products and services comply with relevant laws and international standards in relation to customer health and safety, customer privacy, and marketing and labeling of products and services, and were relevant consumer protection and grievance procedure policies implemented?	✓		(V) The PTI "Code of Business Conduct and Ethics" required relevant policies to be formulated for all company R&D, purchasing, production, operation and service processes, such as: Policies for preventing stakeholders from being harmed by products or services, prohibition against leaking of confidential information, prohibition against violation of intellectual property rights, or engaging in unfair competition. PTI management of intellectual property is explained in item 6 of the following table.	

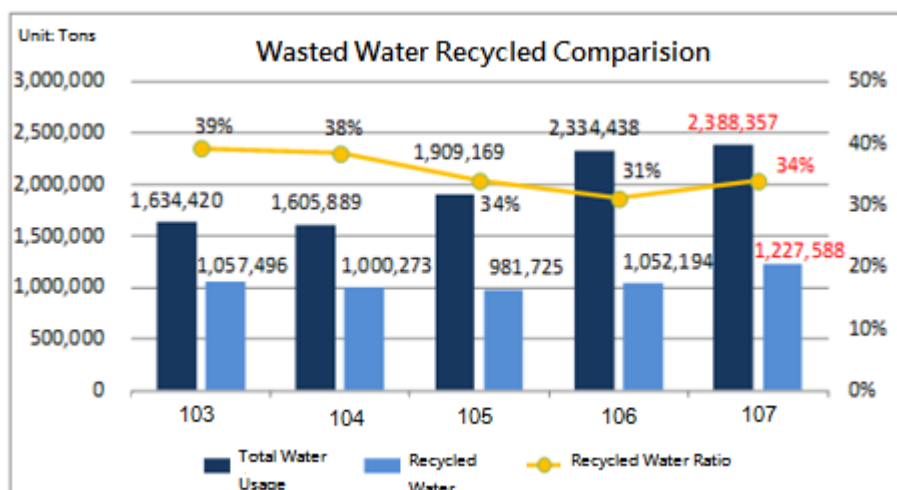
Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
			The relevant complaints procedure has been established by PTI. In addition to internal announcements, complaints channels are also disclosed on our corporate website to safeguard the interests and rights of both internal and external stakeholders.	
(VI) Did the company adopt supplier management policies requiring suppliers to comply with the relevant provisions regarding issues such as environmental protection, occupational safety and health, or labor rights, and specify the status of implementation?	✓		<p>(VI) PTI considers suppliers/contractors to be our partners. Our supply chain management strives for steady development and sustainability through mutual cooperation. Targets and assessments are continuously set for quality, delivery time, cost and technology. Planned visits and on-site audits of business systems are conducted every year as well. The audit systems include:</p> <p>(1) Quality management system</p> <p>(2) Green product management system for non-use of hazardous substances in raw materials</p> <p>(3) RBA Code of Conduct management system on labor and human rights, the environment and ethics</p> <p>(4) Environmental, safety and health risk management</p> <p>Our “Code of Business Conduct and Ethics” require potential suppliers to undergo an assessment of their past business associations. A suitable screening process is used to examine their business dealings and determine whether they have a past record on environmental and social impact.</p>	
V. Does the company refer to international reporting standards or guidelines for the preparation of corporate social responsibility reports and other reports that disclose non-financial information? Does the company obtain third-party verification or assurance for the reports above?	✓		V. Our 2019 CSR Report was prepared in accordance with the “Core” options of the GRI Guidelines published by the Global Reporting Initiative (GRI). Verification by an independent third-party was conducted by the British Standards Institution (BSI) in accordance with AA1000 AS Type II high-level assurance. Limited assurance assurance was also carried out by PwC Taiwan in accordance with the ISAE3000 standard. The information for “salary of permanent employees in non-management positions” was verified by Deloitte.	Complied with the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX-listed Companies.”
<p>VI. If the Company has established corporate social responsibility principles based on "Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies", please describe any difference between the principles and their implementation:</p> <p>PTI referred to the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX</p>				

Evaluation Item	Implementation Status			Reason for Implementation Gap
	Y	N	Details	
Listed Companies” and other relevant laws and regulations in formulating our own “CSR Best Practice Principles.” The CSR Best Practice Principles were approved for implementation by the Board of Directors on November 8, 2013. Amendments were passed by the Board on November 4, 2016, to improve CSR performance, promote better corporate governance, develop a sustainable environment, protect social welfare and strengthen the disclosure of CSR information. There is no difference between the defined principles and their implementation. These principles apply to the overall business activities of PTI and all subsidiaries.				
VII. Other key information useful for explaining status of corporate social responsibility practices: Please refer to item 7 in the table below.				

2. Last 3 years energy usage details as below:

Item	2017	2018	2019
Total waste recovered (tonnes)	612.1	749.79	890.15
Energy consumption savings (kWh)	4,802,805	10,015,926	25,249,932
Wastewater reclaimed (tonnes)	1,052,194	1,227,588	1,337,968

In 2019, water recovered from the packaging process accounted for 38% of tap water consumption and was up 4% on 2018.



Extreme climate as well as shortages of water and energy resources represent a risk to business operations. PTI is continuing to support initiatives on environmental protection and pollution control by minimizing the impact on the surrounding ecological environment from our routine operations. The risk and opportunity

identification model of Task Force on Climate-related Financial Disclosures (TCFD) was used by the Occupational Safety and Environment Committee for regular review of climate change adjustment management and assessment on a regular basis.

Environmental management policies and measures for adapting to or mitigating the challenges brought by climate change can be formulated by gaging the climate and physical risks/opportunities. Damage to the environment can then be reduced.

1. Risk factors: Natural disaster/extreme climate, disruption of utilities (electricity/water/gas).
2. Response: Established a Business Continuity Management (BCM) Plan that covers everything from disaster risk monitoring and detection to emergency response and rapid recovery. Business constitution and resilience is strengthened through continuous education and drills.
3. Opportunities: Improvement of BCM capability can strengthen the company's constitution. In addition to ensuring the safety of company assets and personnel, it can also increase trust and support for PTI from stakeholders such as customers and the general public.

3. Measures such as energy conservation, carbon reduction, greenhouse gas reduction, reduced water consumption and waste management were promoted by PTI through the internal management system and various pollution control facilities to fulfill our corporate social responsibility. Our goal is to promote sustainable environment. An explanation of the statistics from the past two years is provided below:

1. GHG emissions, water consumption and total amount of waste
- (1) Greenhouse gas emissions

A voluntary GHG inventory has been conducted by PTI every year since 2007. The inventory outcome serves as the basis for reduction efforts. The 2019 GHG emission statistics for PTI were based on data from actual inventories conducted at each production site that were verified by an independent third-party (BSI). Direct GHG emissions (Scope 1) accounted for 7.74% of total emissions. The main source of indirect GHG emissions (Scope 2) was electricity consumption and accounted for 92.26% of total emissions. The GHG reduction strategy implemented by PTI focused therefore on electricity management and reduction of electricity use. GHG emissions over the past two years are shown in the table below:

<b>Greenhouse Gas Emission (Unit: ton CO2e/ year)</b>		
<b>Item</b>	<b>2018</b>	<b>2019</b>
Category 1	33,502.80	32,477.99
Category 2	388,396.85	386,986.23
Total Emission	421,899.65	419,464.22

Note: The 2019 GHG inventory data came from our self-inventory.

Third-party verification should be completed by the end of May, 2020.

## (2)Water use

There has been drastic changes to the water environment in recent years due to climate change. Drought and flooding are now alternating with increasing frequency. Stakeholders are also increasingly concerned with water resource issues. The three strategies of reduction, reuse and recovery have now been adopted by PTI for water resource management to increase water efficiency in response to increasingly complex water resource issues. We are also continuing to implement water conservation measures at each site. Water use over the past two years are shown in the table below

<b>Item</b>	<b>2018</b>	<b>2019</b>
Total water usage(tonnes)	2,552,705	2,293,108
Underground water usage(tonnes)	122,272	175,442

## (3)Total weight of wastes

PTI Taiwan generated 1,877.74 tonnes of hazardous industrial waste in 2019, 38.50 tonnes less than 2018. All of the wastes were properly disposed of by licensed contractors. PTI will continue to promote recycling and reuse for waste reduction and the circular economy in order to reduce our impact on the environment. PTI Taiwan recycled 890.15 tonnes of waste in 2019, an increase of 140.36 tones over 2018. On average, 74.18 tonnes were recycled each month.

## 2. Management policies for energy conservation, reduction of GHG emissions, water use and other wastes

Energy conservation, carbon reduction and GHG emission reduction strategies were set out in the “CSR Best Practice Principles” by PTI to implement the development of a sustainable environment. The acquisition of carbon credits was also incorporated into our carbon reduction strategy planning. These strategies are then implemented to reduce the impact of our operations on the natural

environment. In response to the effects of climate change, annual targets have been set by PTI to manage our performance in environmental protection using tangible data. These included:

(1) Annual targets

- A. Total weight of recycled waste to reach 50 tonnes per month
- B. Recover 89% of wastewater from cutting and grinding
- C. Reduce GHG emissions by 15% between 2015 and 2030

(2) Environmental management plan

The following long-term environmental management plan and measures have been implemented to fulfill our corporate social responsibility by maintaining environmental sustainability through the proper operation of pollution control facilities:

- A. Emissions treatment: Air pollution control equipment have been installed for treating volatile organic compounds (VOCs) and undergo regular statutory inspections every year. We also cooperate with testing companies commissioned by the environmental protection bureau to sample the discharge conduits of the air pollution control equipment and check treatment efficiency. All of the test results complied with statutory requirements.
- B. Process water recovery: Wastewater recovery equipment is used to reduce the consumption of water resources. Tap water is substituted with reclaimed water from the production process to conserve water use and protect water resources.
- C. Waste disposal: All waste produced during production are disposed of in accordance with the law. Waste is also sorted and collected the source to make it more recyclable. Waste from the production process are disposed of through collection, sort, reduction and recovery. The management strategy focuses on “recycling” instead of “landfill” so that waste can be turned into usable resources and impact on the environment reduced. Effective management also increases the value of recycling.
- D. Contractor audit and counseling: Suppliers and contractors at risk of environmental pollution undergo regular audits. Contractors receive counseling on the implementation of environmental protection so that we can fulfill our corporate social responsibilities and achieve the goal of a sustainable supply chain together.

- E. Energy conservation and carbon reduction: A trans-department energy conservation organization was established to implement energy conservation projects that reduce energy consumption and GHG emissions; We also disclose our carbon emissions in line with international environmental trends to help prevent global warming and fulfill our corporate social responsibility.
- F. Voluntary environmental monitoring: PTI has developed a voluntary environmental monitoring program that encompasses wastewater quality, noise volume, air quality, and nature of waste. The program allows PTI to effectively track the effect and impact of our business activities on environmental quality.
- G. Change of environmental permits: Applications for change of environmental permits are filed in conjunction with changes in business activity to ensure that our business activities and polluting emissions comply with environmental laws and regulations.

(3) Establishment of designated environmental protection unit

The Occupational Safety and Environmental Protection Department of PTI is dedicated to the management and implementation of occupational safety and environmental protection matters. The department also oversees the normal operation of pollution control facilities. An “Occupational Safety and Environmental Protection Committee” made up of senior managers, plant directors and labor representatives is also convened on a regular basis to examine company proposals on safety, health and environmental protection. Environmental sustainability issues are incorporated in our business management in this manner.

(4) Formulation of environmental, safety and health policies

PTI aims to imbue the concepts of personal safety and environmental protection into our business operations and every employee. The “Environmental, Safety and Health Policy” was therefore formulated to implement environmental, safety and health policies for employees, customers and stakeholder groups. Concrete policies include:

- A. Communication of environmental, safety and health policies to employees, customers and relevant groups.
- B. Compliance with environmental protection, safety and health regulations as well as customer requirements.



C. Consult and engage with workers and their representatives on prevention of injuries, diseases and accidents as well as damage control.

D. Active promotion of energy conservation and waste reduction activities in line with international environmental trends and organizational circumstances.

E. Continuous review and improvement to raise the targets for safety, health and environmental management as well as overall performance.

(5) Concrete outcomes in 2019

The active promotion of action plans in response to global climate change by PTI produced significant outcomes in 2019 as outlined below:

A. Rating of B from the Carbon Disclosure Project (CDP)

The rating of B from CDP in 2019 placed us in the Management grade.

B. Rating of B- in the Water Questionnaire (WQ)

The rating of B- from Water Questionnaire in 2019 placed us in the Management grade.

4. To achieve a balance between the long-term development of the company and the quality of life for our employees, annual market salary surveys are conducted by PTI to compare our remuneration against the prevailing market rates. The overall economic indicators and consumer price indices are also used as a reference to make appropriate adjustments to employee compensation. Optimizing our remuneration to make PTI more attractive to quality talent represents a win for both parties. PTI adheres to the relevant labor regulations by providing our local and overseas employees with compensation that exceeds the local minimum wage. We have also designed a comprehensive benefits scheme that provides employees with more complete and superior rewards than required by law. PTI Taiwan compensation and benefits are as shown below. Total subsidies for company benefits in 2019 amounted to NT\$247,165,904.

Type	Description
Bonus	<ul style="list-style-type: none"> <li>• Holiday bonus: Disbursed at the middle and the end of the year</li> <li>• Quarterly bonus: Based on profitability and whether company targets were met</li> <li>• Employee remuneration/incentive bonus: Based on profitability with reference to individual role/contribution and performance evaluation</li> <li>• Salary adjustment scheme: Salary data is updated annually</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>• Subsidies (marriage, childbirth, hospitalization, condolence payments)</li> <li>• Birthday gift</li> <li>• Lunar New Year, Dragonboat Festival and Mid-Autumn Festival gifts</li> <li>• Film appreciation</li> <li>• Travel subsidy</li> <li>• Meal allowance</li> <li>• Free company insurance (dependents are eligible for life insurance, accident insurance, medical insurance and cancer insurance)</li> <li>• Free regular health exams</li> <li>• Club activities</li> <li>• Company activities (End-of-year party, family day etc.)</li> <li>• Partner merchants (discounts at over 600 partner merchants)</li> <li>• Emergency financial assistance to help employees suffering serious hardship</li> <li>• Platform for group buys, auctions and lifestyle information</li> </ul>

5. Given the consideration of the working environment and the importance of personal protective equipment, PTI is to provide a safe and healthy working environment. The protection of employee's safety measures are as follow:

1. Implementation of "Environmental Safety and Health Policy"

To prevent occupational injuries and accidents and ensure the safety and health of our workplace, we implemented our "Environmental Safety and Health Policy."

- (1) Notify employees, customers and related parties with environmental, safety and health policy.
- (2) Comply with the legislation of environmental protection, safety, health and customer requests.
- (3) Participate in prevention of injury, illness, accident and lost control by the entire employees.
- (4) Accommodate international environmental trend to drive energy-saving and waste-minimizing activities actively.
- (5) Review and constantly improve the environment and OH&S management system to promote the whole performance.

2. Follows the Health and Safety Management System

Based on ISO 14001 and OHSAS 18001 systems to manage

### 3. Measurement of Operating Environments

PTI conducts measurements of operating environments every six months to understand the hazard exposure in workplace environments. If the measurements return abnormal readings, we perform monitoring and improvement on the affected areas.

### 4. Personal Protective Equipments

To ensure the safety and health of employees and minimize exposure to harmful factors, PTI has implemented its personal protective equipment management regulations and required that employees wear appropriate personal protective equipment when handling hazardous operations.

### 5. Health Care

We provide comprehensive employee care and health care system to ensure every employee's mental and physical health. Including comprehensive channels for open communication, psychological counseling system, manage and follow up on health conditions with regular and special health examinations and medical counseling service. We value the health of working mothers and manage the prevention of disease triggered by abnormal workload toward employees, thus, creating an excellent work environment and a healthy corporate culture.

### 6. Training & Development

To raise the awareness of environmental safety and health, beside from training for new employees, PTI organize various training courses annually. Such as, waste management, greenhouse gas inspection, hazardousness identify, risk and environmental assessment, personal protective equipment management, automatic check, emergency response and health seminars.

### 7. Health promotion and management

A number of health promoting activities were held in 2019, including: Flu vaccination, employee health exam, blood donation and bone density testing. Total attendance was 4,137. On-site physician services was provided 297 times in 2019.

6. The Intellectual Property Management Department is the designated company unit for intellectual property (IP) management. The relevant plans and management activities are as shown below. The status of planning and execution will be reported to the Board of Directors in 2020 Q4.

#### 1. Intellectual property strategy

PTI initially focused on boosting our “patent count” to protect our business freedom and strengthen our competitive advantage. Our patent strategy began shifting towards “patent

quality” in 2012. We have been integrating our patents with products and technologies over the past years to create value and revenue. We also developed an IP management plan based on the patent strategy of our R&D department, continued to make improvements of the IP management system, and engaged in the production, management and application of IP to maintain our technical leadership.

2. Intellectual property management system

The “Guidelines for Patent Application and Management” and “Patent Proposal/Application Management System” were formulated and introduced by PTI to encourage the conversion of R&D outcomes into patent proposals by research personnel. These streamlined the process for researchers to submit proposals and allow members of the review committee to determine the value of proposals from all aspects. Patent engineers can also track the progress of patent applications and ensure the quality of execution. PTI applied for Taiwan Intellectual Property Management System (TIPS) certification in 2020. We expect certification to be carried out by November 2020.

3. Potential IP risks and responses

(1)Implementation of regulatory compliance: In the future, business strategy must be connected to IP management and meet the requirements set by IP indicators newly added to the “Corporate Governance Education” in order to achieve regulatory compliance. IP management must therefore be linked to our business strategy to maximize the returns from IP created by PTI and continue improving our ranking in the Corporate Governance Evaluation. The IP management system will be expanded to all local and overseas subsidiaries of PTI Group as well to secure customer recognition of our IP management capability.

(2)Implementation of IP management: PTI is required by customers to engage in data loss prevention. We have strengthened our management of information security and trade secrets but more work needs to be done to prevent risks from inadequate control of intellectual property rights as a whole. IP audits, IP management documentation and standardized management must be implemented to ensure that PTI and customers’ interests are not harmed.

(3)Protection and application of R&D accomplishments: It is essential for PTI to establish a long-term technological advantage due to the trend towards diversification and high-technology in the packaging & testing industry. We our own in-house R&D capability and the ability to cultivate customers that provide a stable source of orders but there is a risk that competitors may develop similar products. To prevent this, advance planning is required for the protection and application of R&D accomplishments through a

comprehensive IP management system. A target of 106 patent proposals was set for 2019. Quarterly audits and annual inventories are also conducted for the protection of trade secrets.

#### 4. Future planning

PTI will build on the results of TIPS mentoring to ensure the proper implementation of the IP management system. All documentation and forms will be bilingual in Chinese and English making them suitable for use in all PTI Group companies in Taiwan, Mainland China, Japan and Singapore. The preparation of an IP report is being planned as well to highlight our IP capabilities and demonstrate our competitiveness.

#### 5. PTI has obtained the following IP accomplishments at the time this report was published:

<b>Overall IP statistics</b>	■Invention patents	Domestic	Pending: <b>83</b>	Approved: <b>291</b>	Overseas	Applied: <b>120</b>	Approved: <b>147</b>
	■Utility model patents	Domestic	Pending: 0	Approved: 8	Overseas	Applied: 0	Approved: <b>4</b>
	■Trademarks	Domestic	Applied: 0	Approved: <b>18</b>	Overseas	Pending: 0	Approved: <b>23</b>
<b>IP category</b>	Copyright	Overseas: <b>2</b>		Trade secrets	Listed separately in trade secrets inventory		

#### 7. Key information useful for explaining status of corporate social responsibility practices at PTI in 2019:

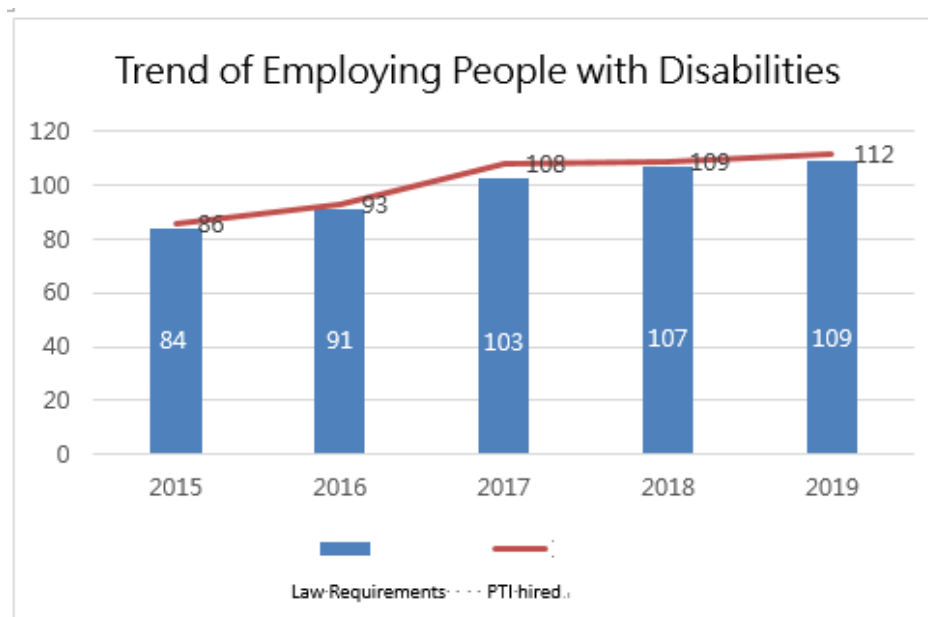
##### **Social Aspect:**

##### 1.Provision of employment opportunities

PTI continued to provide employment opportunities and 2,086 new employees were recruited in 2019. Even as we actively recruit for all types of talent, we also provide suitable job opportunities for disadvantaged groups. By helping them find suitable employment and alleviating their economic pressure, we give back to society and fulfill the spirit of social inclusion. A total of 91 disadvantaged people were employed in 2019.

##### 2.Employment of the handicapped

PTI is helping disadvantaged groups by continuing to improve our working environment that so that more disadvantaged people can join the PTI family. At the end of December 2019, we employed 112 handicapped people and exceeded the statutory quota. A total of 36 new handicapped employees were recruited in 2019.



### 3. Charity activities of “PTI Education Foundation”

The “PTI Education Foundation” was founded by PTI in 2017 with “technology education”, “humanities education” and “talent cultivation” as its missions. The Foundation is committed to promoting popular science, environmental education, and character education with a particular interest in the environment, ecology and protecting the planet. It engages in social welfare through concrete initiatives to grow and prosper together with society. Key activities in 2019 are summarized below:

#### ▲ Reducing inequality ~ Creating opportunities for rural children:

PTI Education Foundation sponsored the “Little Farmers Club” and “Little Readers Club” as well as the club activities and tutoring every Wednesday afternoon at Danan Elementary School in Miaoli County. In 2019 the Foundation also began sponsoring Wednesday club activities at Chingshui Elementary School in Sinpu, another remote, rural elementary school. Thanks to the Foundation’s sponsorship, children at Danan and Chingshui elementary schools can now enjoy the same learning resources as their urban peers. This will make them fall in love with learning and create boundless opportunities for the future!

#### ▲ Green Light summer tutoring and fund-raising in support of “Future Transformers: Round-the-Island Bike Ride”

PTI volunteers were recruited to develop fun-filled tutoring activities. Children in the Green Light program received companionship and tutoring to create even more learning fun and open up new vistas during summer class; PTI also

answered the call from the Green Light “Future Transformers: Round-the-Island Bike Ride” fund-raising campaign. Donations were raised to fund after-school tutoring for disadvantaged local children and encourage them to fall in love with learning.

▲ “Share the Love ~ Starry Christmas” gift-giving:

The Christmas season is filled with joy and gratitude. PTI once again brought love and care to all the children filled with expectation. The “Share the Love ~ Starry Christmas” end-of-year thanksgiving event invited employees to become Christmas elves for adopting and giving away gifts that warm every heart!

▲ Other activities:

PTI Education Foundation disbursed scholarships to 53 students in 2019: “PTI Summer Camp” played host to 57 students and used guided activities to help them plan their future direction; Children from rural elementary schools were also invited to take part in occupational safety and environmental education activities for an early start to environmental education. A series of activities gave the children a better understanding and a taste of environmental education.

#### 4. Volunteers Activity

We founded the volunteering club and with the resource from PTI Education Foundation. We were able to actively promote community service and care, also, be responsible corporate citizens. The company events invite charity groups to setup stalls to increase fundraising for the minority children, elderly living alone, and charity groups. PTI’s volunteering club also has adopt several children’s home including Green Seed Counseling, The Unique Atayal College, Hsinchu Taiwan Fund for Children and Families, White Children’s Home, Chuhsin Family, Yu An Children’s Home, etc.

#### 5. Industrial-Academy Collaboration

PTI has dedicated to the cultivation of students, enthusiastically working with nearby schools to create more job opportunities. We promote industry-academy collaboration to ensure talents are properly developed and willing to stay with us, thereby creating a win-win situation for schools and our company.

### **Employee Aspect:**

#### 1. Work-Life Balance Program

PTI created diverse and varied environments for relaxation at work. We also

provide health exams that exceed statutory requirements, tracking and management of health anomalies, psychological counseling and employment assistance plans. These ensure the physical and mental well-being of PTI employees in work and life.

## 2.Unpaid parental leave policy

A comprehensive unpaid parental leave policy was put in place by PTI in line with national policy to encourage employees to have children. A total of 395 “PTI babies” were born in 2019.

- ▲ Unpaid parental leave: In 2019, a total of 120 employees applied for unpaid parental leave. These included 19 male employees, or 15.8% of all applicants. Up to 80% of employees chose to return to work with PTI after having children, and their retention rate one-year after reinstatement was 93%.
- ▲ Nursing room: Safe, comfortable and private breast-milk expressing environments were established at all sites to look after female employees. These can be used by nursing mothers safely and without worry when necessary.
- ▲ Pregnant parking spaces: Pregnant parking spaces are provided at all sites. Giving priority parking to pregnant women and new mothers provides a better a more convenient working environment.

## 3.Childcare service

PTI cares about our employees’ interactions with their families. We provide not only a variety of employment opportunities but also energy and happiness in their family life. We contract with quality kindergartens and childcare centers where employees live through the Employee Welfare Committee to provide employees’ children with more choices on preschool care and education. Employees can then focus on their work and family life.



## VI. Status of Business Conduct and Ethics

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
1. Establishment of Corporate Conduct and Ethics Policy and Implementation Measures				Comply with regulations.
(1) Does the company have bylaws and publicly available documents addressing its corporate conduct and ethics policy and measures, and the commitment regarding implementation of such policy from the Board of Directors and the management team?	√		The Company's Board of Director has approved "Corporate Conduct and Ethics Policy" base on the guidance of "Public Company Conduct and Ethics Practice Principles" on April 30 2013, and approved the 1st amendment on Feb 9 2015. 2 <sup>nd</sup> amendment approved on Nov 2 2018.	
(2) Does the company establish relevant policies which are duly enforced to prevent unethical conduct and provide implementation procedures, guidelines, consequence of violation and complaint procedures in such policies?	√		The Company has established the following guidance: Prohibition against Providing or Accepting Improper Benefits Prohibition against and Handling Procedure for Facilitating Payments Avoidance of Conflict of Interest Procedures for Making Political Contributions, Charitable Donations or Sponsorships Procedures for Developing & Establishing Business Relationship Disclosure of Ethical Management Policy to the Public Prohibition against Insider Trading Prohibition against Disclosure of Confidential Information Prohibition against Infringement of Intellectual Property Rights Prohibition against Acts of Unfair Competition Preventing Products or Services from Damaging the Stakeholders	
(3) Does the company establish appropriate compliance measures for the business activities prescribed	√		Please refer to Note 1.	

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
in paragraph 2, article 7 of the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and any other such activities associated with high risk of unethical conduct?				
2. Ethic Management Practice				
(1) Does the company assess the ethics records of whom it has business relationship with and include business conduct and ethics related clauses in the business contracts?	√		Please refer to Note 2.	Comply with regulations.
(2) Does the company set up a unit which is dedicated to or tasked with promoting the company's ethical standards and reports directly to the Board of Directors with periodical updates on relevant matters?	√		The Company has set up a CSR Office on Aug 1, 2014 and dedicated to promote and enforce ethical practices and reported directly to the Board of Directors. Board has reviewed its 2018 operations on Jul 13 2018.	
(3) Does the company establish policies to prevent conflict of interests provide appropriate communication and complaint channels and implement such policies properly?	√		Employment contract stated all employees should avoid conflict of interests. Every employee every year signs "Agreement of Avoidance of Conflicts of Interest." starting from 2015. 2016 implement online training course for Code of Ethic and weighted in training scores with annual evaluation.	Comply with regulations.
(4) To implement relevant policies on ethical conducts, does the company establish effective accounting and internal control	√		The Company has established comprehensive accounting and internal control procedures and reporting system.	

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
systems that are audited by internal auditors or CPA periodically?				
(5) Does the company provide internal and external ethical conduct training programs on a regular basis?	√		Please refer to Note 3.	
3. Implementation of Complaint Procedures				Comply with regulations.
(1) Does the company establish specific complaint and reward procedures, setup conveniently accessible complaint channels, and designate responsible individuals to handle the complaint received?	√		The Company has established communication channels and complaint reporting system. Dedicated personnel handle complaints and make sure whistleblower identity will remain anonymous.	
2) Does the company establish standard operation procedures for investigating the complaints received and ensuring such complaints are handled in a confidential manner?	√		Please refer to Note 4.	
(3) Does the company adopt proper measures to prevent a complainant from retaliation for his/her filing a complaint?	√		The Company has established proper procedure to keep whistleblower identity anonymous and away from wrongful conducts.	
4. Information Disclosure Does the company disclose its guidelines on business ethics as well as information about implementation of such guidelines on its website and Market Observation	√		The information and results of Code of Business Conducts and Ethics were available on MOPS and company website. <a href="http://www.pti.com.tw/ptiweb/policy/Code_of_Business_Conducts_and_Ethics.pdf">http://www.pti.com.tw/ptiweb/policy/Code of Business Conducts and Ethics.pdf</a> <a href="http://www.pti.com.tw/ptiweb/G0053.aspx?p=G&amp;c=G5">http://www.pti.com.tw/ptiweb/G0053.aspx?p=G&amp;c=G5</a>	Comply with regulations.

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
Post System (“MOPS”)?				
<p>5. If the company has established corporate governance policies based on TSE Corporate Conduct and Ethics Best Practice Principles, please describe any discrepancy between the policies and their implementation.</p> <p>PTI has established the Code to require that all employees, officers and board members comply with the Code and the other policies and procedures. There is no discrepancy between the Code, including its affiliate policies and procedures, and its implementation. For more details, please refer to “<u>Code of Business Conduct and Ethics</u>” from the company website.</p>				
<p>6. (I) We regularly review and update our policy on business ethics. To improve the implementation outcomes, the third amendment to the “PTI Code of Business Conduct and Ethics” was passed at the 16th session of the 8th Board of Directors on March 10, 2020. The “CSR Office” under the Board of Directors was designated as the responsible unit. Responsibilities included the development/amendment of the ethics policy and preventive measures, the supervision of its implementation, and the making of regular reports to the Board.</p> <p>(II) A whistle blower complaint was received between the end of 2016 and 2017 by PTI. Two employees were alleged of unethical behavior. Once the investigation criteria and procedure for the complaint was finalized, an investigation was carried out by Legal Affairs. The complaint was verified and the two employees terminated. The case was also referred to the Prosecutor’s Office of Hsinchu District Court for prosecution. Prosecutors completed their investigation in April 2018, and charges were filed for breach of trust under Article 342 of the <i>Criminal Code</i>, and for special breach of trust under Sub-paragraph 3, Paragraph 1, Article 171 of the <i>Securities and Exchange Act</i>. A report was made to the attending directors on the case as item 7 on the agenda at the 3rd session of the 8th Board of Directors on November 1, 2017. The outcome of the investigation by the Prosecutor’s Office of Hsinchu District Court was reported to the attending directors at the 5th session of the 2nd Audit Committee and the 6th session of the 8th Board of Directors on May 4, 2018; Progress on the case was reported to the attending directors at the 7th session of the 2nd Audit Committee and the 9th session of the 8th Board of Directors on November 2, 2018; The details of the settlement for the civil case was reported to the attending directors at the 9th session of the 2nd Audit Committee and the 12th session of the 8th Board of Directors on May 3, 2019; the criminal case against one of the people involved was still being examined in the criminal court.</p>				

Note:

1. PTI took the following preventive measures for all business activities at a higher risk of being involved in unethical conduct (offering and acceptance of bribes, illegal political donations, improper charitable donations or sponsorship, offering or acceptance of unreasonable presents, hospitality, or other improper benefits) as listed under Paragraph 2, Article 7 of the Ethical Corporate Management Best Practice Principles for TWSE/TPEX-Listed Companies.
  - (1).Established prevention programs for unethical behavior. Standard operating procedures and guidelines for conduct for work-related business were also defined in each program.
  - (2).Internal organization, establishment and responsibilities were structured to implement checks and balances for business activities within the business scope at a higher risk of being involved in unethical conduct.
  - (3).Corporate education, training and awareness programs on the ethics policy were organized to ensure that employees understood PTI’s commitment to ethical corporate management, related policies and prevention programs, along with the consequences of unethical conduct.
  - (4).Set up a whistle blower mechanism, defined the different types of whistle blower complaints and their associated standard investigation procedure, and ensured their effective implementation.

(5).Assisted the Board of Directors and the management with auditing and assessing the effectiveness of preventive measures for ensuring ethical management. Related business processes were regularly assessed for compliance and reports prepared.

6.Established quantified data for the promotion of ethical management while continuing to analyze the results from the promotion of the ethics policy. Ethical management measures, implementation as well as the aforementioned quantified data and results were disclosed through the corporate website, annual report and public statements. The details of our ethical management principles were also disclosed on the Market Observation POST system.

2. Our “Code of Business Conduct and Ethics” require potential suppliers to undergo an assessment of their past business associations., ethical management policy, and whether they have a record of engaging in unethical behavior. Transactions with those involved in unethical behavior were avoided. An appropriate review procedure must be adopted by PTI for assessing the other party in business transactions. The following items are examined to determine the status of ethical management at the other party:

(1).The supplier’s nationality, business location, organizational structure, business policy, and payment location.

(2).Whether the supplier has defined an ethical management policy and its implementation status.

(3).Whether the supplier’s business location is in a country with higher risk of bribery and corruption.

(4).Whether the supplier’s business is in an industry with higher risk of bribery.

(5).The supplier’s long-term business condition and reputation.

(6).Ask the supplier’s partners for their opinion on the supplier.

(7).Whether the supplier has a past record of unethical behavior such as bribery or illegal political donations.

PTI personnel engaged in business activities must explain our corporate ethical management policy and related regulations to the other transaction party. They must also explicitly refuse to directly or indirectly provide, promise, request or accept any improper benefits, including rebates, commissions, facilitation payments, or offer or accept improper benefits in any other form through other channels.

A full understanding of the other party’s ethical management status must be obtained when a contract is to be signed with PTI. Compliance with ethical management must be incorporated into the contract and the contract must explicitly include the following items:

(1)If either party becomes aware of personnel violating the prohibitions against commissions, rebates or other benefits set out in the contract, they must immediately notify the other party of such personnel’s identity, the method, monetary amount or other benefits provided, promised, requested or accepted, provide the relevant evidence and cooperate with the other party’s investigation. If one party should suffer damages as a result then it is entitled to ask the other party for compensation.

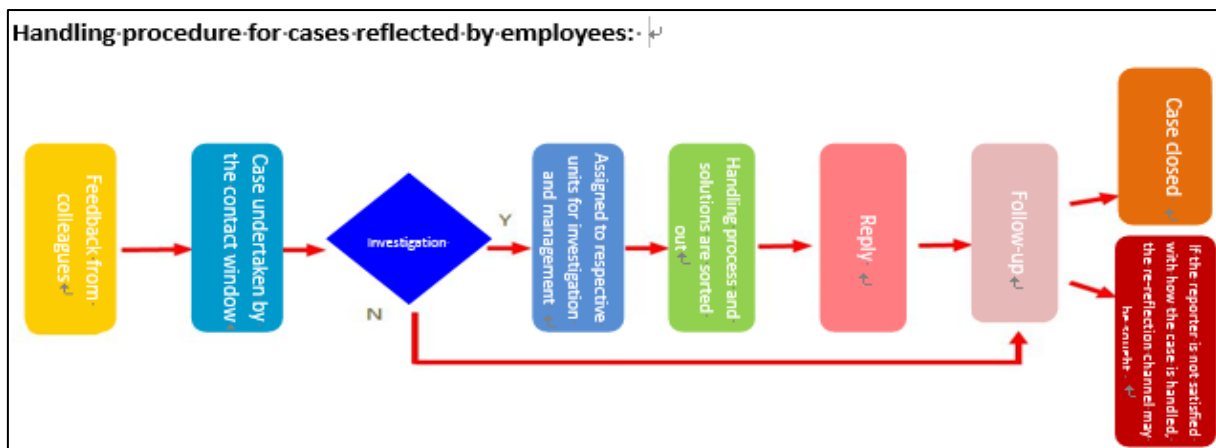
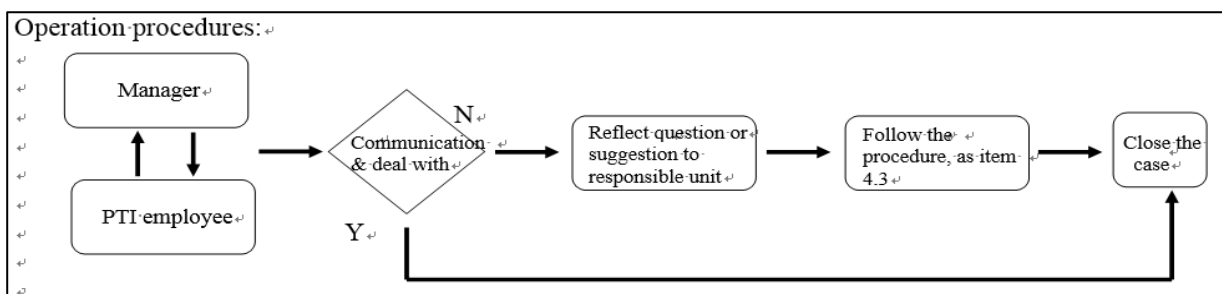
(2)If either party is involved in unethical behavior during the course of business activities then the other party may unconditionally suspend or terminate the contract at any time.

(3)The payment terms must be clearly defined and reasonable. These include the payment location, format, and the applicable tax regulations.

3. In addition to dispatching the relevant personnel to undertake external training on ethical management every year, PTI also organizes regular internal education and training courses on ethical management every year, including: Personal data protection, personal data inventory, Trade Secrets Act, trade secret inventory training, ethical management and business ethics, PTI information protection regulations, and the employee code of conduct. The outcomes of education and training on ethical management in 2019 were as follow:

Type of Employee	Course	Number of Employees
New Hired	General education and training for new employees (Corporate information protection rules, employee code of conduct)	1,696
Existing	Personal Data Protection Act	9,441
	Personal data inventory education & training	58
	Trade Secrets Act	9,441
	Trade secrets inventory education & training	41
	Business integrity and ethics	9,441

#### 4. Process Procedure



#### VII. Posting of Code of Business Conduct and Ethics:

Information for Code of Business Conduct and Ethics can be found on:

MOPS website: <http://mops.twse.com.tw>

Company website: <http://www.pti.com.tw>

#### VIII. Other Significant Information Regarding Code of Business Conduct and Ethics: None.

(IV) Internal Control System Execution Status

1. Statement of Internal Control System

Powertech Technology Inc.

Statement of Internal Control System

Mar 10, 2020

Based on the findings of a self-assessment, Powertech Technology Inc. (PTI) states the following with regard to its internal control system during the year 2019:

1. PTI's Board of Directors and Management are responsible for establishing, implementing, and maintaining an adequate internal control system. Our internal control is a process designed to provide reasonable assurance over the effectiveness and efficiency of our operations (including profitability, performance, and safeguarding of assets), reliability of our financial reporting, and compliance with applicable laws and regulations.
2. An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing its stated objectives. Moreover, the effectiveness of an internal control system may be subject to changes due to extenuating circumstances beyond our control. Nevertheless, our internal control system contains self-monitoring mechanisms, and PTI takes immediate remedial actions in response to any identified deficiencies.
3. PTI evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the "Regulations"). The criteria adopted by the Regulations identify five key components of managerial internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.
4. PTI has evaluated the design and operating effectiveness of its internal control system according to the aforesaid regulations.
5. Based on the findings of such evaluation, PTI believes that, on December 31, 2019, we have maintained, in all material respects, an effective internal control system (that includes the supervision and management of our subsidiaries), to provide reasonable assurance over our operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations.
6. This Statement will be an integral part of PTI's Annual Report for the year 2018 and Prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.
7. This Statement has been passed by the Board of Directors in their meeting held on Mar 10, 2020, with none of the ten attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Powertech Technology Inc.

Chairman: D.K. Tsai

President: J. Y. Hung

2. For entrusted to CPA for auditing and reviewing international control, should disclose the CPA's audited report:

**None.**

(X) In the most recent year and as of publication date of this annual report, incident of company or staff being penalized, staff violating internal audit system and being penalized, major defects and status for improvements: None.

(XI) Major conclusions of board and shareholders meeting:

1. Shareholder Meeting Major Conclusion and Execution

Date	Type of Meeting	Major Conclusion
May 31, 2019	Annual Shareholder Meeting	<p>1. Passed the 2018 Annual Report and Financial Statement.</p> <p>2. Passed the 2018 dividend distribution proposal. Implementation status: August 8, 2019, was set as the baseline date for distribution and September 5, 2019, set as the distribution date (Cash dividend of NT\$4.8 per share). The dividend was distributed on schedule.</p> <p>3. Passed the issue of ordinary shares for cash to sponsor the issuance of depositary receipts (DRs), and/or issue of ordinary shares for cash, and/or private placement of ordinary shares for cash, and/or private placement of overseas or domestic convertible bonds. Implementation status: A suitable strategic investor for the private placement had still not be found after nearly one year. The decision was made at the 16th session of the 8th Board of Directors held on March 10, 2020, to discontinue the proposed private placement and report the matter at the 2020 AGM.</p> <p>4. Passed amendments to the PTI “Procedures for Acquisition and Disposal of Assets” Implementation status: Material information was announced after the AGM on the same day. The amended procedure was also published on our corporate website and POST website on June 13, 2019, and is now in effect.</p> <p>5. Passed the amended clauses of the PTI “Procedures for Engaging in Derivatives Transactions.” Implementation status: Material information was announced after the AGM on the same day. The amended procedure was also published on our corporate website and POST website on June 13, 2019, and is now in effect.</p> <p>6. Passed the proposal to release director from the non-competition clause. Implementation status: Material information was announced after the AGM on the same day</p>



## 2. Board Meeting Major Conclusion and Execution

Date	Type of Meeting	Major Conclusion
Jan 11, 2019	Board Meeting (8th Term 10th meeting)	<ol style="list-style-type: none"> <li>1. Passed the 2019 PTI business plan.</li> <li>2. Proposal for dismissal of managerial officer.</li> <li>3. Proposal for promotion and adjustment to salary of managerial officer.</li> </ol>
Mar 14, 2019	Board Meeting (8th Term 11th meeting)	<ol style="list-style-type: none"> <li>1. Passed the 2018 Annual Report and Financial Statement.</li> <li>2. Passed the 2018 dividend distribution proposal.</li> <li>3. Passed the proposed distribution for directors and employees' remuneration in 2018.</li> <li>4. Passed proposal for adjustment to salary of managerial officer.</li> <li>5. Passed the 2018 internal control review and the issuance of the 2018 Internal Control Statement.</li> <li>6. Passed amendments to the PTI "Internal Control System" and "Internal Audit system."</li> <li>7. Passed amendments to the PTI "Procedures for Acquisition and Disposal of Assets."</li> <li>8. Passed amendments to the PTI "Procedures for Engaging in Derivatives Transactions."</li> <li>9. Passed proposal to apply to financial institution for line of credit.</li> <li>10. Passed application for forward exchange trading limit.</li> <li>11. Passed proposal to issue letter of financial support needed by subsidiary to apply for bank credit line.</li> <li>12. Passed proposal to release director from the non-competition clause.</li> <li>13. Passed proposal to release managerial officer from the non-competition clause.</li> <li>14. Passed proposal for dismissal of managerial officer.</li> <li>15. Passed the issue of ordinary shares for cash to sponsor the issuance of depositary receipts (DRs), and/or issue of ordinary shares for cash, and/or private placement of ordinary shares for cash, and/or private placement of overseas or domestic convertible bonds.</li> <li>16. Passed proposal for change of CPA as well as an assessment of independence and competence.</li> <li>17. Passed proposal to convene the 2019 AGM.</li> </ol>
May 3, 2019	Board Meeting (8th Term 12th meeting)	<ol style="list-style-type: none"> <li>1. Reporting of the PTI 2018 Q1 financial statement.</li> <li>2. Passed amendments to the PTI "Rules of Procedure for Board of Directors Meetings."</li> <li>3. Passed proposal to apply to financial institution for line of credit.</li> <li>4. Passed financial loan to subsidiary.</li> </ol>
Jul 12, 2019	Board Meeting (8th Term 13th meeting)	<ol style="list-style-type: none"> <li>1. Passed the proposed baseline date for distribution of PTI 2018 cash dividend.</li> </ol>

Date	Type of Meeting	Major Conclusion
	Term 13th meeting)	
Aug 2, 2019	Board Meeting (8th Term 14th meeting)	<ol style="list-style-type: none"> <li>1. Reporting of the PTI 2019 Q2 financial statement.</li> <li>2. Passed the remuneration distribution proposal for PTI managerial officers and employees for 2018.</li> <li>3. Passed proposal to apply to financial institution for line of credit.</li> <li>4. Passed application for forward exchange trading limit.</li> <li>5. Passed proposal to issue subsidiary with endorsement/guarantee.</li> <li>6. Passed proposal to issue letter of financial support needed by subsidiary to apply for bank credit line.</li> </ol>
Nov 5, 2019	Board Meeting (8th Term 15th meeting)	<ol style="list-style-type: none"> <li>1. Reporting of the PTI 2019 Q3 financial statement.</li> <li>2. Passed the formulation of the PTI 2020 internal audit plan.</li> <li>3. Passed proposal to apply to financial institution for line of credit.</li> <li>4. Passed application for forward exchange trading limit.</li> </ol>
Mar 10, 2020	Board Meeting (8th Term 16th meeting)	<ol style="list-style-type: none"> <li>1. Passed the 2020 PTI business plan.</li> <li>2. Passed the 2019 Annual Report and Financial Statement.</li> <li>3. Passed the 2019 dividend distribution proposal.</li> <li>4. Passed the proposed distribution for directors and employees' remuneration in 2019.</li> <li>5. Passed the 2019 internal control review and the issuance of the 2019 Internal Control Statement.</li> <li>6. Passed amendments to the PTI "Internal Control System" and "Internal Audit system."</li> <li>7. Passed amendments to the PTI "Code of Business Conduct and Ethics."</li> <li>8. Passed the PTI "Rules Governing the Evaluation of Board Performance."</li> <li>9. Passed amendments to the PTI "Rules of Procedure for Board of Directors Meetings", "Audit Committee Charter" and "Remuneration Committee Charter."</li> <li>10. Passed proposal for adjustment to salary of managerial officer.</li> <li>11. Passed proposal for adjustment to role of managerial officer.</li> <li>12. Passed proposal to apply to financial institution for line of credit.</li> <li>13. Passed application for forward exchange trading limit.</li> <li>14. Passed proposal to issue letter of financial support needed by subsidiary to apply for bank credit line.</li> <li>15. Passed proposal to discontinue the private placement of securities by PTI from 2019.</li> <li>16. Passed the issue of ordinary shares for cash to sponsor the issuance of depositary receipts (DRs),</li> </ol>

Date	Type of Meeting	Major Conclusion
		<p>and/or issue of ordinary shares for cash, and/or private placement of ordinary shares for cash, and/or private placement of overseas or domestic convertible bonds.</p> <p>17. Pass proposal to evaluate the independence and competence of CPA retained by PTI.</p> <p>18. Passed proposal for general election of the Board of Directors.</p> <p>19. Passed proposal to release director from the non-competition clause.</p> <p>20. Passed proposal for convening of 2020 AGM.</p>
Apr 10, 2020	Board Meeting (8th Term 17th meeting)	<p>1. Passed proposal to review the list of candidate (independent) directors nominated by the PTI shareholders.</p> <p>2. Passed proposal to increase PTI's investment in "Powertech Technology (Suzhou) Ltd."</p> <p>3. Passed the proposal to increase the limit on number of private placements for foreign/local convertible bonds.</p>

(XII) Different opinions from board or supervisor regarding major decision of board: **None.**

(XIII) Termination of chairman, president, head of accounting, head of finance, head of internal control, or head of R&D as the date of report printing: **None.**

## V. Professional Audit Services Information

CPA Firm	Name of CPA		Audit Period	Note
Deloitte & Touche LLP	Yu Feng Huang	Cheng-Chih Lin	Jan 1, 2019 ~ Dec 31, 2019	

Unit: NTS

Items		Audit Fees	Non-Audit Fees	Total
Range amount				
1	Less than \$2,000,000		√	
2	\$2,000,000 to \$3,999,999			
3	\$4,000,000 to \$5,999,999			
4	\$6,000,000 to \$7,999,999			
5	\$8,000,000 to \$9,999,999			
6	\$10,000,000 or above	√		√

- (1) The amount paid to CPA accountant, accounting firm, and related industries for non-audited fees over 25%, should disclose the audited and non-audited amount and the content of non-audited service items.

Unit: NTS Thousands

CPA Firm	Name of CPA	Audit Fee	Non-Audit Fee					Audit Period	Note
			System Design	Company Registration	Human Resource	Others	Subtotal		
Deloitte & Touche LLP	Cheng-Chih Lin Yu-Feng Huang	10,955	0	0	0	1,545	1,545	Jan 1 - Dec 31, 2019	Other non-audit fees including: 1. Balancing Taxation and operation tax preparation and filing NT\$575 K 2. Transfer pricing report fees NT\$353K 3. Services for tax incentives application and fees NT\$ 383K 4. Services for sales tax withholding and fees NT\$161K 5. Transfer Pricing Master Filing and certify employee compensation evaluation NT\$ 73K

- (2) If change CPA firm and the amount paid for audited fee currently is less than previous year's audited fees, should disclose the amount of audited fee reduction, proportion, and reason: None.
- (3) If the audited fee has reduced by over 15% from previous year, should disclose the amount of audited fee reduction, the proportion, and reason: None.

## 6. Change of Accountant

### (1) Former CPAs

Date of Change	Mar 14 2019		
Reason and Explanation for Change	In compliance with regulatory requirements on rotation.		
State whether the Appointment is Terminated or Rejected by the Consignor or CPAs	Status/Client	CPA	Consignor
	Terminate Assignment Voluntary		
	Assignment Rejected (Continue)		
The Opinions other than Unmodified Opinion Issued in the Last Two Years and the Reasons for the Said Opinion	None		
Is there any disagreement in opinion with the issuer	Yes		Accounting principle or practice
			Disclosure of financial statements
			Auditing scope or procedures
			Others
	No	√	
Note			
Supplementary Disclosure (Disclosures Specified in Article 10.6.1.4~7 of the Standards)	None		

### (2) Successor CPAs

Accounting Firm	Deloitte & Touche
Name of CPA	Yu-Feng Huang, Cheng-Chih Lin
Engagement Date	Mar 14 2019
Prior to the Formal Engagement, Any Inquiry or Consultation on the Accounting Treatment or Accounting Principles for Specific Transactions, and the Type of Audit Opinion that Might be Rendered on the Financial Report	None
Written Opinions from the Successor CPAs that are Different from the Former CPAs Opinions	None

NOTE: In compliance with CPA firm regulatory rotation requirements, Yu-Feng Huang and Cheng-Chih Lin appointed as CAPs to replace Yu-Feng Huang and Su-Li Fang.

(3) Reply by predecessor CPA regarding Article 10, Subparagraph 10, Item 1 and Item 2-3 of this guideline: None.

**7. Chairman, CEO, Head of Financial or Accounting Dept – Information Relating to Serving at Accounting Firm of CPAs or related companies:** None.

**8.Changes in Shareholding and Changes in Pledge of Shares by Board of Directors, Independent Directors, Managers, and Shareholders owning more than 10% of company shares in most recent year and as of publication date of annual report**

(1) Changes in Shareholding and Changes in Pledge by Board of Directors, Independent Directors, Managers holding more than 10% of company shares

Unit: Shares

Title	Name	2019		As of Mar 31, 2020	
		Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged
Chairman	D.K. Tsai	0	—	120,000	—
Director	Kingston Technology Corp. Investment Account Rep: Shigeo Koguchim, Daphne Wu, JS Leu, Evan Tseng	0	—	0	—
Director	Kioxia Semiconductors Taiwan Corp. Rep: Kenjiro Kara	0	—	0	—
Independent Director	Quincy Lin	0	—	0	—
Independent Director	Jim W.L. Cheng	0	—	(140,000)	—
Independent Director	Philips Wei	0	—	0	—
Independent Director	Pei-Ing Lee	0	—	0	—
Director & President	J.Y. Hung	(3,000)	—	(2,000)	—
Manager	J.S. Leu	(47,000)	—	(28,000)	—
Manager	John Wang	0	—	20,000	—
Manager	John Chang	0	—	0	—
Manager	Tonwey Cheng	0	—	0	—
Manager	Y.C. Chen	0	—	0	—
Manager	Wilber Wu	0	—	(12,000)	—
Manager	Phu Le	0	—	0	—
Manager	Y.C. Chi	(28,000)	—	(12,000)	—
Manager	Paul Wu	0	—	0	—
Manager	David Fang	0	—	0	—
Manager	Perry Lin	(74,000)	—	0	—
Manager	Yohan Lin	0	—	0	—
Manager	Vic Chen	0	—	0	—
Manager	Gary Chang (Note)	(10,000)	—	0	—
Manager	Victor Tung	0	—	0	—
Finance & Accounting Manager	Evan Tseng	0	—	0	—

Note : Gary Chang position change on Mar 16 2020 and disclosure as of Feb 29 2020.

(1) Stock Trade or Stock Pledge with Related Party: None.

**9. Information on Top 10 Shareholders of company shares who are spouses or within Second-degree Relative of Consanguinity to Each Other:**

Mar 30, 2020

Name	Shareholding		Spouse & Minor Children		PTI Shareholding by Nominee Arrangement		Name and Relationship Between PTI's Top 10 Shareholders as Defined in the Statement of Financial Accounting Standards No. 6		Note
	Shareholding	%	Shareholding	%	Shareholding	%	Title (or Name)	Relationship	
Investment Account of Kingston Technology Corporation	29,875,000	3.83%	—	—	—	—	KTC-TU Corp. and KTC-SUN Corp.	The reps. of the two companies and the CEO and VP. of the shareholder are the same person	
Hermes Investment Funds Public Limited Company	22,248,990	2.86%	—	—	—	—	None	—	—
KTC-TU Corp. Rep: John Tu	19,977,554 0	2.56% 0.00%	—	—	—	—	Investment Account of Kingston Technology Company	The CEO of that company and the rep. of that shareholder is the same person	—
New Labor Pension Fund	16,145,300	2.07%	—	—	—	—	None	—	—
KTC-SUN Corp. Rep: David Sun	15,655,362 0	2.01% 0.00%	—	—	—	—	Investment Account of Kingston Technology Company	The CEO of that company and the rep. of that shareholder is the same person	—
LABOR PENSION FUND SUPERVISORY COMMITTEE-LABOR RETIREMENT FUND	14,870,000	1.91%	—	—	—	—	None	—	—
Government of Singapore--GOS-EFM	13,331,000	1.71%	—	—	—	—	None	—	—
Norges Bank	12,959,690	1.66%	—	—	—	—	None	—	—
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	12,562,231	1.61%	—	—	—	—	None	—	—
Cathay Life Insurance Co. Ltd. Rep: Tiao-Kuei Huang	11,980,000 0	1.54% 0.00%	—	—	—	—	None	—	—

10. Shareholding Information Regarding the Same Invested Company of Company, Company’s Board of Directors, Committee Members, Managers, and Businesses That Are Directly or Indirectly Controlled By Company

Units: Shares; %

Invested Company (note)	Investment by Powertech Technology Inc.		Investments directly or indirectly controlled by Directors, Committee members, managers, and company		Combined Investments	
	Shareholding	%	Shareholding	%	Shareholding	%
TeraPower Technology Inc.	73,385,830	49.00%	76,831,170	51%	149,767,000	100.00%
Powertech Holding (BVI) Inc.	50,000	100.00%	0	0%	50,000	100.00%
Greatek Electronics Inc.	244,064,379	42.91%	0	0%	244,064,379	42.91%
Powertech Technology (Singapore) Pte. Ltd.	85,000,000	100.00%	0	0%	85,000,000	100.00%
Powertech Technology Japan Ltd.	—	100.00%	0	0%	—	100.00%

Note: Investment using Equity Method Evaluation.



## IV. Capital and Shares

### 1. Capital and Shares

#### (1) Sources of Capital

##### 1. Capitalization

Month / Year	Issue Price Per Share (NT\$)	Authorized Share Capital		Capital Stock		Remark		
		Shares (thousand shares)	Amount (NT\$ thousands)	Shares (thousand shares)	Amount (NT\$ thousands)	Sources of Capital	Capital Increase by Assets Other than Cash	Others
5/1997	10	200,000	2,000,000	60,000.0	600,000	Company established, with paid-in Capital of NT\$ 600 million	None	None
4/1998	12	200,000	2,000,000	120,000.0	1,200,000	Cash Injection of NT\$ 600 million	None	Note1
5/1999	11	200,000	2,000,000	200,000.0	2,000,000	Cash Injection of NT\$ 800 million	None	Note2
8/2001	10	280,000	2,800,000	221,800.0	2,218,000	Surplus and Capital Reserve Capital Increase of NT\$ 218 million	None	Note3
9/2002	10	280,000	2,800,000	235,222.9	2,352,229	Capitalization of retained earnings of NT\$ 134.229 million	None	Note4
9/2002	11.5	280,000	2,800,000	246,312.9	2,463,129	Cash Injection of NT\$ 110.9 million	None	Note5
9/2003	10	280,000	2,800,000	261,250.0	2,612,500	Capitalization of retained earnings of NT\$ 149.371 million	None	Note6
9/2004	10	440,000	4,400,000	308,000.0	3,080,000	Capitalization of retained earnings of NT\$ 467.5 million	None	Note7
9/2004	43	440,000	4,400,000	338,000.0	3,380,000	Cash Injection of NT\$ 300 million,	None	Note8
6/2005	10	580,000	5,800,000	400,500.0	4,005,000	Capitalization of retained earnings of NT\$ 625 million	None	Note9
6/2006	10	580,000	5,800,000	471,000.0	4,710,000	Capitalization of retained earnings of NT\$ 705 million	None	Note10
6/2007	10	580,000	5,800,000	556,300.0	5,563,000	Capitalization of retained earnings of NT\$ 853 million	None	Note11
6/2008	10	750,000	7,500,000	630,800.0	6,308,000	Capitalization of retained earnings of NT\$ 745 million	None	Note12
7/2009	10	750,000	7,500,000	669,385.2	6,693,852	Capitalization of retained earnings of NT\$ 385.852 million	None	Note13
5/2010	60.6	750,000	7,500,000	704,236.7	7,042,367	Conversion into common shares by convertible bonds of NT\$ 348.515 million	None	Note14
9/2010	58.4	750,000	7,500,000	715,366.8	7,153,668	Conversion into common shares by convertible bonds of NT\$ 111.301 million	None	Note15
12/2010	58.4	750,000	7,500,000	726,496.9	7,264,969	Conversion into common shares by convertible bonds of NT\$ 111.301 million	None	Note16
8/2011	10	1,000,000	10,000,000	799,146.6	7,991,466	Capitalization of retained earnings of NT\$ 726.497 million	None	Note17
8/2012	10	1,000,000	10,000,000	779,146.6	7,791,466	Note Purchased of company's treasury stocks, with a capital reduction of NT\$ 200 million	None	Note18

Note1: 2/17/1998 MOF (1) No. 18910

Note2: 3/2/1999 MOF (1) No. 22357

Note3: 6/21/2001 MOF (1) No.139798

Note4: 7/10/2002 MOF (1) No.0910137911

Note5: 7/10/2002 MOF (1) No.0910137913

Note6: 7/8/2003 MOF (1) No.0920130303

Note7: 6/25/2004 MOF (1) No.0930128233

Note8: 7/6/2004 SEC (1) No. 0930128234

Note9: 6/24/2005 FSC (1) No. 0940125391

Note10: 6/27/2006 FSC (1) No.0950126720

Note11: 6/28/2007 FSC (1) No.0960032903

Note12: 6/25/2008 FSC (1) No.0970031487

Note13: 7/2/2009 FSC (1) No.0980032960

Note14: 5/5/2010 YST No.09901091340

Note15: 9/21/2010 YST No.09901214270

Note16: 12/31/2010 YST No.09901291530

Note17: 8/31/2011 YST No.10001183300

Note18: 8/27/2012 YST No.10101177670

##### 2. Capital and Shares

Unit: Shares

Type of Stock	Authorized Share Capital			Note
	Shares Outstanding	Unissued Shares	Total	
Common Stock	779,146,634	220,853,366	1,000,000,000	TSE Listed

##### 3. Total reporting and filing related information: Not applicable

## (2) Composition of Shareholders

Mar 30, 2020

Shareholder Composition Amount	Government Agencies	Financial Institution Investor	Other Institutional Investor	Domestic Individual Investor	Foreign Institution & Individual Investor	Total
Number of Shareholders	5	18	345	33,323	980	34,671
Shareholding	42,905,100	40,094,000	43,512,456	80,122,366	572,512,712	779,146,634
Holding (%)	5.51%	5.15%	5.59%	10.28%	73.47%	100.00%

## (3) Distribution Profile of Share Ownership

Mar 30, 2020; Unit: Shares

Shareholder Ownership (Unit: Share)	Number of Shareholders	Shares Owned	Ownership (%)
1 ~ 999	18,711	1,318,449	0.17%
1,000 ~ 5,000	12,271	23,626,435	3.03%
5,001 ~ 10,000	1,507	11,493,665	1.48%
10,001 ~ 15,000	476	5,951,006	0.76%
15,001 ~ 20,000	310	5,629,377	0.72%
20,001 ~ 30,000	240	6,076,377	0.78%
30,001 ~ 40,000	166	5,869,185	0.75%
40,001 ~ 50,000	102	4,640,816	0.60%
50,001 ~ 100,000	269	20,084,255	2.58%
100,001 ~ 200,000	195	28,261,188	3.63%
200,001 ~ 400,000	158	44,682,077	5.74%
400,001 ~ 600,000	75	37,041,807	4.75%
600,001 ~ 800,000	33	22,885,394	2.94%
800,001 ~ 1,000,000	20	17,867,610	2.29%
1,000,001 or more	138	543,718,993	69.78%
Total	34,671	779,146,634	100%

(4) Major Shareholders

Mar 30, 2020

<b>Shareholding</b>	<b>Total Shares Owned</b>	<b>Ownership (%)</b>
<b>Name of Major Shareholders</b>		
Investment Account of Kingston Technology Corporation	29,875,000	3.83%
Hermes Investment Funds Public Limited Company	22,248,990	2.86%
KTC-TU Corp.	19,977,554	2.56%
New Labor Pension Fund	16,145,300	2.07%
KTC-SUN Corp.	15,655,362	2.01%
LABOR PENSION FUND SUPERVISORY COMMITTEE-LABOR RETIREMENT FUND	14,870,000	1.91%
Government of Singapore--GOS-EFM	13,397,000	1.72%
Norges Bank	12,959,690	1.66%
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	12,562,231	1.61%
Cathay Life Insurance Co. Ltd.	11,980,000	1.54%

(5) Net Worth, Earnings, Dividends, Market Price per Common Share, and Related Information Over the Last Two Years:

Unit: Thousand Shares/NT\$

Year Item		2018	2019	As Of Mar 31, 2020 (Note 8)
Market Price Per Share	Highest Market Price	97.30	108.00	117.50
	Lowest Market Price	63.80	64.00	66.40
	Average Market Price	84.15	80.39	99.27
Net Worth Per Share (Note2)	Before Distribution	52.63	55.22	-
	After Distribution	47.83	-	-
Earnings Per Share	Weighted Average Shares	779,147	779,147	-
	Earnings Per Share (Note3)	8.02	7.52	-
Dividends Per Share	Cash Dividends	4.8	4.5 (Note1)	-
	Stock grants	-	-	-
		-	-	-
	Accumulated Undistributed Dividend (Note4)	-	-	-
Return on Investment	Price/Earnings Ratio (Note5)	10.49	10.69	-
	Price/Dividend Ratio (Note6)	17.53	17.86 (Note1)	-
	Cash Dividend Yield (Note7)	5.70%	5.60% (Note1)	-

Note 1: Pending on shareholders' approval.

Note 2: Based on shares issued at yearend and completed after resolution by shareholders' meeting the following year.

Note 3: If there are stock grants that must be adjusted retroactively, should list the EPS before and after adjustment.

Note 4: if the terms of issuance of securities have accumulated dividends that are not paid until there are earnings, must disclose separately the accumulated dividends that are unpaid for current year.

Note 5: Price/Earnings Ratio = Average Market Price/ Earnings per Share

Note 6: Price/Dividend Ratio = Average Market Price/Cash Dividends per Share

Note 7: Cash Dividend Yield = Cash Dividends per Share/Average Market Price

Note 8: The net worth per share and earnings per share should be provided based on the last quarter audited by CPA as of printing of annual report; information for other items should be provided based on information from current year up till the printing of annual report.

(6) Company's Dividend Policy and Implementation Status

1. Stock Dividend Policy:

Powertech Technology Inc. belongs to a capital intense industry. Thus, the stock payout policy must consider the factors such as company's current and future investment environment, capital needs, market competition, and capital expenditures, etc. Under the consideration of balancing shareholders' & committee members' benefits, dividends paid, and the long term financial planning of the company, the payment of dividends will be in the form of cash and/or stock with cash dividends greater than 20% of total amount of

dividends being distributed.

2. The dividend distribution status:

- (1) The payout ratios were about 50% (about 80% in cash and 20% in stocks) during year of 2003 to 2010.
- (2) The payout ratios were increased to about 66% after year 2011 and going forward. In year 2013, NT\$2 cash dividends were paid from capital reserved with net loss from legislative settlements.
- (3) Powertech Technology Inc. proposed to pay \$4.50 cash in per share which was about 60.0% of 2019 profit earning.

3. 2019 dividend distribution status:

PTI proposed to pay NT\$3,506,159,853 (NT\$4.50 per share) in cash from 2019 earnings Actual distribution subject to shareholders' approval.

- (7) The impact of the proposed stock grants at this shareholders' meeting on the Company's operating performance and earnings per share:

There is no stock grant proposals for the earnings distribution for 2019.

(8) Employee Profit Sharing and Directors' & committee members' compensation

1. The Company's Article of Incorporation states information regarding the amount and scope of employee profit sharing and Directors' & committee members' compensation. The principal of distribution from the Company's annual net income are:
  - (1) Make up for losses from previous years at top of priority.
  - (2) 5.0%-7.5% employee compensation and less than 1.5% for Board compensation should be reserved from operating income before tax.
  - (3) Employee compensation could be in cash or stock and employees included all subsidiaries defined by Board. Board compensation can only be in cash. Independent directors were paid monthly and were excluded from the annual board compensation plan.

2. This period's basis of estimating the employee profit sharing and Directors' & committee members' compensation distribution of stock grants' share calculation basis and the accounting handling of the actual distributed amount being different from estimated amount.

The basis for estimating the employee profit sharing and Directors' & committee members' compensation was based on the annual net income. If the actual resolution for distribution by the shareholders' meeting is different from the estimated amount, then it will be viewed as changes in estimation and accounted into annual profit or losses of the distribution year.

3. The board meeting on Mar 10, 2020 approved the 2019 distribution of employee profit sharing and directors' compensation proposal and details in below:

- (1) 5.39% of operating income before tax for employees profit sharing (NT\$394,108,865) and 1.08% of operating income before tax for directors' compensation (NT\$78,821,773) distributed in cash and no discrepancy with

estimation made in 2019.

- (2) The ratio of employees profit sharing distributed in stock: Not Applicable.
- (4) Actual distribution of previous year employees profit sharing and directors compensation:

	Amount (NT\$)
Employee profit sharing — in cash	420,813,659
Directors' compensation — in cash	84,162,732
Total	\$ 504,976,391

No discrepancy with board approval.

- (9) Buyback of Common Stock: None.

**2. Issuance of Corporate Bonds:** None.

**3. Issuance of Preferred Shares:** None.

#### 4. Issuance of Global Depositary Receipts

Mar 31, 2020

Date Issued Item		Jan 23, 2006	Feb 10, 2006
Issuance & Listing		Bourse de Luxembourg	
Total Amount (US\$)		103,650,000	12,092,500
Offering Price Per DR (US\$)		6.91	
Units Issued		15,000,000 at first issuance	1,750,000 units at follow-up issuance
Underlying Securities		No more than 33,500,000 PTI common shares held by selling shareholders to serve as underlying securities of the overseas depository receipts.	
Common Shares Represented		30,000,000 shares	3,500,000 shares
Rights & Obligations of DR Holders		The rights and obligations of the overseas depository receipt holders, such as voting rights, dividends, shares preferential subscription rights and other rights and interests, are based on the applicable laws of the Republic of China and the relevant provisions of the Depositary Agreement.	
Trustee		None	
Depositary Bank		JP Morgan Chase Bank	
Custodian Bank		JP Morgan Chase Bank, Taipei Branch	
DR Outstanding		65,012 DR units	
Apportionment of Expenses for Issuance & Maintenance		Issuance: including but not limited to, underwriting fees, legal fees, listing fees, accountant fees, financial advisory fees and any other related costs. Unless otherwise specified by law, and other regulations by the issuer, the underwriter, the selling shareholder and the depository institution, the obligation to include the annual listing fees, information disclosure and other expenses rests with the selling shareholder(s).	
		Maintenance: Unless otherwise specified by law, and other regulations by the issuer, the underwriter, the selling shareholder and the depository institution, the obligation to include the annual listing fees, information disclosure and other expenses rests with the Company.	
Terms and Conditions in the Deposit Agreement & Custody Agreement		<p>Depositary Agreement: 1. Sale / delivery 2. Information available 3. Depositary Receipts original issue, redeem and re-issue 4. Dividends, other distributions and stock options 5. Registration reference date 6. Voting rights 7. Transfer 8. Original changes securities 9 Taxes 10. Amendments and Termination</p> <p>Custodian Agreement: 1. Deliver securities to the original issuance of DR 2. Notify depository institution issuing depository receipts 3. DR against the securities back to the time of the original delivery 4. Monthly billing to confirm the number of shares 5. the Number of shares registered confirmed on base date.</p>	
Market Price	2019	Highest Market Price	US \$ 6.95
		Lowest Market Price	US \$ 4.16

Date Issued Item		Jan 23, 2006	Feb 10, 2006
Per Share	As Of Mar 31 2020	Average Market Price	US \$ 5.19
		Highest Market Price	US \$ 7.75
		Lowest Market Price	US \$ 4.54
		Average Market Price	US \$ 6.65

**5. Status of Employee Stock Option Plans and Employee Restricted Stocks:** None.

**6. Status of New Share Issuance in Connection with Merger and Acquisitions:** None.

**7. Financing Plans and Implementation**

As of Mar 31, 2020, there are no situation of incomplete previous issuances and private placement of securities or complete plans whose benefits are not realized.



## V. Operational Highlights

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### 1. Business Activities

#### 1. Business Scope

##### 1. Main Business Scope:

- (1) CC01080 Electronic Parts and Components Manufacturing
- (2) CC01101 Electronic Parts and Components Manufacturing
- (3) CC01110 Computers and Computing Peripheral Equipments Manufacturing
- (4) CC01120 Data Storage Media Manufacturing and Duplicating
- (5) CC01990 Electrical Machinery, Supplies Manufacturing
- (6) F119010 Wholesale of Electronic Materials
- (7) F219010 Retail Sale of Electronic Materials
- (8) H201010 Investment
- (9) I301010 Software Design Services
- (10) I501010 Product Designing
- (11) JE01010 Rental and Leasing Business

##### 2. Revenue Proportion :

Established in May 1997, the Company's primarily provides Integrated Circuit (IC) packaging and testing services. Revenue proportion as of 2018 is as followed :

Unit : NT 1,000s

Items	Net Revenue 2019	Revenue Proportion
Packaging Service	40,183,544	60.41 %
Testing Service	17,623,648	26.49%
Wafer Level Packaging	3,446,149	5.18%
Wafer Level Testing	4,851,085	7.29%
Others	420,718	0.63%
Total	66,525,144	100.00%

##### 3. Current Product/Services :

- (1) High Pin-count Thin Small Outline Package (TSOP) packaging and testing services
- (2) Quad Flat No-leads (QFN) Packaging Services
- (3) Multi-Chip Packaging (MCP, S-MCP) Packaging and Testing Services
- (4) Ball Grid Array (wBGA, FBGA) IC packaging and testing services
- (5) Secured Digital Memory Card (SD, microSD) , USB packaging and testing services
- (6) Solid State Drive(SSD)・Embedded Memory (eMMC, eMCP, UFS) packaging and testing services

- (7) DRAM Chip-Stacking packaging and testing services
- (8) Mobile memory packaging and testing services
- (9) Wafer testing services
- (10) Wafer bumping packaging services
- (11) Copper Piller Bump (CPB) Wafer testing services
- (12) System-in-Packag (SiP) packaging services
- (13) Redistribution Layer (RDL) services
- (14) Wafer Level Chip Scale Package (WLCSP) packaging services
- (15) Package on Package / Package in Package(PoP, PiP) packaging and testing services
- (16) Micro-electro-mechanical systems (MEMS) packaging services
- (17) CMOS Image Sensor (CIS)packaging and testing services
- (18) Flip-Chip Chip Scale Package (FC CSP) Packaging Services
- (19) Packaging service with laminate substrate
- (20) Through-Mold-Via (TMV) Technology development for chip-stacking requirement in packaging services
- (21) Copper Pillar Bump Flip Chip (Cu Pillar Bump Flip Chip) packaging services
- (22) CMOS Image Sensor (CIS) packaging services
- (23) Electro Magnetic Interference (EMI) shield package packaging services
- (24) Fan-Out Wafer Level (FOWLP) packaging and testing services
- (25) Fan-Out Panel Level (FOPLP) packaging and testing services
- (26) LPDDR3 KGD testing services

#### 4. Product/Service in Development :

- ( 1 )Embed PiFO® package with Chip Middle and Cu pillar connecting RDL route on the side to achieve connection between high density dominate chips. Packaging reliability expect to certify by end of 2020.
- ( 2 )Developing ultra-fine RDL line and space 2/2um to provide high efficiency, I/O count, band width, and heterogeneous integration package technologies.
- ( 3 )Developing Dielectric Stack Via with ultra-fine RDL line and space to achieve high density dominate chips connection.
- ( 4 )Developing Dry Film Dielectrics to provide better qualify of Surface Coplanarity for FO products.
- ( 5 )Developing Fan-out on FCBGA Substrate technology with fine line/space replacing 2.5D

- Si interposer to achieve better performance and lower cost solution.
- ( 6 )Developing Cu/Ni/SnAg micro bump technology use on Fan-out on substrate to provide performance competitiveness solution with 2.5D Si interposer solution.
  - ( 7 )Promote TSV technology with CIS customers to co-develop next generation high speed and resolution automotive products.
  - ( 8 )Promote TSV technology on high performance computing memory products with high die stacking and band width.
  - ( 9 )Developing grade zero automotive products using wire bond FBGA to meet higher grade qualification.
  - (10)Developing TSV for customized CIS(CMOS Image Sensor) solution to meet automotive grade qualification.
  - (11)Developing FCBGA packaging technology for grade zero automotive product to meet automotive grade qualification.
  - (12)Developing 110X110 mm<sup>2</sup> FO products to provide solution for high-end products requirement.
  - (13) Introduce Low k materials on GDDR6 products to improve process speed.
  - (14)Developing LLHBM PKG structure on FCBGA package to provide solution for future large size package structure.
  - (15)Developing FCCSP Hybrid (Flip-chip and wiring) packaging structure for 5nm wafers to provide solution for future products.
  - (16)Developing FCCSP technology for ADAS products to meet automotive grade requirement.
  - (17)Promote thin film glasses for compact CIS(CMOS Image Sensor).
  - (18)Research on improving TSV material for CIS(CMOS Image Sensor) to provide compact package solution.
  - (19)Working on break through 7x7mm<sup>2</sup> panel size restriction to target for larger size wafer level package for CIS (CMOS Image Sensor) market.
  - (20)Developing multiple layers distribution bumping to improve IC design flexibility.
  - (21)Developing fine bump pitch and narrow gap between chips to SBT for FCCSP to meet the trade of compact packages.
  - (22)Developing FCBGA 55x55mm<sup>2</sup> & 77.5x77.5mm<sup>2</sup> to meet high speed interconnection requirement such as AI , server and networking.
  - (23)Developing advanced CIS(CMOS Image Sensor) and ultra-thin wafer level package to provide solution for automotive products.
  - (24)Developing larger dimension and fine space TSV packaging technology for advanced CIS and 5G products.

- (25) Developing PCIe Gen4 testing services and software.
- (26) Developing Higher Speed NAND testing services and hardware.
- (27) Developing CIS testing services and hardware.
- (28) Developing Drone related testing services and hardware.
- (29) Developing Multi-Die Package.
- (30) Developing T5503A IOOCK LPDDR4 testing services and hardware.
- (31) Developing 5Grelated testing services and hardware.

## 2. Industry Summary

### 1. Current Industry Status & Outlook

The “World Economic Outlook” report published by the International Monetary Fund in January 2020, noted that the global economic growth rate of 2.9% in 2019 was the weakest since the global financial crisis from 10 years ago. The US-China trade war, Brexit and a slowdown in major economies all led to a significant downturn in global economic activity, trade and investment during the course of 2019.

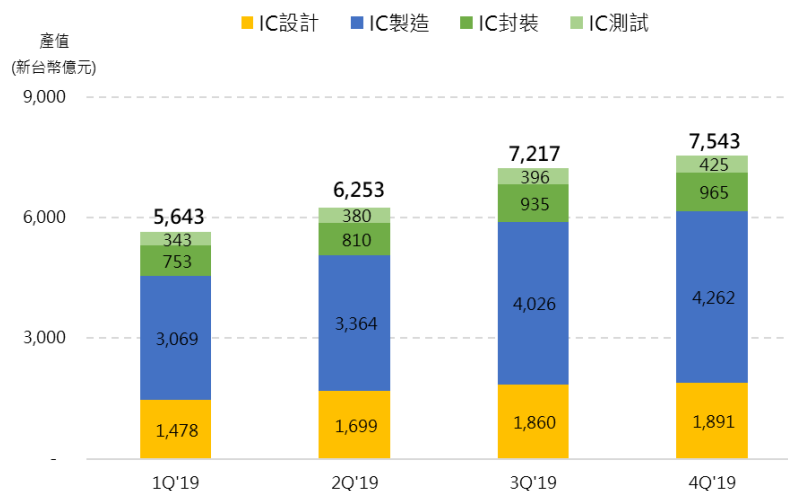
The semiconductor industry was affected by the economic weakness of 2019 as well. Data published by the Semiconductor Industry Association (SIA) and World Semiconductor Trade Statistics (WTST) organization in February 2020 put global semiconductor sales for 2019 at US\$412.1 billion by value, down 12.1% from the US\$468.8 billion reported for 2018; Global semiconductor sales by volume in 2019 was 932 billion chips, down 7.2% from 2018. The biggest decline by region was in the US semiconductor market that shrunk by 23.8%, followed by the Japan market with a decline of 10.0%. The decline in the China market was 8.7%.

In terms of IC categories, the massive memory market plays an important part in the semiconductor market. Over the last decade, DRAM accounted for around 14 ~ 16% of the global semiconductor market value, while NAND Flash accounted for 11 ~ 12%. In 2019 the memory market was affected by a slide in market demand and excessive OEM inventory levels so the average selling price (ASP) plummeted by 47.4% and the value of the global memory market dropped 31.5%. The drop in the memory market was therefore a main factor in the decline of the semiconductor market.

The US-China trade war spurred Chinese companies to increase their investment in in-house IC R&D and to seek help from the Taiwanese semiconductor industry chain. The Taiwanese semiconductor industry saw positive growth every quarter in 2019 as a result. Statistics compiled by the Industry, Science, and Technology International Strategy Center (ISTI) of Industrial Technology Research Institute. The Taiwanese IC industry was worth NT\$2,665.6 billion in 2019, up 1.7% from 2018. The IC packaging industry in particular was worth NT\$346.3 billion, up 0.5% from 2018, while the IC testing industry was worth

NT\$154.4 billion, up 4.0% from 2018.

### 2019 Taiwan IC Industry Market Value by Quarter



### 2019 Taiwan IC Industry by Segment

Unit : NT \$billions

	1Q19	YoY Growth	2Q19	YoY Growth	3Q19	YoY Growth	4Q19	YoY Growth	2019	Annual Growth
IC Design	1,478	-1.9%	1,699	4.7%	1,860	4.7%	1,891	15.1%	6,928	8.0%
IC Manufacturing	3,069	11.4%	3,364	-4.7%	4,026	5.5%	4,262	8.3%	14,721	-0.9%
IC Packaging	753	-0.39%	810	-6.9%	935	0.5%	965	8.4%	3,463	0.5%
IC Testing	343	3.3%	380	10.8%	396	0.8%	425	6.3%	1,544	4.0%
IC Industry Total	5,643	-6.4%	6,253	-2.0%	7,217	4.4%	7,543	9.8%	26,656	1.7%

Source : TSIA ; Industrial Technology Research Institute (2019/02)

## 2. Industry Supply Chain

Sectors in IC industry can be categorized according to position in production process, including IC Design at the upstream, IC Manufacturing & Foundries at the mid-stream and IC Assembly & Testing sector at the downstream.

### (1) Upstream :

IC Design Sector includes companies designing IC products. The sector is knowledge-intensive with high entrance barrier and return on investment. Its main business scope includes designing and sales of own products or customized design for customers.

### (2) Mid-stream :

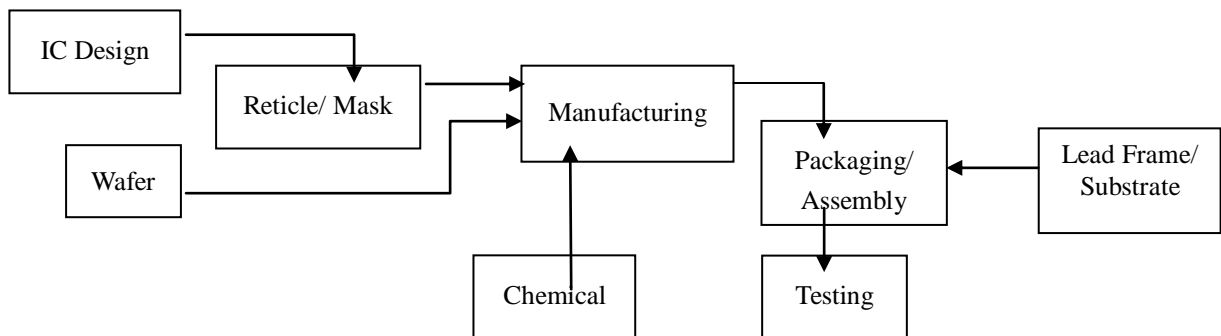
Include IC manufacturing sector and related chemical suppliers. Its main business scope involves manufacturing wafer with precision tools according to in IC circuits designed in

house or specified by customers. This sector is capital and technology intensive with high entrance barrier

(3) Downstream :

Outsource Assembly and Testing (OSAT) sector provides cutting, packaging, assembly and testing service to manufactured IC wafer for final product application.

IC Industry Supply Chain as illustrated below



In recent years scope of IC manufacturing as well as assembly and testing continues overlap due to increasing market demand for larger quantity and higher quality IC. In addition to higher performance and smaller profile, IC is also required to satisfy demands for integrated functions. As a result some wafer foundries begin to develop products and services that extends into scope of IC packaging and assembly. Majority of wafer foundries choose to work closely with cooperating assembly and testing service providers. Integrated Design and Manufacturers (IDM) also collaborate with OSAT service providers in designing and developing product solutions.

### 3. Trend of Product Development and Competition

#### (1) Trend of Product Development

IC Assembly and Testing refers to back end of line production process of IC production, including packaging and assembly, as well as testing. Its purpose is to provide protection, thermal management and connectivity to IC chips. Packaging and Assembly technology can be divided broadly into two main stages, including lead frame packaging and leadless packaging on substrate. The initial stage of development is lead frame packaging, which connects IC chips to external connection pins around the IC chips through means of wire bonding. Subsequently lead frames are replaced by substrate where external connection is replaced by led balls under IC chips. The latest development no longer uses lead frames or

led balls. The latest Flip-chip packaging technology places the IC chip directly on motherboard where IC chips are connected directly to substrate through metal bumps

There are two main areas of technological development in Assembly and packaging technology. One is System on Chip (SoC) where the entire system circuit, including Central Processing Unit (CPU), Memory (Flash memory/ SRAM), Digital Signal Processor (DSP), Input/Output Interface (I/O interface)... are incorporated onto one single IC chip. The other is System in Package (SiP) where IC chips with different digital or analog functions are connected to Integrated Substrate or Functional Substrate with embedded passive components or electric circuits through bumping or wire bonding. SiP packaging technologies also differs according to application requirements, such as surface Multi-chip Module (MCM) packaging or 3D Chip-Stacking packaging which reduces surface area.

While System on Chip (SoC) and System in Package (SiP) are currently the two major direction of development in Semiconductor Assembly and Packaging technologies, System in Chip (SoC) technology has reached a stage of bottleneck. As SoC faces difficulties such as high defect rate, extensive development time and high cost, SiP multi chip module package with advantages such as small profile, high speed and frequency, lower lost and shorter production lead time becomes highly valued solution. As semiconductor micro-manufacturing technologies and IC production cost reaches bottleneck, relevance of Moore's Law is gradually reaching its limit of applicability. In addition, end-product for Internet of Things also emphasizes heterogeneous integration of different components such as Sensor, Logic/Dram, GPU and other IoT Product applications. Consequently utilizing SiP technology to achieve heterogeneous integration through assembly, particularly integration of sensor units that SoC struggles to achieve, becomes popular areas of research and development. Based on its production process of Wafer-level SiP Assembly and Packaging (e.g. CoWos, InFO package) wafer foundry TSMC is currently leading the movement towards Fan-Out packaging utilized in smart phone application. More than 20% thinner than traditional Flip Chip assembly, fan out packaging matches the trend of increasingly slim profile of smart phones. In addition, Fan-Out packaging also offers advantages in higher performance, low power consumption and better thermal management than Flip Chip packaging. Furthermore, its lower cost also fulfils consumer demands for lower price in electronic devices. The above factors indicate that Fan-Out packaging technologies will become the mainstream for smart phone applications. With exception of TSMC, most wafer foundries choose to collaborate with closely cooperating OSAT service providers in product development. IDM manufacturers also collaborate with OSAT service providers in product design and development. This creates increasingly close integration of

assembly and OSAT service providers, wafer foundries, and IDM manufacturers.

In response to trend of technological development of the industry, as well as increasing demand from upstream customer for capacity in memory, logic, as well as advance assembly, packaging and testing, our company continues to invest in new equipment and capacity to satisfy customer demand. In the meantime, our company continues to develop assembly and packaging technologies providing high performance at low cost. As assembly and packaging industry evolves with an increasing diversity and technology-intensiveness, companies with capability of independent technological development as well as maintaining stable customer base will benefit the most. PTI held a groundbreaking event in Sep 2018 for a Fan-Out Panel-Level Packing (FOPLP) facility, which is the first one in the world FOPLP dedicated facility. PTI believes the FOPLP will be essential for future applications on 5G, AI, bio tech, Advanced Driver- Assistance System (ADAS), smart city, and IoT related products. Ability to develop advanced packing and testing services and secure customer relations will play major factors for corporate sustainability.

(3) State of Competition :

Unfavorable factors in the first half of 2019 such as the global economic slowdown, the volatility of international trade, and weak end-user product demand all created a very challenging environment in the global semiconductor packaging and testing market. Thanks to 5G demand, easing of downward pressure of memory prices and a gradual recovery in mobile phone sales all helped the global semiconductor packaging and testing industry hold the line in the second half of 2019.

The Taiwanese IC packaging and testing industry was worth approximately NT\$500.7 billion in 2019 and accounted for more than half of the global semiconductor packaging and testing market. Five out of the top ten packaging and testing service providers in the world were based in Taiwan.

PTI has many years of experience in the packaging and testing sector. We lead the global top five in semiconductor packaging and testing service providers with our stacked IC packaging technology. For 2019 our total revenues for the year were NT\$66.525 billion, with Flash accounting for 38%, DRAM accounting for 25%, logic IC accounting for 27%, while System in Package (SiP) and modules accounted for 10% of total revenues.

In the past, System on Chip (SoC) integrated a number of identical technology node components onto the same chip. The cost of IC fabrication jumps when advanced processes move to the 7nm and 5nm scale. Not all IC design houses can afford the high costs associated with advanced processes. This was why PTI focused on the



development of various advanced packaging technologies. We now lead the rest of the industry in our advanced packaging technology and production capacity for “heterogeneous integration.” We are also now investing Fan-Out Panel-Level Packaging (FOPLP) technology. Using FOPLP we can integrate the functional components of dissimilar technology nodes. The result is a more cost-effective packaging method that rivals the performance of SoC fabricated by advanced processes. In other words, we can help our customers achieve technological leadership and improved returns by “integrating heterogeneous components made up of multiple technology nodes into the same chip packaging.”

Factors such as import substitution, national policy, financial support and innovative applications have spurred China’s development of its semiconductor industry in recent years. New fabs entering mass production and the injection of capital from Big Fund have also led to the rapid development of the Chinese semiconductor packaging and testing industry. Data from DIGITIMES Research suggested that Chinese semiconductor packaging and testing companies are mainly focusing on Flip Chip and SiP packaging technologies are the present time due to market demand.

#### Annual Growth 2014-2019 of Taiwan OSAT Companies Ranking Among Global Top 10

Unit : NT million

Year	2019	19/18	2018	18/17	2017	17/16	2016	16/15	2015	15/14	2014
Company	Revenue	Annual Growth	Revenue	Annual Growth	Revenue	Annual Growth	Revenue	Annual Growth	Revenue	Annual Growth	Revenue
ASE Holding	413,182	4.0%	397,261	36.8%	290,441	5.7%	274,884	-3.0%	283,302	10.0%	256,591
PTI	66,525	-2.2%	68,039	14.1%	59,632	23.4%	48,344	13.7%	42,524	6.2%	40,039
KYEC	25,539	22.7%	20,816	5.7%	19,686	-2.0%	20,081	17.2%	17,129	5.2%	16,278
Chipbond	20,419	9.0%	18,725	16.4%	18,428	6.8%	17,256	2.3%	16,863	4.6%	17,683
ChipMOS	20,337	10.0%	18,480	3.0%	17,941	-7.5%	19,392	-2.4%	19,869	9.7%	22,005

Source : Market Observation Post System/ Relevant Financial Statements Organized by PTI

For Semiconductor backend companies, collaboration with strategic partners possessing leading advantage in technology and production cost enables long term supply chain partnership while securing stable business and profit in the oligopolistic DRAM and Flash market. PTI strives to establish and maintain solid strategic relations with customer while focusing on market segmentation. Currently our primary customers consist of best-known international semiconductor companies in memory manufacturing. Considering risks of price fluctuation due to excess capacity caused by over investment in memory market, PTI also expanded its business scope in 2008 into integrated advanced assembly and packaging services (SiP, MCP, 3D IC, Bumping, Flip Chip MEMS, Fan out, TSV CMOS...). Based on

its fundamental advantage in memory assembly and testing, PTI aim to integrate multiple functions such as logic, wireless, wired and micro-processing unit within a single package to provide high performance and small profile solutions. PTI also continues to emphasize UPH, increasing production efficiency while lowering production cost.

### (3) Summary of Technological Research & Development

#### 1.R&D Cost

Latest Annual R&D expenditure as followed

		Unit : NT thousands
Item	Year	2019
R&D Expenditure		1,905,221

#### 2. Successfully developed technology or product :

##### I. Packaging Solution Achievements:

##### A.提供多樣性面板級扇出型封裝技術：

- a. The CHIEFS® packaging solution used Chip First technology as the basis for developing a packaging that offers 6-side protection. Package level reliability verification was completed in 2019.
- b. CLIP® packaging solution used Chip Last technology as the basis for integration of MLCC passive components. Package level reliability verification has been completed and there is a chance that it may be applied to automotive products such as Advanced Driver Assistance System (ADAS) and Infotainment in the future.
- c. PiFO® packaging solution replaced the conventional substrate by embedding the Controller in the Fan-Out Packaging. Flash memory IC are also stacked on top to give an ultra-slim, high-capacity memory package suitable for mobile phone, wearable devices and other applications.
- d. PiFo® packaging solution replaced the conventional substrate by embedding multiple chips in the Fan-Out Packaging. Superior control of structural thickness dimensions and relatively lower structural expansion compared to conventional substrate offers high-end applications with a new option for embedded IC substrate.
- e. BF2O® packaging solution used Bump-free Fan-Out and Redistribution Layer (RDL) technology to provide very cost-competitive Fan-out Panel-Level Packaging (FOPLP) suitable for end products that require lightweight, thinness and compact size. Packaging for mobile phone power management IC has now successfully entered mass production.

##### B. High-speed, high-bandwidth 8-chip high-end memory packaging based on Through

Silicon Via (TSV) technology has now completed reliability testing. Mass production will commence in 2020 Q3 in support of the customer's sales plan.

- C. A special glass carrier was developed to further streamline TSV integrated production process, increase the yield of die stacking and brought us closer to the realization of low-cost 3D IC.
- D. Developed a special structure for TSV chip packaging of CMOS Image Sensor (CIS). The new structure brought us closer to realizing ultra-slim image chips with super-high resolution.
- E. Wire Bond FBGA packaging product for automotive grade 2 product applications was successfully developed and put into mass production.
- F. FCBGA packaging product for automotive grade 1 production applications was developed to meet customer requirements on high-end automotive products.
- G. Certification completed for GDDR6 graphics memory using epoxy resin with high heat dissipation for improved processing performance.
- H. Commenced mass production of BioChip with TSV-based packaging. Such biochips can be used to rapidly check the genetic sequence of the subject and identify diseases for early intervention.
- I. Successfully developed SiP packaging for passive components with very fine interval that will enable the provision of lighter, thinner, more compact and low-cost packaging solutions.
- J. Developed bumping process for different wafer sizes that can be used in conjunction with special embedded substrates. Electrical connections can be made with other chips to optimize the product's electrical characteristics and improve product performance.
- K. Developed 5G mmWave AiP FCCSP and completed its packaging certification to meet the needs of 5G products.
- L. Developed vertical wire interconnection technology for use with fan-out packaging for memory with 4-chip stacked IC. This will replace the conventional 16-chip stacked wire-bonded packaging to meet the requirements for low-cost and fast delivery time.
- M. Developed advance BIO CSP TSV technology to realize a high-capacity rapid genetic sequence testing function for biological organisms.

## II. Testing Solution Achievements:

- A. B6700D burn-in oven BI testing services with software and hardware development
- B. UFS2.1 system level testing services with software and hardware development
- C. Automotive IC testing services

- D. T5503HS 4.5Gbps testing with software and hardware development
- E. T5383 chip probing services
- F. Testing socket mold-type development

#### (4) Long-term and Short-term Business Strategy

Our Short-term and Long-term strategic business planning in management, production, sales & marketing and research & Development are outlined below

##### 1. Short-term business planning

- (1) Actively expand product capacity while developing new technologies and production process

In response to persistent growth in semiconductor market and customer demand, we will continue to actively expand our capacity. We will also increase our competitive advantage by emphasizing on developing new technology and production process such as WLP, FC, SiP/Modules, 2.5D/3D IC, Fan-Out and other advance packaging technologies in accordance with product development trend.

- (1) Continue to reduce production lead time in order to provide speedy service for customers.

Our main advantage lies in flexible production process offering high level of mobility. We will continue to reduce production lead time in order to provide speedy service for our customers.

- (2) Continue to provide integrated Turn-Key services

Due to consideration in cost, up-stream wafer foundries continues to outsource IC assembly, packaging and testing to specialized assembly and testing facilities (OSAT). We are among the few companies capable of providing complete assembly, packaging and testing services in the country. In order to increase our competitive advantage in providing customer with more options and better service, we will continue to offer integrated Turn-Key services.

- (3) Explore foreign and domestic market and increase market share

In addition to maintaining strong relationship with existing foreign and domestic customers, we will use our competitive advantage in flexible production process, high level of mobility and capability in providing Turn-Key services to develop new customer worldwide.

##### 2. Long-Term Business Planning

- (1) Emphasize long-term partnership with customer and supplier

Through emphasizing long-term collaboration with up-stream and down-stream partners, we

aim to become the trusted OSAT service provider providing our customer reliable quality and service. We will also develop strong collaborative partnership with our suppliers

(2) Increase investment in automated equipment, accelerate automated production, improve production yield, increase production efficiency and reduce manpower dependence.

(3) Continue to develop new assembly, packaging and testing technology and new customer  
As semiconductor moves beyond micrometer and enters the era of nanometer, demand for advance technology in IC assembly, packaging and testing continues to grow rapidly due to increase in function diversity and decrease in size profile. PTI established out research and development facility dedicated to advance assembly and packaging technology in order to satisfy demand from existing and new customers and continues to strengthen our competitive advantage.

(4) Increase revenue contribution from Logic, Module(SSD) and Micro-electro-mechanical Systems(MEMS)

Through increasing customer and revenue in areas of Logic, Module (SSD) and (MEMS) we continue to diversify product risk and increase company scale.

## 2. Market and Product Sales Outlook

### (1) Market Analysis

#### 1. Primary area of product/service sales/provision

Our primary business scope includes providing IC outsourced assembly and testing (OSAT) services in overseas as well as domestic market. As of 2018 revenue from domestic sales account for 20.21% of overall revenue while that of overseas markets account for 79.79%. Our principle markets are Japan, Singapore, and North America.

Unit : NT Thousands

<b>Year</b> <b>Market</b>	<b>2018</b>	<b>%</b>	<b>2019</b>	<b>%</b>
Domestic	13,752,607	20.21	13,401,920	20.15
Export	54,286,772	79.79	53,123,224	79.85
Japan	22,270,182		23,245,391	
Singapore	14,947,281		13,147,802	
North America	13,167,078		12,634,897	
Europe	2,052,881		2,367,141	
China and Hong Kong	1,381,878		1,133,562	
Others	467,472		594,431	
<b>Total</b>	<b>68,039,379</b>	<b>100</b>	<b>66,525,144</b>	<b>100</b>

## 2. Market Share :

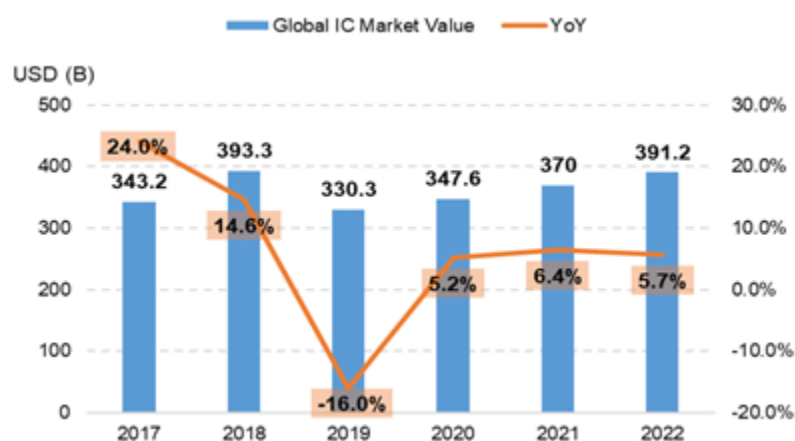
According to data provided by Gartner, PTI is the 4<sup>th</sup> largest OSAT service provider worldwide in 2018. It is also ranked 2nd in revenue among OSAT service providers in Taiwan. Currently there are over 30 domestic OSAT service providers respectively, of which 20 provides both assembly and testing services. According to 2018 operation results of Taiwanese IC industry published by Taiwan Semiconductor Industry Association (TSIA) in February 2019, overall output value of IC Assembly sector amounts to approximately NT\$344.5 billion while that of testing sector amounts to approximately NT\$148.5 billion. In 2018, our assembly revenue amounts to approximately NT\$ 45.6 billion, contributing 13.2% of overall industry output while testing revenue amounts to approximately NT \$22.5 billion, contributing 15.5% to overall industry output. In particular PTI also holds leadership position in assembly, packaging and testing of memory IC products. Powertech Semiconductor (Xian) Co. Ltd., a subsidiary established through investment contract with Micron Technology Inc. on semiconductor assembly, began production in 2016, increasing PTI's market share in memory OSAT sector. In 2017, PTI also reached agreement with Micron Technology Inc. to acquire its Akita facility in Japan as well as 39.6% share of Tera Probe, Inc. from Micron, consolidating PTI's position in Japan. Future applications of 5G, AI, bio tech, ADAS, smart city and IoT related products are going to create massive demand for FOPLP packages which drive PTI to invest heavily in Fan-Out Panel-Level Packaging (FOPLP).

## 3. Market Supply and Demand Outlook and Growth Potential

Looking ahead to 2020, even though the signing of the Phase 1 trade agreement between the US and China in January 2020 will help reduce the amount of uncertainty in the global economy, the COVID-19 pandemic has impacted on the global industry supply chain and slowed the pace of economic expansion.

World Semiconductor Trade Statistics (WSTS) estimated that the global semiconductor market will grow by 5.9% in 2020 compared to 2019 and reach US\$433 billion. Integrated circuits (CI) will account for US\$347.6 billion and grow by 5.2%; opto-electronic components will account for US\$46.2 billion and grow by 12.5%; discrete components will account for US\$24.9 billion and grow by 3.8%, and sensors will account for US\$14.4 billion and grow by 5.4%.

## 2017 ~ 2022 Global IC Market Value and Growth Rate

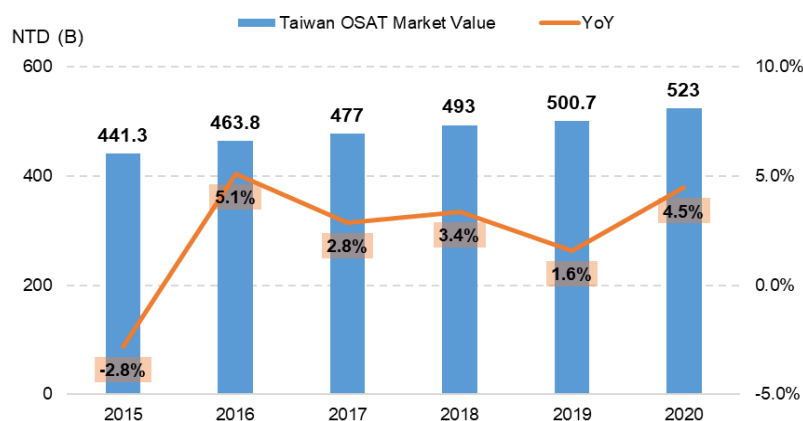


Source: WSTS and IEK Table by PTI

IC Insights expected semiconductor parts and complications for applications such as smart phones, autotronics, artificial intelligence (AI), big data systems, and in-depth learning applications to underpin the growth of the semiconductor industry in 2020.

The de-Americanization movement launched by China in the second half of 2019 is still building up steam. Add the business opportunities offered by China's 5G infrastructure and Taiwan's semiconductor packaging and testing industry can expect the industry to grow as a whole thanks to advanced packaging and testing capabilities, and heterogeneous IC integration, packaging and testing technology. ISTI estimated that the Taiwanese semiconductor packaging and testing industry will be worth NT\$523 billion in 2020, up 4.5% from 2019.

## 2015 ~ 2020 Taiwan OSAT Packaging and Testing Market Value and Growth Rate



Source: WSTS and IEK Table by PTI

#### 4. Competitive Advantages

PTI have grown to become one of the major OSAT service providers, delivering high quality, dedicated service and advanced technology for our customers. We continue to collaborate closely and maintain solid relations with our customers. Our competitive advantages are as followed.

##### (1) Solid Strategic Allies and Globalization

The IC OSAT sector is characterized by high level of collaboration with upstream wafer foundries. Consequently profitability of assembly, packaging and testing service providers relies on solid relationship with customers. In the meantime, IC manufactures also chose long-term partnership with assembly, packaging and testing service providers due to confidentiality in product technology, product quality and production process. Such strategic alliance with concrete relationship of collaboration is beneficial for long-term development of the company.

##### (2) Turn-key Service

In response to rapid decline in IC sales prices, we offer Turn-key Service to our customers, including both assembly and packaging, as well as testing in order to reducing cost and risk in shipping process.

##### (3) Outstanding capability in development and production

PTI have been committed in developing new technologies while investing heavily in technological research and production process improvement. We have been proudly awarded many domestic and international patents, as well as technology license from multiple major international manufacturers, establishing our solid competitive edge within the industry.

##### (4) Investment in high precision automated equipment

In response to development of IC product towards increasingly higher performance, pin-count and density we continue to invest in high precision automated equipment from well-known Japanese and US vendors in order to satisfy customer needs and continuously improve our quality of service.

##### (5) Online automated customer service system

Our online automated customer service systems enables customer to track closely product status, production progress, and any potential problems. This facilitates swift problem resolution and product improvement while increasing added value for customer.

#### 5. Supporting and Hindering Factors and Responding Strategy

##### (1) Supporting Factors :



## 【Industry Background】

### ① Competitive Advantage of Taiwanese Semiconductor Industry

Taiwan semiconductor industry encompasses a complete semiconductor industry structure from upstream IC Design and wafer foundries to downstream OSAT service providers. This vertically integrated chain of supply, consistent with industry development, contributes to establish the strong competitive position of Taiwanese semiconductor sector in the global market. Booming IC industry facilitated by rapid global development in electronics, information technology, communication technology, consumer electronics, optoelectronic industry, Artificial Intelligence (AI) and Internet of Things (IoT) will continue to support stable growth in OSAT sector.

### ② OSAT Sector Benefitting from Major Integrated Device Manufacturer (IDM) Outsourcing Trend.

Due to high capital investment of advanced production process, global IDM manufacturers continue to increase its outsourcing of wafer manufacturing, assembly, packaging and testing to Asia region with lower production cost. Taiwan, with its complete industry structure and dynamic vertical supply chain, is the most preferential outsourcing choice for international IDM manufacturers and IC Design Companies. Taiwanese OSAT sector also benefits from OEM orders.

## 【Competitive Niche】

### ① Strong Managing Team and Solid Strategic Alliance

Our major share-holders include well-known companies such as Kingston Group and Taiwan Toshiba Semiconductor, facilitating solid reputation and stable customer base. As our revenue continues to grow, support from our shareholders also ensures sufficient capital supply for our future operation and development. Furthermore, our management team is equipped with comprehensive working experience within the semiconductor sector and capability of making appropriate decisions according to market trend.

### ② Continued Development and Innovation

In response to rapid changes in semiconductor market, PTI is dedicated to technological development. In addition to developing new products, we continue to introduce new technologies through collaboration with our strategic partners. Our research and development team is equipped with capability in independent designing and developing testing software and hardware programs. In addition to continually developing testing program and improving testing equipment in areas of IC testing, we also continue to

develop cutting edge technologies and services in respond to future mainstream IC market demand. Our business scope has extended into logic market from assembly, packaging and testing of memory products. Building on our leading advantage in assembly, packaging and testing for both memory and logic IC, PTI continues to expand its scope into 3D IC. In assembly and Packaging we have completed development in IC Chip-Stacking technology, Field Programmable Gate Array (FPGA) and Fan-Out Packaging technology, and have been rewarded many patents. We will also continue our effort in refining in material and production process.

### ③ Turn-key Service and Flexible Capacity

We able to provide our customer integrated turn-key service of IC assembly, packaging, testing and packing service in a single order, effectively reducing shipping time and cost. In addition, we are able to respond quickly to market and customer demand and swiftly expand and adjust our capacity accordingly through timely investment in advance equipment, providing our customer with most competitive solutions.

## (2) Hindering Factor and Responding strategy

### ① Fluctuation in IC Industry in Connection With Economic Climate

#### Strategic Response :

#### A. Product Diversification

In addition to continually strengthening our memory assembly, packaging and testing quality and technology, acquisition of Greatek Electronic Inc. also contributed immensely to expansion into Logic market. Furthermore, our new production technologies such as copper pillar bump, Re-distribution Layer (RDL), Wafer Level CSP, MEMS and SSD continues to achieve customer qualification. Through product diversification we are able to mitigate risk of economic cycle as well as provide our customer greater range of assembly, packaging and testing services

#### B. Strengthening Collaboration with Customers

Establish long-term partnership with existing customers, establishing Powertech Semiconductor (Xian) Co. Ltd. and actively developing new customers to achieve stable and sufficient level of capacity utilization.

#### C. Increase Market Scope

With Akita facility as production basis in Japan, supported by Tera Probe, Inc., PTI will establish comprehensive chain of supply in Japan.

### ② Erosion of Gross Profit by Increasing Material Cost

Strategic Response :

A. Lowering Production Cost

Mitigating the effect of increasing material cost by varying product structure, improving yield, developing alternative material solution and continue to improve production process.

B. Emphasizing Added value

Continue to support our customer with high quality product with short lead time and swift responding service. Enabling our customers to produce time-effective and competitive product through our dedication in developing new technologies.

③Manpower shortage

Strategic Response :

A. Increase staff welfare and bonus incentives to attract talent and encourage cohesion among staff members. We also design staff training program according to long-term development strategy to support progress for both company and staff member.

B. We will continue to improve productivity and dependence on manpower through actively introducing advanced automated equipment in conjunction with upcoming Industrialization 4.0.

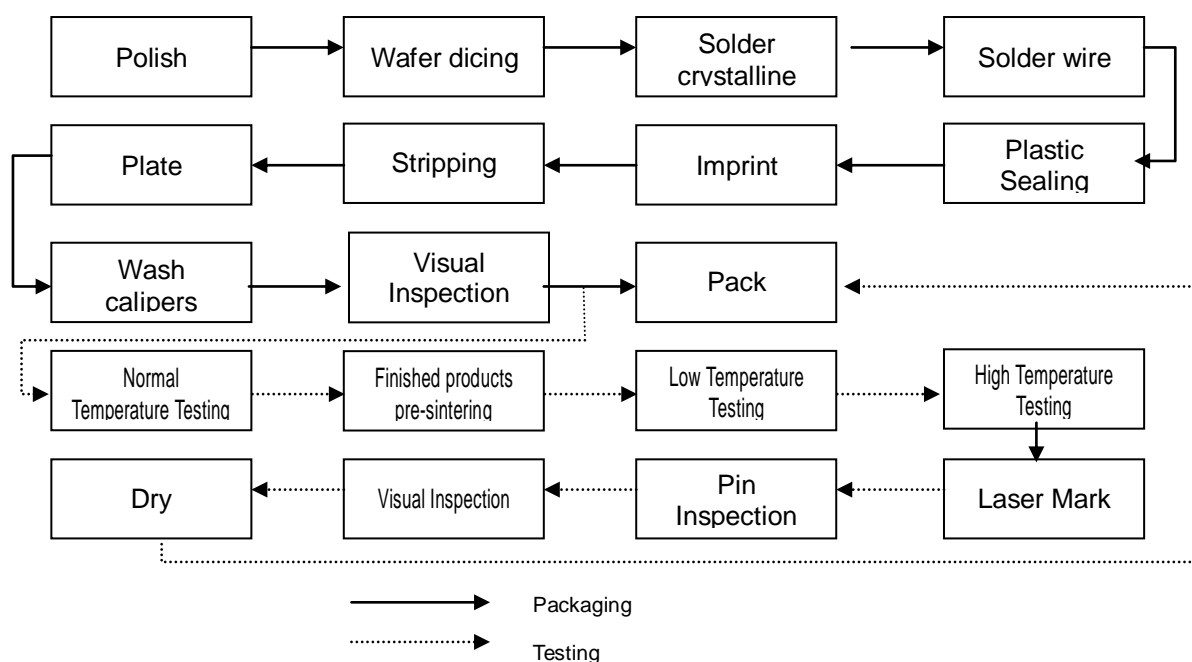
C. Alleviating the effect of manpower shortage by employing foreign workforce with permission from Ministry of Labor.

(2) Important Applications and Production Process of Main Products

1. Product Applications

Main Products or Services	Important Applications or Functions
IC Assembly	To turn Wafer into complete single product through sawing, mounting, wire bonding, molding, trimming/forming, and other processes of the Integrated Circuit (IC).
Final Test	Placing the IC into different environment such as normal, high, or low temperature to test and classify according to test conditions specified by customers. These steps ensure the product conforms to the quality and stability demanded by customers.
Burn-In	Using Burn-In process forced the IC operate in extreme environments to accelerate aging of the products and screen out the unqualified, to ensure reliability of products.
Laser Mark	Printing the name of company and product details on the IC.

## 2. Production Process



### (3) Suppliers of Major Raw Materials

Our company mainly provides IC processing for our customers. The suppliers of the key raw materials used in packaging operations are listed below:

Main Raw Materials	Main Suppliers
Lead-Frame	Shinko Electric, Nichiden Seimitu Kogyo Co., Ltd., Samsung.
Substrate	Unimicron, Nanya, Simmtech, Eastern Company Limited, Japan Circuit Industrial, Shinko, Kinsus, and Daisho.
Die Attach Film (DAF)	Hitachi Chemical Co.(HK) Ltd, Nitto Denko Taiwan, Lintec, Henkel
Gold Wire	Chroma New Material, Tanaka
Compound	Hitachi Chemical Co.(HK) LTD., Hitachi Chemical Taiwan, and Kyocera.

(4) Information of suppliers' who commanding 10% and plus of annual purchasing volume in any year over the last 2 years.

1. There was no supplier accounted for over 10% of total purchase over the last 2 years.

2. List of Major Customers:

**Major Customers Information for the Last Two Calendar Years**

Unit: NT\$ Thousands

Year	2018				2019				As of 2020 Q1			
Item	Name	Amount	Percent of total amount sold (%)	Relation with Issuer	Name	Amount	Percent of total amount sold (%)	Relation with Issuer	Name	Amount	Percent of total amount sold (%)	Relation with Issuer
1	A	14,923,812	21.93	Related Party	A	17,934,998	26.96	Related Party	A	5,187,943	27.58	Related Party
2	B	18,482,277	27.16	None	B	14,818,184	22.27	None	B	4,072,911	21.65	None
3	C	8,673,567	12.75	None	C	9,319,159	14.01	None	C	2,959,458	15.73	None
	Others	25,959,723	38.16		Others	24,452,803	36.76		Others	6,591,368	35.04	
	Net Amount Sold	68,039,379	100		Net Amount Sold	66,525,144	100		Net Amount Sold	18,811,680	100	

Reason for changes: PTI revenue increase contributed by capacity expansion, and customer demand increase.

## (5) Production Quantity &amp; Value Table 2018-2019

Quantity Unit: 1,000 wafers Amount Unit: NT\$ Thousands

Year Production Units	2018			2019		
	Capacity	Quantity	Amount	Capacity	Quantity	Amount
IC Packaging	12,324,692	11,025,300	31,914,437	12,633,942	11,083,932	30,073,884
IC Testing	9,129,235	6,960,538	11,480,104	8,861,588	6,715,326	13,151,756
Wafer Level Packaging	1,247	797	3,035,235	1,300	774	2,483,523
Wafer Level Testing	3,282	2,571	5,094,738	1,204	1,068	2,272,550
Total	21,458,456	17,989,206	51,524,514	21,498,034	17,801,100	47,981,713

## (6) Sales Quantity &amp; Value Table 2018-2019

Quantity Unit: 1,000 wafers Amount Unit: NT\$ Thousands

Year Sales Quantity & Value	2018				2019			
	Domestic Sales		Exports		Domestic Sales		Exports	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
IC Packaging	6,055,816	8,390,151	4,988,870	33,407,896	6,304,864	8,519,264	4,815,833	31,664,280
IC Testing	4,312,491	2,357,230	2,695,853	13,637,546	4,217,109	2,271,432	2,548,104	15,352,216
Wafer Level Packaging	165	915,240	635	2,807,917	176	881,556	551	2,564,593
Wafer Level Testing	1,083	2,072,481	2,351	4,024,018	981	1,722,420	836	3,128,665
Others	—	17,505	—	409,395	—	7,248	—	413,470
Total	10,369,555	13,752,607	7,687,709	54,286,772	10,523,130	13,401,920	7,365,324	53,123,224

### 3. Employee Status

Table for Employees Number, Average Age, Average Years of Service, and Distribution of Education for Last Two Years

Year		2018	2019	As of Mar 31, 2020
Employees number	Administration and Management Staff	1,369	1,435	1,450
	R&D Engineering Staff	2,381	2,394	2,466
	Operators	7,005	7,562	7,643
	Total	10,755	11,391	11,559
Average Age		32.8	34.12	34.50
Average Years of Service		4.04	5.14	5.46
Education Distribution in %	Doctorates	0.11	0.08	0.08
	Masters	7.74	7.77	7.87
	College and Universities	72.15	71.72	71.61
	High School	19.49	19.96	20.03
	Below High School	0.51	0.47	0.41

### 4. Environmental Protection Expenditures

Any losses suffered by the company in the most recent fiscal year and up to the annual report publication date due to violation of environmental regulations (including any compensation paid and any violations of environmental protection laws or regulations found in environmental inspection, specifying the disposition dates, disposition reference numbers, the articles of law violated, and the content of the dispositions), and disclosing an estimate of possible expenses that could be incurred currently and in the future and measures being or to be taken. If a reasonable estimate cannot be made, an explanation of the facts of why it cannot be made shall be provided.

- (I) Losses due to environmental pollution and total fines during the most recent year and up to the annual report publication date:

Hsinchu County Environmental Protection Bureau sent a notice (Huan-Yeh No. 1083402040) to PTI on August 14, 2019, that hazardous industrial waste was still stored at our 3C factory more than one year after it was produced. For violating Paragraph 1, Article 36 of the *Waste Disposal Act*, and Article 7 of the *Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste*, A fine of NT\$60,000 was therefore imposed under Paragraph 2, Article 53 of the *Waste Disposal Act*.

Improvements and preventive measures:

A licensed waste contractor was immediately contracted after the incident to remove the hazardous industrial waste: Preventive measures: The regulatory knowledge of responsible personnel was strengthened. A reminder function for temporary storage was also added to

the waste report and control to ensure effective execution of waste management operations.

(II) Estimate of possible expenses that could be incurred currently and in the future, and response measures taken:

1. Estimate of possible expenses that could be incurred currently and in the future

Proposed purchase of pollution control equipment or expenditures:

Unit : NT K

Item	2020	2021	2022
GHG inventory counseling and verification fees	360	360	360
Payment of sewage treatment and discharge fees	25,000	30,785	30,785
Wastewater treatment costs	37,624	40,000	40,000
Environmental monitoring and testing fees	800	966	966
Industrial waste removal and processing costs	55,000	55,000	55,000
Expansion of wastewater treatment facilities	69,000	70,000	70,000
Air pollution testing fees	117	125	125
Installation of air pollution treatment facilities	120,000	100,000	0
Air pollution control costs	487	633	633
<b>Total Expenses</b>	<b>308,388</b>	<b>297,869</b>	<b>197,869</b>

## 2. Maintenance Measures

### (1) Management Program:

The Company conducts the following programs to implement its responsibilities on environmental protection:

- A. The use of chemicals in the production process is rigorously controlled by PTI to prevent air pollution from Volatile Organic Compounds (VOCs) produced during the production process. Comprehensive control equipment (treatment equipment such as activated carbon and washing towers) effectively limit the amount of air pollution.
- B. Recycle Waste Water: Utilize waste water recycle system to reduce waste on resources and re-use the recycle water to save and protect the water resources.
- C. Water Pollution Control: all facilities waste water must be treated and meet official standard before release back to the water system. Internal monitoring system and regular measure & calibration were in place.
- D. All waste produced during production are disposed of in accordance with the law. Waste is also sorted and collected the source to make it more



recyclable..

- E. Work with suppliers: Regularly inspects suppliers to meet environmental protection regulations.
- F. A trans-department energy conservation organization was established to implement energy conservation projects that reduce energy consumption and GHG emissions; A GHG inventory management process was established in accordance with the ISO 14064-1 standard. Professional organizations were also retained to provide counseling and verification. Disclosure of carbon emission data was provided to conform with international environmental trends.
- G. Voluntary Environmental Monitor Program: Program including waste water, noise, air quality, waste material impact on environment to effectively control the company operations impact on the environment.
- H. Allowance Permit: Consistently monitor the company operations meet the latest environmental standards.

## 5. Labor Relations

### (1) The Implementation Status for Employee Welfare Policy, Training and Continue Education

PTI values the salary and benefits for its employees and offers lawful benefits. According to the bonus payment specifications, annual earnings minus taxes, surplus and dividends are then appropriate for employee bonuses. Employees can also enjoy benefits provided by the Employee Welfare Committee. With PTI family day, movie screenings and year end banquets to relieve stress from work and bond with coworkers.

1. Insurance: All PTI employees are insured with free general group insurance (including life, accident, medical, cancer, and other insurances). In the spirit of caring for employees as well as their families, the spouse and children of employees also include in the free group insurance.
2. Health and Safety:
  - (1) Through professional medical staff and health management, PTI conducts health promotion and health management for employees. All plants are staffed with professional medical personnel to monitor the health of employees. We collaborate with professional medical organizations to conduct health examinations for employees.
  - (2) We conduct risk management and assessment for resumption of work for individuals with high health risks. We also offer health information and courses.
  - (3) PTI prevent the disease triggered by abnormal workload by self-reporting the workload, work in day/ night shift, prolonged abnormal workload, irregular schedule,

frequent business trips, or tense working conditions. These employees undergo health risk evaluation, overwork risk evaluation, and Framingham risk evaluation. On-site doctors evaluate the results, talk with the employees, and if necessary, change job positions, decrease working hours, or take other administrative management to maintain employee health.

- (4) In 2004, PTI obtained the OHSAS 18001 occupational health and safety management certificate. To prevent occupational injuries and accidents and ensure the safety and health of our workplace, we also devised our "Environmental Safety and Health Policy".



3. PTI uses the "Psychological Counseling System" to let employees unload burdens and listened to themselves in this ever changing world of responsibilities. Care-free conversations during the Psychological Counseling System to heal inner wounds, rejuvenate, see a different world, and create a healthy work environment.
4. Company Trips: Employee Welfare Committee has unscheduled company trips to for coworkers to bond with each other. In 2017, we offered vouchers of a value of NTD\$1,500 to each employee. PTI Taiwan also signed contract with renowned travel agencies to offer package tour or coupon to employees, allowing them to achieve the balance between commitments to work and relaxing lifestyles.
5. Family Day/ Large-scale events: Employee Welfare Committee has irregularly scheduled family day and other large-scale events. The event is held to bond us together. Also, family members of our employees can get to know each other. This company is driven by the support of our colleagues and families. Family Day makes us happy and maintains our physical and mental health. 2017 was the 20<sup>th</sup> anniversary for PTI, we held special events to thank all the collaboration from our partners. Movie ticket issuing is part of our benefits. Through regular free ticket issuing, employees can enjoy movies together and

reach the effort of bonding people. In 2017, we organized entertainment park day trip. Each employee was given two tickets.

The Employee Welfare Committee organized family days and other large leisure activities. PTI employees and their dependents are all considered part of the PTI family. The hosting of family day activities allows employees and their families to have fun together, strengthens the bonds between employees, and encourages employees to support charity. These initiatives make employees feel more inspired and happy outside of work. We strive to “build a friendly workplace” and create a quality environment where employees can enjoy their work and life. Our goal for the friendly workplace is to achieve “work-life balance.” In addition to providing generous remuneration and benefits, we also organize a variety of activities. We look after not only PTI employees but their families as well. By 1. communicating the PTI culture, 2. looking after PTI partners, and 3. Building up rapport at PTI, we hope to inspire our partners to focus on the creation of even more unlimited possibilities.

(1) Communication of PTI culture: A corporate culture of “co-creation, co-sharing, co-success” is communicated through different activities. PTI partners are encouraged to create and share as much as possible. The sharing of knowledge between partners is one of sources of continued growth at PTI.

(2) Looking after PTI partners: Employees are offered variety of activities to find one they like in order to achieve a balance between work and life. We help employees stay motivated in work and life by helping them build an exciting life. At the same time, we also look after our partners’ families so they can concentrate fully on their work.

(3) Building rapport at PTI: Activities are used to create more opportunities for partners to connect with the Company and each other in order to build team cohesion and expand personal networks. The personal networks that partners build improves talent retention and provides them with more resources within the organization. The improved productivity will in turn lead to better work performance.

6. Employee Club Activities: We value the balanced development of work and life of our employees. PTI's Employee Welfare Committee plans a variety of events throughout the year and encourages employee participation to relieve stress from work, bond with coworkers, develop physical and mental health, cultivate cultural knowledge, promote social welfare, and thus become an employee in the technology industry with LOHAS. We have 9 employee clubs with 648 members.
7. Leave from work: In accordance with Labor Standard Act, PTI offers holiday and annual

leave to employee. Regular reports are provided to supervisors to assist employee has a balanced work and life.

8. Birthday/ Funeral and Other Benefits:

- (1) Birthday star is given a coupon equivalent of NTD\$500 to celebrate his/her birthday. Employees with matters of material contingencies are offered a grant from NTD\$1,000 to NTD\$10,000.
- (2) PTI offers NTD\$1,000 value of cash or equivalent coupon, gift on annual Labor's Day.
- (3) PTI offers coupon/ gift equivalent of NTD\$1,000 during Dragon Boat Festival, Mid-autumn Festival etc.
- (4) Gifts are offered to employees with 3, 5, 10, 20 years of seniority.

9. Maternity Subsidies and Other Services: A NTD\$2,000 of subsidies per child birth are provided to employee or its spouse. Also, PTI provides related application services for labor insurance. PTI cares about the employees and their interaction with their families. By having the employee welfare committee signing designated kindergartens and child-care facilities in the areas where employees reside, we offer options of pre-school care for the children of our employees, so that the employees can excel in both their work and their family life without any worries.

10. Food and Housing: PTI has its own cafeteria offering meals with subsidies. Employee only has to pay a small amount to enjoy lavish meals.

11. On-Job-Training: To ensure a diverse talent, we "listen to needs" to consider internal and external issues. We are committed to meet the demand of employee learning, organizational development, and company policies, which has led us to PTI's unique "need and resolution oriented" operational model and training system, where we enhance the managerial abilities of executives, improve employee competence, and ensure the sustainable growth of the company.

(2) The Implementation Status for employee retirement and pension system

PTI Taiwan follows the Labor Standards Law and the Labor Pension Act in implementing employee retirement regulations and established a labor pension supervision committee to appropriate the full amount of pension contribution for employee to apply for pension after retirement. The insurer of Annuity Insurance is an insurance company approved by the central competent authority and the insured of the Annuity Insurance contract is the employer who will insure from the same insurer. The workers are the insured persons and beneficiaries. The Annuity Insurance premium to be paid by the employer each month may not be less than 6% of the monthly wages of the worker. In 2017, the listed total amount contributed to pension was

NT\$290,347,000.

(3) Negotiation between Management and Labor and the Implementation of Employee Rights

1. Employee Care:

PTI values the opinion of its employees. We offer various channels to encourage communication between employees and the management, so that we thoroughly understand employees' satisfaction with management and welfare systems and maintain good labor-management relationship. Since our foundation, PTI has enjoyed harmonious labor-management relationship. There has been no occurrence of labor-management disputes that resulted in losses. The possibility of future labor management disputes leading to losses is extremely low. In addition, with quarterly labor management meetings and welfare committee meetings, employees can voice their opinions on specific issues and reach agreement with the company through discussions in the meetings, thus perpetuating effective communication channels. PTI also respect and protect employees' rights of freedom of speech and freedom of assembly and association. The quarterly labor management meetings are negotiated by labor representation voted by employees.

2. Comprehensive Communication Channels

We have established comprehensive channels for diverse, two-way, and open communication. By helping employees communicate their opinions to the management, their concerns can be effectively taken care of. Our fair, confidential, and efficient handling procedure resolves employees' concerns while maintaining good labor management relationship. We have also established sexual-harassment prevention measures, employee psychological counseling services, and rewards and discipline regulations. We are always listening to employees' opinions. Anonymous or otherwise, we always exercise confidentiality and fairness in handling such information. All forms of retribution are protected against, so that employees can express their concerns without fear.

(4)List any losses suffered by the company in the most recent fiscal year and up to the annual report publication date due to labor disputes (including any violations of the *Labor Standards Act* found during labor inspection, specifying the disposition dates, disposition reference numbers, the articles of law violated, the substance of the legal violations, and the content of the dispositions), and disclosing an estimate of possible expenses that could be incurred currently and in the future and measures being or to be taken. If a reasonable estimate cannot be made, an explanation of the facts of why it cannot be made shall be provided.

Date	Document #	Violation Code	Violation Summary	Finding
Dec 2 2019	Fu-Lao-Zi No. 1093930028	Paragraph 1, Article 24 of the <i>Labor Standards Act</i>	An employer shall pay worker overtime wages using the following basis: I. When the overtime work does not exceed two hours, the worker shall be paid, in addition to the regular hourly wage, at least an additional one-third of the regular hourly rate. II. When the overtime work is over two hours, but the total overtime work does not exceed four hours, the worker shall be paid, in addition to the regular hourly wage, at least an additional two-thirds of the regular hourly rate. III. When the overtime work requested is governed by Paragraph 4 of Article 32, the worker shall be paid two times the regular hourly rate.	(1) Fine of NT\$70,000  (2) Publication of offender's name and that of the person-in-charge
		Paragraph 2, Article 32 of the <i>Labor Standards Act</i>	The extension of working hours referred to in the preceding paragraph, combined with the regular working hours shall not exceed twelve hours a day; the total number of overtime shall not exceed forty-six hours a month; however, the extension of working hours, with the consent of a labor union, or if there is no labor union exists in a business entity, with the approval of a labor-management conference, shall not exceed fifty-four hours a month and one hundred and thirty-eight hours every three months.	

## 6. Major Contracts

Contract Classification	Contract Company	Contract Duration	Main Contents	Limitations of Terms
Outsource Services Contract	A Company	Jun 2019 -	Packaging and testing services	Non-disclosure agreement
	F Company	Dec 2019 – Dec 2020	Packaging and testing services	Non-disclosure agreement
	I Company	Dec 2019 – Dec 2022	Packaging and testing services	Non-disclosure agreement
Bank Loan	CTBC Bank	Sep 2019 - Sep 2022	Medium-term credit loan	Commitment to maintain a certain ratio between the assets & liabilities and net worth
	Mega International Commercial Bank, Hsin-An Branch	Dec 2019 - Dec 2022	Machinery & Equipment Loan	None
	Yuanta Commercial Bank	Jan 2019 – Jan 2023	Medium-term credit loan	Commitment to maintain a certain ratio between the assets & liabilities and net worth
	KGI Bank	Dec 2018 - Dec 2022	Medium-term credit loan	Commitment to maintain a certain ratio between the assets & liabilities and net worth
	E.Sun Bank	Sep 2017 - Sep 2032	Building Construction	None
		Sep 2017 - Sep 2024	Building Construction	
		May 2019 - May 2022	Medium-term credit loan	
	Hua Nan Bank	Sep 2019- Sep 2022	Medium-term credit loan	None
		Mar 2019 - Mar 2022		
		Jun 2019 – Jun 2022		
		Aug 2019 – Aug 2022		
	First Bank	May 2019 - May 2024	Medium-term credit loan	None
	Bank of Taiwan	Nov 2012 – Nov 2027	Building Construction Loan	None
		Nov 2016 – Nov 2021	Machinery & Equipment Loan	
		Sep 2017 – Sep 2022		
		Oct 2019 – Oct 2024		

Contract Classification	Contract Company	Contract Duration	Main Contents	Limitations of Terms
	Taiwan Cooperative Bank	Apr 2017 - Apr 2032	Building Construction Loan	None
		Apr 2017 - Apr 2024	Medium-term credit loan	
		Sep 2017 – Sep 2022	Machinery & Equipment Loan	
	Shin Kong Bank	Oct 2019- Oct 2022	Medium-term credit loan	None
	Chang Hwa Bank	Aug 2019 – Aug 2022	Medium-term credit loan	None
		Mar 2017 - Mar 2023	Machinery & Equipment Loan	
		Jun 2017 – Jun 2023	Machinery & Equipment Loan	
		May 2019 – May 2025	Machinery & Equipment Loan	
	Taishin Bank	Jan 2019- Jan 2022	Medium-term credit loan	Commitment to maintain a certain ratio between the assets & liabilities and net worth
	O Bank	Jul 2019 - Jul 2022	Medium-term credit loan	Commitment to maintain a certain ratio between the assets & liabilities and net worth
	Land Bank of Taiwan	Oct 2019 – Oct 2022	Medium-term credit loan	None
	HSBC	Sep 2019 – Sep 2022	Medium-term credit loan	None
	Cathay United Bank	Nov 2019 – Nov 2022	Medium-term credit loan	None
	Shanghai Commercial & Savings Bank, Ltd.	Jan 2019 – Jan 2022	Medium-term credit loan	None
	MUFG Bank	Oct 2019 – Oct 2022	Medium-term credit loan	None



## VI. Financial Highlights

### 1. Summarized Balance Sheets, Income Statements, CPA and Audit Opinions for Last 5 years

#### (1) Summarized Balance Sheets

##### 1. PTI Consolidated Balance Sheets – IFRS

Unit: NT\$ Thousands

Year Item							
		2015	2016	2017	2018	2019	3/31/2020
Current Assets		\$32,538,444	\$31,686,234	\$37,077,396	\$37,889,542	\$43,342,833	Note 3
Property, Plant and Equipment		35,168,436	44,173,985	58,663,021	61,980,853	58,779,789	
Intangible Assets		1,225,706	1,125,149	1,249,649	1,162,204	1,059,626	
Other Assets		2,770,106	3,222,178	2,668,362	2,562,902	3,963,733	
Total Assets		71,702,692	80,207,546	99,658,428	103,595,501	107,145,981	
Current Liabilities	Before Distribution	11,291,105	16,735,143	21,788,688	18,580,671	20,404,401	
	After Distribution	14,018,118	19,851,730	25,294,848	22,320,575	Note 2	
Non-Current Liabilities		18,455,533	19,151,983	28,186,311	31,937,463	31,843,617	
Total Liabilities	Before Distribution	29,746,638	35,887,126	49,974,999	50,518,134	52,248,018	
	After Distribution	32,473,651	39,003,713	53,481,159	54,258,038	Note 2	
Equity Belong to Parent Company		33,830,784	35,814,959	38,060,810	41,003,226	43,027,728	
Capital Stock		7,791,466	7,791,466	7,791,466	7,791,466	7,791,466	
Capital Surplus		1,457,194	678,047	119,593	127,734	209,852	
Retained Earnings	Before Distribution	24,419,993	27,291,846	30,555,478	33,361,411	35,447,618	
	After Distribution	22,472,127	24,736,245	27,049,318	29,621,507	Note 2	
Other Equity		162,131	53,600	(337,628)	(195,070)	(324,741)	
Treasury Stock		0	0	(68,099)	(82,315)	(96,467)	
Non-Controlling Interests		8,125,270	8,505,461	11,622,619	12,074,141	11,870,235	
Total Equity	Before Distribution	41,956,054	44,320,420	49,683,429	53,077,367	54,897,963	
	After Distribution	39,229,041	41,203,833	46,177,269	49,337,463	Note 2	

Note 1: The listed numbers were certified by CPA.

Note 2: The earnings distribution for 2019 subject to shareholders' approval.

Note3: No CPA certified data for 1Q20 as of the date of printing.

## 2. PTI Stand Alone Balance Sheets – IFRS

Item \ Year	Financial Information for Last Five Years					Mar 31 2020
	2015	2016	2017	2018	2019	
<b>Current Assets</b>	\$22,583,480	\$23,773,297	\$19,289,640	\$22,634,087	\$27,056,110	Note3
<b>Property, Plant, and Equipment</b>	25,282,123	31,339,124	36,344,220	36,364,180	35,113,054	
<b>Intangible Assets</b>	19,793	11,831	4,359	0	6,248	
<b>Other Assets</b>	12,261,080	11,920,199	16,532,424	17,175,479	18,916,216	
<b>Total Assets</b>	60,146,476	67,044,451	72,170,643	76,173,746	81,091,628	
<b>Current Liabilities</b>	<b>Before Distribution</b>	8,215,112	12,407,510	10,800,669	9,924,490	
	<b>After Distribution</b>	10,942,125	15,524,097	14,306,829	13,664,394	
<b>Non-Current Liabilities</b>		18,100,580	18,821,982	23,309,164	25,246,030	
<b>Total Liabilities</b>	<b>Before Distribution</b>	26,315,692	31,229,492	34,109,833	35,170,520	
	<b>After Distribution</b>	29,042,705	34,346,079	37,615,993	38,910,424	
<b>Capital Stocks</b>		7,791,466	7,791,466	7,791,466	7,791,466	
<b>Capital Surplus</b>		1,457,194	678,047	119,593	127,734	
<b>Retained Earnings</b>	<b>Before Distribution</b>	24,419,993	27,291,846	30,555,478	33,361,411	
	<b>After Distribution</b>	22,472,127	24,736,245	27,049,318	29,621,507	
<b>Other Equity</b>		162,131	53,600	(337,628)	(195,070)	
<b>Treasury Stocks</b>		0	0	(68,099)	(82,315)	
<b>Total Equity</b>	<b>Before Distribution</b>	33,830,784	35,814,959	38,060,810	41,003,226	
	<b>After Distribution</b>	31,103,771	32,698,372	34,554,650	37,263,322	

Note 1: The listed numbers were certified by CPA.

Note 2: The earnings distribution for 2019 subject to shareholders' approval

Note 3: No CPA certified data available for 2Q19 as the day of printing.

## (2) Summarized Income Statements

### 1. PTI Consolidated Income Statements – IFRS

Item	Year	Financial Information for Last Five Years					Mar 31 2020
		2015	2016	2017	2018	2019	
Net Sales		\$42,523,512	\$48,343,542	\$59,632,083	\$68,039,379	\$66,525,144	Note 1
Gross Profit		8,219,542	10,462,026	12,698,512	13,830,042	12,676,895	
Operating Income		5,643,828	7,632,373	9,074,024	9,783,654	8,712,240	
Non-Operating Income		163,770	(369,297)	(186,746)	(348,317)	(204,722)	
Income Before Income Tax		5,807,598	7,263,076	8,887,278	9,435,337	8,507,518	
Income from Continuing Operations after Income Taxes		5,040,004	6,008,868	7,291,275	7,512,562	6,879,292	
Income from Discontinued Operations		-	-	-	-	-	
Net Income (Losses)		5,040,004	6,008,868	7,291,275	7,512,562	6,879,292	
Other Consolidated Income (after-tax)		25,678	(138,013)	(497,749)	186,891	(357,273)	
Consolidated Net Income		5,065,682	5,870,855	6,793,526	7,699,453	6,522,019	
Net Income Attributable to Shareholders of the Parent Company		4,015,813	4,834,605	5,849,262	6,234,276	5,838,650	
Net Income Attributable to Non-Controlling Interests		1,024,191	1,174,263	1,442,013	1,278,286	1,040,642	
Consolidated Net Income Attributable to Shareholders of the Parent Company		4,055,088	4,711,188	5,428,005	6,369,021	5,696,440	
Consolidated Net Income Attributable to Non-Controlling Interests		1,010,594	1,159,667	1,365,521	1,330,432	825,579	
Earnings Per Share (NT\$)		5.20	6.20	7.51	8.02	7.52	

Note: The listed numbers were certified by CPA.

Note 2: No CPA certified data available for 1Q20 as of the date of printing.

### 2. PTI Stand Alone Income Statements – IFRS

Item	Year	Financial Information for Last Five Years					Mar 31 2020
		2015	2016	2017	2018	2019	
Net Sales		\$32,568,461	\$35,348,214	\$37,771,046	\$42,000,490	\$42,848,591	Note 1
Gross Profit		6,116,415	7,609,120	8,008,406	8,655,182	8,849,382	
Operating Income		4,340,438	5,515,633	5,509,933	6,027,213	6,144,161	
Non-Operating Income		170,482	270,378	1,341,740	1,298,840	695,444	
Income Before Income Tax		4,510,920	5,786,011	6,851,673	7,326,053	6,839,605	
Income from Continuing Operations after Income Taxes		4,015,813	4,834,605	5,849,262	6,234,276	5,838,650	
Income from Discontinued Operations		-	-	-	-	-	
Net Income (Losses)		4,015,813	4,834,605	5,849,262	6,234,276	5,838,650	
Other Consolidated Income (after-tax)		39,275	(123,417)	(421,257)	134,745	(142,210)	
Consolidated Net Income		4,055,088	4,711,188	5,428,005	6,369,021	5,696,440	
Earnings Per Share (NT\$)		5.20	6.20	7.51	8.02	7.52	

Note : The listed numbers were certified by CPA.

Note 1: No CPA certified data available for 1Q20 as of the date of printing.

### 3. CPA Opinions for the Last 5 Years

Year	Name of CPA	Opinion
2015	Yu-Feng Huang, Su-Li Fang	Unqualified Audit Report
2016	Yu-Feng Huang, Su-Li Fang	Unqualified Audit Report
2017	Yu-Feng Huang, Su-Li Fang	Unqualified Audit Report
2018	Yu-Feng Huang, Su-Li Fang	Unqualified Audit Report
2019	Yu-Feng Huang, Cheng-Chih Lin	Unqualified Audit Report

## 2. Financial Analysis for Last 5 years

### 1. Consolidated Analysis – IFRS

Item \ Year		Financial Information for Last Five Years (Note)					Mar 31 2020	
		2015	2016	2017	2018	2019		
Capital Structure Analysis (%)	Debt Ratio	41.49	44.74	50.15	48.76	48.76	Note 1	
	Long-term Fund to Fixed Asset Ratio	171.78	143.69	132.74	137.16	147.57		
Liquidity Analysis %	Current Ratio	288.18	189.34	170.17	203.92	212.42		
	Quick Ratio	262.76	168.37	150.26	181.93	192.30		
	Times Interest Earned (Times)	30.13	54.66	38.62	27.92	25.56		
Operating Performance Analysis	Average Collection Turnover (Times)	5.05	4.72	5.04	5.61	5.19		
	Average Collection Days	72.26	77.33	72.42	65.06	70.32		
	Average Inventory Turnover (Times)	12.90	12.42	12.61	13.72	13.98		
	Average Payment Turnover (Times)	10.93	9.92	10.09	10.88	10.01		
	Days Sales Outstanding	28.29	29.38	28.94	26.60	26.10		
	Fixed Assets Turnover (Times)	1.21	1.09	1.02	1.10	1.10		
	Total Assets Turnover (Times)	0.59	0.60	0.60	0.66	0.63		
Profitability Analysis	Return on Total Assets (%)	7.38	8.06	8.34	7.68	6.80		
	Return on Equity (%)	12.37	13.93	15.51	14.62	12.74		
	Ratio of Pre-Tax Income over Capital stock (%)	74.54	93.22	114.06	121.10	109.19		
	Net Margin(%)	9.44	10.00	9.81	9.16	8.78		
	Earnings per Share(NT)	5.20	6.20	7.51	8.02	7.52		
Cash Flow	Cash Flow Ratio (%)	112.83	77.23	81.13	108.75	88.00		
	Cash Flow Adequacy Ratio (%)	113.72	110.78	86.70	85.05	93.51		
	Cash Flow Reinvestment Ratio (%)	9.66	9.02	10.08	10.65	8.53		
Leverage	Operating Leverage	4.01	3.43	3.74	4.13	4.40		
	Financial Leverage	1.04	1.02	1.03	1.04	1.04		
Reasons for changes in financial ratios (changes under 20% are exclude from analysis)								
1. Decrease of Cash flow reinvest ratio due to less cash flow from operations, cash dividends and increase spending on estate, facility, and equipment.								

Note: The listed numbers were certified by CPA.

Note 1: No CPA certified data available for 1Q20 as of the date of printing.

## 2. PTI Stand Alone Analysis – IFRS

Year Item		Financial Information for Last Five Years					Mar 31 2020	
		2015	2016	2017	2018	2019		
Capital Structure Analysis (%)	Debt Ratio	43.75	46.58	47.26	46.17	46.94	Note 1	
	Long-term Fund to Fixed Asset Ratio	205.41	174.34	168.86	182.18	195.58		
Liquidity Analysis %	Current Ratio	274.90	191.60	178.60	228.06	217.86		
	Quick Ratio	250.99	173.97	155.26	199.80	194.87		
	Times Interest Earned (Times)	26.67	47.90	42.55	37.54	28.52		
Operating Performance Analysis	Average Collection Turnover (Times)	5.42	4.96	5.33	6.79	6.19		
	Average Collection Days	67.31	73.59	68.43	53.74	59.00		
	Average Inventory Turnover (Times)	14.29	13.53	12.79	12.69	12.18		
	Average Payment Turnover (Times)	10.78	9.70	9.25	9.84	8.96		
	Days Sales Outstanding	25.55	26.98	28.54	28.77	29.96		
	Fixed Assets Turnover (Times)	1.29	1.13	1.12	1.16	1.20		
	Total Assets Turnover (Times)	0.54	0.53	0.54	0.57	0.54		
Profitability Analysis	Return on Total Assets (%)	7.06	7.76	8.60	8.63	7.68		
	Return on Equity (%)	12.29	13.88	15.84	15.77	13.90		
	Ratio of Pre-Tax Income over Capital stock (%)	57.90	74.26	87.94	94.03	87.78		
	Net Margin(%)	12.33	13.68	15.49	14.84	13.63		
	Earnings per Share(NT)	5.20	6.20	7.51	8.02	7.52		
Cash Flow	Cash Flow Ratio (%)	113.70	57.65	118.57	117.95	91.48		
	Cash Flow Adequacy Ratio (%)	108.67	101.10	80.92	77.61	88.41		
	Cash Flow Reinvestment Ratio (%)	8.20	4.95	9.86	7.91	6.91		
Leverage	Operating Leverage	3.78	3.28	3.28	3.83	3.76		
	Financial Leverage	1.04	1.02	1.02	1.03	1.04		
Reasons for changes in financial ratios (changes under 20% are excluded from analysis)								
1. Decrease of times of interest earned were due to decrease of income tax and income before tax.								
2. Decrease of cash flow ration was due to increase of debts.								

Note: The listed numbers were certified by CPA

Note 1: No quarterly data available after IFRS adoption.

1. Capital Structure Analysis
  - (1) Debt Ratio = Total Liabilities / Total Assets
  - (2) Long-term Fund to Fixed Asset Ratio = (Shareholders' Equity + Long-term Liabilities) / Net Fixed Assets
2. Liquidity Analysis
  - (1) Current Ratio = Current Assets / Current Liabilities
  - (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities
  - (3) Times Interest Earned = Earnings before Interest Expense and Net Income / Interest Expense.
3. Operating Performance Analysis
  - (1) Average Collection Turnover = Net Sales / Average Receivables (including Accounts Receivable arising from Operation Notes Receivables)
  - (2) Average Collection Days = 365 / Receivables Turnover
  - (3) Average Inventory Turnover = Cost of Goods Sold / Average Inventory
  - (4) Average Payment Turnover = Cost of Goods Sold / Average Payables (including Accounts Payable arising from Operation Notes Payables)
  - (5) Days Sales Outstanding = 365 / Inventory Turnover
  - (6) Fixed Assets Turnover = Net Sales / Average Net Fixed Assets
  - (7) Total Assets Turnover = Net sales / Average Total Assets
4. Profitability Analysis
  - (1) Return on Total Assets = [Net Income + Interest Expense × (1 - Tax Rate)] / Average Total Assets
  - (2) Return on Equity = Net Income / Average Total Shareholders' Equity
  - (3) Net Margin = Net Income / Net Sales
  - (4) Earnings Per Share = (Net Income - Preferred Stock Dividends) / Weighted Average Number of Shares Outstanding
5. Cash Flow
  - (1) Cash Flow Ratio = Net Cash Flow from Operating Activities / Current Liabilities.
  - (2) Cash Flow Adequacy Ratio = Five-year Net Cash Flow from Operating Activities / Most Recent Five Years (Capital Expenditure + Inventory + Cash Dividend).
  - (3) Cash Reinvestment Ratio = (Net Cash Flow from Operating Activities - Cash Dividend) / (Gross Fixed Assets + Investments + Other Assets + Working Capital)
6. Leverage
  - (1) Operating leverage = (Net Sales - Variable Operating Costs and Expenses) / Income
  - (2) Financial leverage = Operating income / (Operating Income - Interest Expense)

### **3. Audit Committee's Audit Report on Financial Reports**

#### **Audit Committee's Audit Report**

May 10, 2020

Audit Committee had performed an audit for PTI's 2019 financial statements (including parent company and consolidated financial statements) and profit sharing plans. The Audit Committee had concluded the reports conformed to regulations of the Company Act. Our report was presented to conform to Article 14-4 of Security Exchange Act and Article 219 of the Company Act.

Best Regards

Powertech Technology Inc. Shareholders' Meeting of May 28, 2020.

Powertech Technology Inc. Audit Committee  
Chair: Jim W.L. Cheng

**Powertech Technology Inc. and Subsidiaries**

**Consolidated Financial Statements for the  
Years Ended December 31, 2019 and 2018 and  
Independent Auditors' Report**



## **DECLARATION OF CONSOLIDATION OF FINANCIAL STATEMENTS OF AFFILIATES**

The companies required to be included in the consolidated financial statements of affiliates in accordance with the “Criteria Governing Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises” for the year ended December 31, 2019 are all the same as the companies required to be included in the consolidated financial statements of parent and subsidiary companies under International Financial Reporting Standard 10 “Consolidated Financial Statements.” Relevant information that should be disclosed in the consolidated financial statements of affiliates has all been disclosed in the consolidated financial statements of parent and subsidiary companies. Hence, we have not prepared a separate set of consolidated financial statements of affiliates.

Very truly yours,

POWERTECH TECHNOLOGY INC.

By:

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TSAI DUH-KUNG  
Chairman

March 10, 2020

## **INDEPENDENT AUDITORS' REPORT**

The Board of Directors and Shareholders  
Powertech Technology Inc.

### **Opinion**

We have audited the accompanying consolidated financial statements of Powertech Technology Inc. and its subsidiaries (the Corporation), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Corporation as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

### **Basis for Opinion**

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Corporation in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Key Audit Matters**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matters of the consolidated financial statements of the Corporation for the year ended December 31, 2019, are described as follows:

#### **Contract assets and revenue recognition**

1. The sales revenue of the Corporation is material to the Corporation. Refer to Note 22 to the accompanying consolidated financial statements for details of sales revenue. The major type of revenue is subcontracting revenue. The types of subcontracting transactions are as follows:
  - 1) Wafer level testing;
  - 2) Wafer level packaging;

- 3) IC packaging; and
  - 4) IC testing.
2. Packaging services: Since the customers have ownership of the assets, assume significant risks and rewards of ownership of the assets, have the right to determine the disposal of the assets and can prevent the Corporation from obtaining the benefits of the assets, revenue should be recognized over time in accordance with the requirements of paragraph 35(b) of International Financial Reporting Standards No. 15.
  3. Testing services: In accordance with the requirements of paragraph 35(a) of International Financial Reporting Standards No. 15., as the Corporation conducts testing services, the customers obtain and consume the benefits provided by the Corporation's testing services at the same time. Therefore, revenue should also be recognized over time.
  4. The Corporation recognizes the contract assets and revenue of packaging and testing services at the end of each month based on the completion schedule. Since the above-mentioned process includes estimates and manual controls, there is a risk that contract assets and revenue may not be recognized correctly as a result of human error.
  5. We reviewed the Corporation's revenue recognition policy, assessed the reasonableness of its contract assets and revenue recognition, and confirmed against relevant supporting documents and accounts records to verify the accuracy of the monetary amounts of contract assets and revenue recognition.

#### Capitalization of property, plant and equipment

1. The capital expenditure of the Corporation relating to property, plant and equipment is significant to its consolidated financial statements. Refer to Note 13 of the accompanying consolidated financial statements for details on property, plant and equipment.
2. To ensure the accuracy of the cost amounts, the requisition, purchasing, verification and record-keeping of the Corporation's property, plant and equipment are all subject to appropriate sign-off procedures. According to the list of newly acquired, un-capitalized items and unit acceptance forms, the Corporation's accounting department will record the items that should be capitalized into the computer system of fixed assets every month. The Corporation will regularly examine items that were not capitalized for more than three months after their purchase date and request the department utilizing the items to provide an explanation as to why the items which should already have been capitalized have not yet been capitalized.
3. Because of the significance of such capital expenditure amounts, delays in capitalization or errors in cost amounts thereof may lead to misstatement of the consolidated financial statements
4. We reviewed the Corporation's property, plant and equipment capital expenditure policy, assessed the reasonableness of the timing of capitalization, and conducted the following procedures:
  - 1) We selected samples of newly acquired items from the record of property, plant and equipment to verify whether the costs are recognized in the appropriate period.
  - 2) We selected samples from the list of advance payments and construction in progress at the end of the year and performed an on-site inventory count to observe whether such items were not yet ready for their intended use.
  - 3) We selected samples of items that were not capitalized for more than three months after their purchase date from the list of advance payments and construction in progress to examine whether the reasons of such items remaining un-capitalized had been explained by applicants or users and were approved by supervisors.

## **Other Matter**

We have also audited the parent company only financial statements of Powertech Technology Inc. as of and for the years ended December 31, 2019 and 2018 on which we have issued an unmodified opinion.

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

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Corporation'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 Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Corporation's financial reporting process.

## **Auditors' Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China 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 consolidated financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated 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 our 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.
2. 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 Corporation's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. 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 Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such

disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient and appropriate audit evidence regarding the financial information of entities or business activities within the Corporation to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision, and performance of the Corporation audit. We remain solely responsible for our audit opinion.

We 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 we identify during our audit.

We also provide those charged with governance with a statement that we 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 our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2019 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yu-Feng Huang and Cheng Chih Lin.

Deloitte & Touche  
Taipei, Taiwan  
Republic of China

March 10, 2020

#### Notice to Readers

*The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The*

*standards, procedures and practices to audit such consolidated financial statements are those generally applied in the Republic of China.*

*For the convenience of readers, the independent auditors' report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and consolidated financial statements shall prevail.*

# POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS DECEMBER 31, 2019 AND 2018 (In Thousands of New Taiwan Dollars)

ASSETS	2019		2018		LIABILITIES AND EQUITY	2019		2018	
	Amount	%	Amount	%		Amount	%	Amount	%
CURRENT ASSETS					CURRENT LIABILITIES				
Cash and cash equivalents (Notes 4 and 6)	\$ 21,800,048	20	\$ 18,544,142	18	Short-term bank loans (Note 17)	\$ 1,182,283	1	\$ 843,953	1
Financial assets at fair value through profit or loss - current (Notes 4 and 7)	71,207	-	56,217	-	Financial liabilities at fair value through profit or loss - current (Notes 4 and 7)	3,953	-	2,223	-
Financial assets at amortized cost - current (Notes 4, 9 and 29)	549,732	-	548,917	-	Contract liabilities - current (Note 22)	62,458	-	39,323	-
Contract assets - current (Notes 22 and 28)	2,170,456	2	1,671,214	2	Notes and accounts payable	5,785,178	5	4,969,810	5
Notes and accounts receivable (Notes 4 and 10)	9,518,972	9	8,966,825	9	Accounts payable to related parties (Note 28)	120,603	-	-	-
Receivables from related parties (Notes 4, 10 and 28)	4,252,488	4	2,879,308	3	Accrued employees' compensation and remuneration of directors (Note 23)	792,121	1	959,978	1
Other receivables (Note 4)	312,508	-	309,115	-	Payables to equipment suppliers	4,252,127	4	2,443,343	2
Other receivables from related parties (Notes 4 and 28)	6,525	-	16,081	-	Other payables to related parties (Note 28)	17,447	-	569	-
Inventories (Notes 4 and 11)	3,879,025	4	3,822,960	4	Current income tax liabilities (Notes 4 and 24)	778,495	1	1,603,899	2
Prepaid expenses	227,082	-	261,915	-	Lease liabilities - current (Notes 3, 4, 5, and 14)	211,549	-	-	-
Other current assets (Notes 4 and 16)	554,790	1	812,848	1	Accrued expenses and other current liabilities (Notes 4, 19 and 28)	7,015,882	7	7,224,942	7
Total current assets	43,342,833	40	37,889,542	37	Current portion of long-term debt (Notes 17 and 29)	182,305	-	361,637	-
NON-CURRENT ASSETS					Finance lease payables - current (Notes 3, 4 and 18)	-	-	130,994	-
Financial assets at fair value through other comprehensive income - non-current (Notes 4 and 8)	26,093	-	26,803	-	Total current liabilities	20,404,401	19	18,580,671	18
Financial assets at amortized cost - non-current (Notes 4, 9 and 29)	1,501,145	2	2,041,110	2	NON-CURRENT LIABILITIES				
Property, plant and equipment (Notes 4, 13, 28 and 29)	58,779,789	55	61,980,853	60	Long-term debt (Notes 17 and 29)	29,456,112	28	30,872,339	30
Right-of-use assets (Notes 3, 4, 5 and 14)	1,925,903	2	-	-	Deferred income tax liabilities (Notes 4 and 24)	114,476	-	115,906	-
Intangible assets (Notes 4 and 15)	1,059,626	1	1,162,204	1	Lease liabilities - non-current (Notes 3, 4, 5 and 14)	1,546,096	2	-	-
Deferred income tax assets (Notes 4 and 24)	384,507	-	357,829	-	Finance lease payables - non-current (Notes 3, 4 and 18)	-	-	163,439	-
Other non-current assets (Notes 4, 16 and 20)	126,085	-	137,160	-	Net defined benefit liabilities - non-current (Notes 4 and 20)	395,785	-	404,530	1
Total non-current assets	63,803,148	60	65,705,959	63	Other non-current liabilities (Note 19)	331,148	-	381,249	-
					Total non-current liabilities	31,843,617	30	31,937,463	31
					Total liabilities	52,248,018	49	50,518,134	49
					EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE CORPORATION (Notes 4 and 21)				
					Capital stock				
					Common shares	7,791,466	7	7,791,466	7
					Capital surplus	209,852	-	127,734	-
					Retained earnings				
					Legal reserve	7,045,884	7	6,422,456	6
					Special reserve	195,070	-	337,628	-
					Unappropriated earnings	28,206,664	26	26,601,327	26
					Total retained earnings	35,447,618	33	33,361,411	32
					Other equity	(324,741)	-	(195,070)	-
					Treasury share	(96,467)	-	(82,315)	-
					Total equity attributable to shareholders of the Corporation	43,027,728	40	41,003,226	39
					NON-CONTROLLING INTERESTS (Notes 12 and 21)	11,870,235	11	12,074,141	12
					Total equity	54,897,963	51	53,077,367	51
TOTAL	\$ 107,145,981	100	\$ 103,595,501	100	TOTAL	\$ 107,145,981	100	\$ 103,595,501	100

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

# POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018 (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2019		2018	
	Amount	%	Amount	%
NET SALES (Notes 4, 22 and 28)	\$ 66,525,144	100	\$ 68,039,379	100
OPERATING COSTS (Notes 4, 11, 23 and 28)	<u>53,848,249</u>	<u>81</u>	<u>54,209,337</u>	<u>80</u>
GROSS PROFIT	<u>12,676,895</u>	<u>19</u>	<u>13,830,042</u>	<u>20</u>
OPERATING EXPENSES (Notes 23 and 28)				
Marketing	326,433	-	380,531	-
General and administrative	1,711,601	3	1,801,639	3
Research and development	1,905,221	3	1,864,218	3
Expected credit loss (Note 10)	<u>21,400</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total operating expenses	<u>3,964,655</u>	<u>6</u>	<u>4,046,388</u>	<u>6</u>
OPERATING INCOME	<u>8,712,240</u>	<u>13</u>	<u>9,783,654</u>	<u>14</u>
NONOPERATING INCOME AND EXPENSES				
Other gains and losses (Notes 4, 23 and 28)	17,167	-	(417,992)	-
Other income (Notes 4, 23 and 28)	234,703	-	204,861	-
Finance costs (Notes 4 and 23)	(346,444)	-	(350,525)	-
Foreign exchange (loss) gain, net (Notes 4 and 23)	<u>(110,148)</u>	<u>-</u>	<u>215,339</u>	<u>-</u>
Total nonoperating income and expenses	<u>(204,722)</u>	<u>-</u>	<u>(348,317)</u>	<u>-</u>
INCOME BEFORE INCOME TAX	8,507,518	13	9,435,337	14
INCOME TAX EXPENSE (Notes 4 and 24)	<u>1,628,226</u>	<u>3</u>	<u>1,922,775</u>	<u>3</u>
NET INCOME	<u>6,879,292</u>	<u>10</u>	<u>7,512,562</u>	<u>11</u>
OTHER COMPREHENSIVE INCOME (LOSS) (Notes 4 and 21)				
Items not reclassified subsequently to profit or loss:				
Remeasurement of defined benefit plans (Note 20)	(22,442)	-	(20,445)	-
Unrealized loss on investments in equity instruments at fair value through other comprehensive income	(710)	-	(32,193)	-
Items reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations	<u>(334,121)</u>	<u>-</u>	<u>239,529</u>	<u>-</u>
Total other comprehensive (loss) income	<u>(357,273)</u>	<u>-</u>	<u>186,891</u>	<u>-</u>
TOTAL COMPREHENSIVE INCOME	<u>\$ 6,522,019</u>	<u>10</u>	<u>\$ 7,699,453</u>	<u>11</u>
NET INCOME ATTRIBUTABLE TO				
Shareholders of the Corporation	\$ 5,838,650	9	\$ 6,234,276	9
Non-controlling interests	<u>1,040,642</u>	<u>1</u>	<u>1,278,286</u>	<u>2</u>
	<u>\$ 6,879,292</u>	<u>10</u>	<u>\$ 7,512,562</u>	<u>11</u>

(Continued)



# POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018 (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2019		2018	
	Amount	%	Amount	%
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO				
Shareholders of the Corporation	\$ 5,696,440	9	\$ 6,369,021	9
Non-controlling interests	<u>825,579</u>	<u>1</u>	<u>1,330,432</u>	<u>2</u>
	<u>\$ 6,522,019</u>	<u>10</u>	<u>\$ 7,699,453</u>	<u>11</u>
EARNINGS PER SHARE (Note 25)				
Basic	<u>\$ 7.52</u>		<u>\$ 8.02</u>	
Diluted	<u>\$ 7.47</u>		<u>\$ 7.95</u>	

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

(Concluded)

# POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY  
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018  
(In Thousands of New Taiwan Dollars)

	Equity Attributable to Shareholders of the Corporation											
	Capital Stock - ordinary shares		Capital Surplus	Retained Earnings			Other Equity		Treasury Share	Total	Noncontrolling Interests	Total Equity
	Number of Shares (In Thousands)	Amount		Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translating Foreign Operations	Unrealized Gain (Loss) on Investments in Equity Instruments Designated Through Other Comprehensive Income				
BALANCE, JANUARY 1, 2018	779,147	\$ 7,791,466	\$ 119,593	\$ 5,837,530	\$ -	\$ 24,803,578	\$ (319,150)	\$ (18,478)	\$ (68,099)	\$ 38,146,440	\$ 11,676,332	\$ 49,822,772
Appropriation of the 2017 earnings												
Legal reserve	-	-	-	584,926	-	(584,926)	-	-	-	-	-	-
Special reserve	-	-	-	-	337,628	(337,628)	-	-	-	-	-	-
Cash dividends distributed by the Corporation	-	-	-	-	-	(3,506,160)	-	-	-	(3,506,160)	-	(3,506,160)
Cash dividends distributed by subsidiaries	-	-	-	-	-	-	-	-	-	-	(1,037,884)	(1,037,884)
Donations from shareholders	-	-	41	-	-	-	-	-	-	41	55	96
Distribution of cash dividends from capital surplus	-	-	-	-	-	-	-	-	-	-	-	-
Net income for the year ended December 31, 2018	-	-	-	-	-	6,234,276	-	-	-	6,234,276	1,278,286	7,512,562
Other comprehensive income (loss) for the year ended December 31, 2018	-	-	-	-	-	(7,813)	148,425	(5,867)	-	134,745	52,146	186,891
Total comprehensive income (loss) for the year ended December 31, 2018	-	-	-	-	-	6,226,463	148,425	(5,867)	-	6,369,021	1,330,432	7,699,453
The Corporation's shares held by its subsidiary treated as treasury shares	-	-	-	-	-	-	-	-	(14,216)	(14,216)	(18,915)	(33,131)
Adjustment of capital surplus due to dividends distributed to subsidiaries	-	-	8,100	-	-	-	-	-	-	8,100	-	8,100
Increase in non-controlling interests	-	-	-	-	-	-	-	-	-	-	124,121	124,121
BALANCE, DECEMBER 31, 2018	779,147	7,791,466	127,734	6,422,456	337,628	26,601,327	(170,725)	(24,345)	(82,315)	41,003,226	12,074,141	53,077,367
Appropriation of the 2018 earnings												
Legal reserve	-	-	-	623,428	-	(623,428)	-	-	-	-	-	-
Special reserve	-	-	-	-	(142,558)	142,558	-	-	-	-	-	-
Cash dividends distributed by the Corporation	-	-	-	-	-	(3,739,904)	-	-	-	(3,739,904)	-	(3,739,904)
Cash dividends distributed by subsidiaries	-	-	-	-	-	-	-	-	-	-	(939,230)	(939,230)
Donations from shareholders	-	-	57	-	-	-	-	-	-	57	75	132
Other changes in capital surplus changes in percentage of ownership interests in subsidiaries	-	-	71,501	-	-	-	-	-	-	71,501	(71,501)	-
Net income for the year ended December 31, 2019	-	-	-	-	-	5,838,650	-	-	-	5,838,650	1,040,642	6,879,292
Other comprehensive loss for the year ended December 31, 2019	-	-	-	-	-	(12,539)	(128,961)	(710)	-	(142,210)	(215,063)	(357,273)
Total comprehensive income (loss) for the year ended December 31, 2019	-	-	-	-	-	5,826,111	(128,961)	(710)	-	5,696,440	825,579	6,522,019
The Corporation's shares held by its subsidiary treated as treasury shares	-	-	-	-	-	-	-	-	(14,152)	(14,152)	(18,829)	(32,981)
Adjustment of capital surplus due to dividends distributed to subsidiaries	-	-	10,560	-	-	-	-	-	-	10,560	-	10,560
BALANCE, DECEMBER 31, 2019	779,147	\$ 7,791,466	\$ 209,852	\$ 7,045,884	\$ 195,070	\$ 28,206,664	\$ (299,686)	\$ (25,055)	\$ (96,467)	\$ 43,027,728	\$ 11,870,235	\$ 54,897,963

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

**POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**  
**(In Thousands of New Taiwan Dollars)**

	2019	2018
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Income before income tax	\$ 8,507,518	\$ 9,435,337
Adjustments for:		
Depreciation	12,711,268	12,512,745
Amortization	137,554	144,040
Expected credit loss recognized on trade receivables	21,400	-
Net (gain) loss on fair value change of financial assets designated as at fair value through profit or loss	(14,990)	2,744
Finance costs	346,444	350,525
Premium amortization of financial assets at amortized cost	1,146	1,770
Interest revenue	(116,330)	(84,749)
Net loss on disposal of property, plant and equipment	196,472	719,969
Property, plant and equipment transfer to expenses	7,876	1,202
Net loss on disposal of intangible assets	-	20,024
Impairment loss on non-financial assets	527,327	437,609
Net loss (gain) on foreign currency exchange, net	170,365	(196,902)
Changes in operating assets and liabilities:		
(Increase) decrease in contract assets	(499,242)	11,857
Increase in notes and accounts receivable	(654,534)	(596,797)
(Increase) decrease in accounts receivable from related parties	(1,410,714)	1,144,186
Increase in other receivables	(11,226)	(56,493)
(Increase) decrease in other receivables from related parties	(24,230)	11,258
Increase in inventories	(56,065)	(1,253,822)
Decrease (increase) in prepayments	34,833	(1,724)
Decrease (increase) in other current assets	258,058	(91,469)
Increase (decrease) in financial liabilities held for trading	1,730	(3,664)
Increase (decrease) in contract liabilities	23,135	(4,419)
Increase (decrease) in accounts payable	868,860	(19,760)
Increase in accounts payable to related parties	122,136	2,617
Decrease in accrued employees' compensation and remuneration of directors	(167,857)	(8,646)
Increase in other payables to related parties	16,878	569
(Decrease) increase in accrued expenses and other current liabilities	(200,230)	377,577
(Decrease) increase in net defined benefit liabilities	(21,284)	222
Decrease in other payables	(47,188)	(652,299)
Cash generated from operations	20,729,110	22,203,507
Interest received	118,900	79,177
Interest paid	(411,192)	(449,692)
Income tax paid	(2,481,738)	(1,625,894)
Net cash generated from operating activities	17,955,080	20,207,098

(Continued)

# POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018 (In Thousands of New Taiwan Dollars)

	2019	2018
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Acquisition of financial assets at amortized cost	\$ (100,228)	\$ (395,971)
Proceeds from sale of financial assets at amortized cost	645,594	644,627
Proceeds from disposal of non-current assets held for sale	-	1,024,362
Acquisition of property, plant and equipment	(8,715,717)	(17,689,500)
Disposal of property, plant and equipment	199,395	202,000
(Increase) decrease in refundable deposits	(19,460)	18,025
Increase in intangible assets	(32,061)	(33,090)
Increase in non-current assets	(8,700)	-
(Decrease) increase in prepayments for equipment	(33,009)	35,311
Decrease in other prepayments	<u>-</u>	<u>2,613</u>
Net cash used in investing activities	<u>(8,064,186)</u>	<u>(16,191,623)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Increase (decrease) in short-term bank loans	338,330	(2,998,396)
Proceeds from long-term debt	21,490,668	25,832,486
Repayments of long-term debt	(23,085,580)	(21,764,125)
(Decrease) increase in guarantee deposits	(2,913)	3,611
Decrease in finance lease payables	-	(11,806)
Repayment of the principal portion of lease liabilities	(289,500)	-
Dividends paid to shareholders of the Corporation	(3,729,344)	(3,498,060)
Payments for buy-back of treasury share	(32,981)	(33,131)
Dividends paid to non-controlling interests	(939,230)	(1,037,884)
Donations from shareholders	132	96
Increase in non-controlling interests	<u>-</u>	<u>124,121</u>
Net cash used in financing activities	<u>(6,250,418)</u>	<u>(3,383,088)</u>
<b>EFFECTS OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH HELD IN FOREIGN CURRENCIES</b>	<u>(384,570)</u>	<u>195,173</u>
<b>NET INCREASE IN CASH AND CASH EQUIVALENTS</b>	3,255,906	827,560
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF THE YEAR</b>	<u>18,544,142</u>	<u>\$17,716,582</u>
<b>CASH AND CASH EQUIVALENTS, END OF THE YEAR</b>	<u>\$21,800,048</u>	<u>\$18,544,142</u>

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

(Concluded)

**POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**  
**(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)**

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**1. GENERAL INFORMATION**

Powertech Technology Inc. (the PTI) was incorporated in the Republic of China (“ROC”) on May 15, 1997 and commenced business on September 3, 1997. The PTI is mainly engaged in the manufacturing, packaging, testing, researching and developing, designing, assembling and sale of various integrated circuit products. The PTI also provides semiconductor testing and assembly services on a turnkey basis, in which the PTI buys fabricated wafers and sells tested and assembled semiconductors. The PTI’s registered office and principal place of business is in Hsin-chu Industrial Park, Hukou, Hsin-chu.

The PTI’s shares were initially listed and started trading on the Taipei Exchange (“TPEX”) on April 3, 2003, after which the PTI’s shares were transferred for listing and started trading on the Taiwan Stock Exchange (“TWSE”) on November 8, 2004. The PTI also issued Global Depositary Shares (“GDS”), which are listed on the Luxembourg Stock Exchange and trading on the Euro MTF Market. The GDS were accepted for quotation on the International Order Book of the London Stock Exchange.

The consolidated financial statements are presented in the PTI’s functional currency, the New Taiwan dollar. For greater comparability and consistency of financial reporting, the consolidated financial statements are presented in New Taiwan dollars since the PTI’s shares are listed on the Taiwan Stock Exchange.

**2. APPROVAL OF FINANCIAL STATEMENTS**

The consolidated financial statements were approved by the board of directors and issued on March 10, 2020.

**3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS**

- a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the “IFRSs”) endorsed and issued into effect by the Financial Supervisory Commission (FSC)

Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Corporation’s accounting policies:

1) IFRS 16 “Leases”

IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 “Leases”, IFRIC 4 “Determining whether an Arrangement contains a Lease”, and a number of related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

### Definition of a lease

The Corporation elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into (or changed) on or after January 1, 2019. Contracts identified as containing a lease under IAS 17 and IFRIC 4 are not reassessed and are accounted for in accordance with the transitional provisions under IFRS 16.

### The Corporation as lessee

The Corporation recognizes right-of-use assets and lease liabilities for all leases on the balance sheets except for those whose payments under low-value asset and short-term leases are recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Corporation presents the depreciation expense charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the consolidated statements of cash flows, cash payments for the principal portion of lease liabilities are classified within financing activities; cash payments for the interest portion are classified within operating activities. Prior to the application of IFRS 16, payments under operating lease contracts were recognized as expenses on a straight-line basis. Prepaid lease payments for land use rights for land in the People's Republic of China were recognized as prepayments for leases. Cash flows for operating leases were classified within operating activities on the consolidated statements of cash flows. Leased assets and finance lease payables were recognized on the consolidated balance sheets for contracts classified as finance leases.

The Corporation elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized in retained earnings on January 1, 2019. Comparative information is not restated.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments. The Corporation applies IAS 36 to all right-of-use assets.

The Corporation also applies the following practical expedients:

- a) The Corporation applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.
- b) The Corporation accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.
- c) The Corporation excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.
- d) The Corporation uses hindsight, such as in determining lease terms, to measure lease liabilities.

For leases previously classified as finance leases under IAS 17, the carrying amounts of right-of-use assets and lease liabilities on January 1, 2019 are determined as at the carrying amounts of the respective leased assets and finance lease payables on December 31, 2018.

The lessee's weighted average incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 is 1.71%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018	\$ 393,632
The future minimum lease payments of cancellable operating lease commitments on December 31, 2018	<u>1,847,294</u>
Undiscounted amount on January 1, 2019	<u>\$ 2,240,926</u>
Discounted amount using the incremental borrowing rate on January 1, 2019	\$ 1,663,368
Add: Finance lease payables on December 31, 2018	<u>294,433</u>
Lease liabilities recognized on January 1, 2019	<u>\$ 1,957,801</u>

#### The Corporation as lessor

The Corporation does not make any adjustments for leases in which it is a lessor, and it accounts for those leases with the application of IFRS 16 starting from January 1, 2019.

The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:

	<b>As Originally Stated on January 1, 2019</b>	<b>Adjustments Arising from Initial Application</b>	<b>Restated on January 1, 2019</b>
Prepayments for leases - current	\$ 2,566	\$ (2,566)	\$ -
Property, plant and equipment	61,980,853	(369,999)	61,610,854
Prepayments for leases - non-current	63,520	(63,520)	-
Right-of-use assets	<u>-</u>	<u>2,099,453</u>	<u>2,099,453</u>
Total effect on assets	<u>\$ 62,046,939</u>	<u>\$ 1,663,368</u>	<u>\$ 63,710,307</u>
Lease liabilities - current	\$ -	\$ 259,743	\$ 259,743
Finance lease payables - current	130,994	(130,994)	-
Lease liabilities - non-current	-	1,698,058	1,698,058
Finance lease payables - non-current	<u>163,439</u>	<u>(163,439)</u>	<u>-</u>
Total effect on liabilities	<u>\$ 294,433</u>	<u>\$ 1,663,368</u>	<u>\$ 1,957,801</u>
Retained earnings	<u>\$ 26,601,327</u>	<u>\$ -</u>	<u>\$ 26,601,327</u>

## 2) IFRIC 23 "Uncertainty over Income Tax Treatments"

IFRIC 23 clarifies that when there is uncertainty over income tax treatments, the Corporation should assume that the taxation authority has full knowledge of all related information when making related examinations. If the Corporation concludes that it is probable that the taxation authority will accept an uncertain tax treatment, the Corporation should determine the taxable profit, tax bases, unused tax losses, unused tax credits or tax rates consistently with the tax treatments used or planned

planned to be used in its income tax filings. If it is not probable that the taxation authority will accept an uncertain tax treatment, the Corporation should make estimates using either the most likely likely amount or the expected value of the tax treatment, depending on which method the Corporation expects to better predict the resolution of the uncertainty. The Corporation has to reassess its judgments and estimates if facts and circumstances change.

Upon initial application of IFRIC 23, the Corporation determined that there was no effect on assets, liabilities and equity.

- b. The IFRSs endorsed by the FSC for application starting from 2020

<b>New IFRSs</b>	<b>Effective Date Announced by IASB</b>
Amendments to IFRS 3 “Definition of a Business”	January 1, 2020 (Note 1)
Amendments to IFRS 9, IAS 39 and IFRS 7 “Interest Rate Benchmark Reform”	January 1, 2020 (Note 2)
Amendments to IAS 1 and IAS 8 “Definition of Material”	January 1, 2020 (Note 3)

Note 1: The Corporation shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 2: The Corporation shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

Note 3: The Corporation shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

Except for the above impact, as of the date the consolidated financial statements were authorized for issue, the Corporation is continuously assessing the possible impact that the application of other standards and interpretations will have on the Corporation’s financial position and financial performance and will disclose the relevant impact when the assessment is completed.

- c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

<b>New IFRSs</b>	<b>Effective Date Announced by IASB (Note 1)</b>
Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”	To be determined by IASB
IFRS 17 “Insurance Contracts”	January 1, 2021
Amendments to IAS 1 “Classification of Liabilities as Current or Non-current”	January 1, 2022

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual reporting periods beginning on or after their respective effective dates.

Except for the above impact, as of the date the consolidated financial statements were authorized for issue, the Corporation is continuously assessing the possible impact that the application of other standards and interpretations will have on the Corporation’s financial position and financial performance and will disclose the relevant impact when the assessment is completed.



#### **4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

##### **a. Statement of compliance**

The consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRSs as endorsed and issued into effect by the FSC.

##### **b. Basis of preparation**

The consolidated financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value and defined benefit liabilities.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

- 1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- 2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- 3) Level 3 inputs are unobservable inputs for an asset or liability.

##### **c. Classification of current and non-current assets and liabilities**

Current assets include:

- 1) Assets held primarily for the purpose of trading;
- 2) Assets expected to be realized within 12 months after the reporting period; and
- 3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period.

Current liabilities include:

- 1) Liabilities held primarily for the purpose of trading;
- 2) Liabilities due to be settled within 12 months after the reporting period, and
- 3) Liabilities for which the Corporation does not have an unconditional right to defer settlement for at least 12 months after the reporting period.

Assets and liabilities that are not classified as current are classified as non-current.

##### **d. Basis of consolidation**

The consolidated financial statements incorporate the financial statements of the PTI and the entities controlled by the PTI (i.e. its subsidiaries).

Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of profit or loss and other comprehensive income from the effective dates of acquisitions up to the effective dates of disposals, as appropriate.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the PTI.

All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the PTI and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Corporation's ownership interests in subsidiaries that do not result in the Corporation losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the interests of the Corporation and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Corporation.

See Notes 12 and 32 k for detailed information on subsidiaries (including the percentages of ownership and main businesses).

e. Business combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interests in the acquiree over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after re-assessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held interests in the acquiree, the excess is recognized immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured at the non-controlling interests' proportionate share of the recognized amounts of the acquiree's identifiable net assets.

f. Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Corporation's foreign operations (including the subsidiaries and associates in other countries or subsidiaries that use currencies different from the PTI) are translated into New Taiwan dollars using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising are recognized in other comprehensive income (attributed to the owners of the PTI and non-controlling interests as appropriate).

g. Inventories

Inventories consist of raw materials and supplies and are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at standard cost and adjusted to approximate the weighted-average cost on the balance sheet date.

h. Property, plant, and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and accumulated impairment loss.

Property, plant and equipment in the course of construction for production are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. Such assets are depreciated and classified to the appropriate categories of property, plant and equipment when completed and ready for their intended use.

Depreciation of property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

i. Goodwill

Goodwill arising from the acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment loss.

For the purposes of impairment testing, goodwill is allocated to each of the Corporation's cash-generating units (referred to as cash-generating units) that are expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired, by comparing its carrying amount, including the attributable goodwill, with its recoverable amount. However, if the goodwill allocated to a cash-generating unit was acquired in a business combination during the current annual period, that unit shall be tested for impairment before the end of the current annual period. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

If goodwill has been allocated to a cash-generating unit and the entity disposes of an operation within that unit, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal, and is measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained.

j. Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Amortization is recognized on a straight-line basis. The estimated useful life, residual value, and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are measured at cost less accumulated impairment loss.

2) Internally-generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

3) Intangible assets acquired in a business combination

Intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset are recognized in profit or loss.

k. Impairment of tangible and intangible assets other than goodwill and assets related to contract costs

At the end of each reporting period, the Corporation reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered any impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Corporation estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the individual cash-generating units on a reasonable and consistent basis of allocation if corporate assets could be allocated to the individual cash-generating units, otherwise, corporate assets are allocated to the smallest group of cash-generating units on a reasonable and consistent basis of allocation.

The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

Before the Corporation recognizes an impairment loss from assets related to contract costs, any impairment loss on inventories related to the contract shall be recognized in accordance with applicable standards. Then, impairment loss from the assets related to the contract costs is recognized to the extent that the carrying amount of the assets exceeds the remaining amount of consideration that the Corporation expects to receive in exchange for related goods or services less the costs which relate directly to providing those goods or services and which have not been recognized as expenses. The assets related to the contract costs are then included in the carrying amount of the cash-generating unit to which they belong for the purpose of evaluating impairment of that cash-generating unit.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset, cash-generating unit or assets related to contract costs is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized for the asset, cash-generating unit or assets related to contract costs in prior years. A reversal of an impairment loss is recognized in profit or loss.

## 1. Financial instruments

Financial assets and financial liabilities are recognized when the Corporation becomes a party to the contractual provisions of the instruments.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issuance of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognized immediately in profit or loss.

### 1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a trade date basis.

#### a) Measurement category

Financial assets are classified into the following categories: Financial assets at FVTPL, financial assets at amortized cost and investments in equity instruments at FVTOCI.

#### i. Financial assets at FVTPL

A financial asset is classified as at FVTPL when the financial asset is mandatorily classified as at FVTPL.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset. Fair value is determined in the manner described in Note 27.

#### ii. Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

- i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- ii) 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.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, debt investments, time deposits with original maturities of more than 3 months, notes and accounts receivable (included related parties), other receivables (included related parties), pledged time deposits and refundable deposits, are measured at amortized cost, which equals the gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for:

- i) Purchased or originated credit-impaired financial assets, for which interest income is calculated by applying the credit-adjusted effective interest rate to the amortized cost of such financial assets; and
- ii) Financial assets that are not credit-impaired on purchase or origination but have subsequently become credit-impaired, for which interest income is calculated by applying the effective interest rate to the amortized cost of such financial assets in subsequent reporting periods.

A financial asset is credit impaired when one or more of the following events have occurred:

- i) Significant financial difficulty of the issuer or the borrower;
- ii) Breach of contract, such as a default;
- iii) It is becoming probable that the borrower will enter bankruptcy or undergo a financial reorganization; or
- iv) The disappearance of an active market for that financial asset because of financial difficulties.

Cash equivalents include time deposits with original maturities within 3 months from the date of acquisition, which are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These cash equivalents are held for the purpose of meeting short-term cash commitments.

### iii. Investments in equity instruments at FVTOCI

On initial recognition, the Corporation may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation as at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, instead, it will be transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Corporation's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

b) Impairment of financial assets and contract assets

The Corporation recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including accounts receivable) and contract assets.

The Corporation always recognizes lifetime expected credit losses (i.e. ECLs) for accounts receivable and contract assets. For all other financial instruments, the Corporation recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on the financial instrument has not increased significantly since initial recognition, the Corporation measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECLs represent the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represent the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

For internal credit risk management purposes, The Corporation determines that the following situations indicate that a financial asset is in default (without taking into account any collateral held by the Corporation):

- i. Internal or external information show that the debtor is unlikely to pay its creditors.
- ii. When a financial asset is more than 90 days past due unless the Corporation has reasonable and corroborative information to support a more lagged default criterion.

The impairment loss of all financial assets is recognized in profit or loss by a reduction in their carrying amounts through a loss allowance account.

c) Derecognition of financial assets

The Corporation derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss that had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

2) Equity instruments

Equity instruments issued by the Corporation are classified as equity in accordance with the substance of the contractual arrangements and the definitions of an equity instrument.

Equity instruments issued by the Corporation are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Corporation's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Corporation's own equity instruments.

### 3) Financial liabilities

#### a) Subsequent measurement

Except for the following situation, all financial liabilities are measured at amortized cost using the effective interest method.

#### Financial liabilities at FVTPL

A financial liability is classified as at FVTPL when such a financial liability is held for trading.

Financial liabilities held for trading are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any interest or dividends paid on such financial liability. Fair value is determined in the manner described in Note 27.

#### b) Derecognition of financial liabilities

The difference between the carrying amount of a financial liability derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

### 4) Derivative financial instruments

The Corporation enters into foreign exchange forward contracts to manage its exposure to foreign exchange rate risks.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of a derivative financial instrument is positive, the derivative is recognized as a financial asset; when the fair value of a derivative financial instrument is negative, the derivative is recognized as a financial liability.

### m. Revenue recognition

The Corporation identifies contracts with customers, allocates the transaction price to the performance obligations, and recognizes revenue when performance obligations are satisfied.

For contracts where the period between the date the Corporation transfers a promised good or service to a customer and the date the customer pays for that good or service is one year or less, the Corporation does not adjust the promised amount of consideration for the effects of a significant financing component.

#### Revenue from the rendering of services

As the Corporation fulfills the obligations in the contract for testing services, the customer simultaneously receives and consumes the benefits provided by the Corporation. The Corporation has the right to revenue collection for the portion of testing services that have been fulfilled, and the revenue from testing services is recognized over time. The Corporation fulfills the obligations in the contract for packaging services when the customer creates or enhances the goods they have control of. The Corporation has the right to revenue collection for the portion of packaging services that have been fulfilled, and the revenue from packaging services is recognized over time. Contract assets are recognized during the process of semiconductor assembling and testing, and are reclassified to accounts receivable at the point the bills were issued. If the payment exceeds the revenue recognized to date, the



Corporation recognizes the difference as a contract liability. It is recognized as contract asset before the Corporation satisfies its performance obligations.

The Corporation does not recognize revenue on materials delivered to subcontractors because this delivery does not involve a transfer of control.

n. Leases

2019

At the inception of a contract, The Corporation assesses whether the contract is, or contains, a lease.

1) The Corporation as lessor

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms.

2) The Corporation as lessee

The Corporation recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs needed to restore the underlying assets, and less any lease incentives received. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the consolidated balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Corporation uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, the Corporation remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the consolidated balance sheets.

Variable lease payments that do not depend on an index or a rate are recognized as expenses in the periods in which they are incurred.

## 2018

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

### 1) The Corporation as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

### 2) The Corporation as lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated balance sheets as a finance lease obligation.

Finance expenses implicit in lease payments for each period are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets, in which case they are capitalized.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

### o. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Other than that stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

### p. Employee benefits

#### 1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related services.

#### 2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost, past service cost, as well as gains and losses on settlements) and net interest on the net defined benefit liabilities (assets) are recognized as employee benefits expense in the period in which they occur, or when the plan amendment, curtailment or settlement occurs. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which it occurs. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liabilities (assets) represent the actual deficit (surplus) in the Corporation's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

### 3) Termination benefits

A liability for a termination benefit is recognized at the earlier of when the Corporation can no longer withdraw the offer of the termination benefit and when the Corporation recognizes any related restructuring costs.

### q. Treasury shares

The parent company's shares held by its subsidiaries are reclassified to treasury shares from investments accounted for using the equity method and are recognized based on the original investment cost. Cash dividends earned by subsidiaries are written-off from investment income and adjusted to capital surplus - treasury share transactions.

### r. Taxation

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

#### 1) Current tax

According to the Income Tax Law, an additional tax on unappropriated earnings is provided for as income tax in the year the shareholders approve to retain earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

#### 2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, except where the Corporation is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in which the liabilities are settled or the assets are realized, based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Corporation expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

3) Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity respectively.

## 5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Corporation's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered relevant. Actual results may differ from these estimates.

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

### Critical Accounting Judgments

a. Lease terms - 2019

In determining a lease term, the Corporation considers all facts and circumstances that create an economic incentive to exercise or not to exercise an option, including any expected changes in facts and circumstances from the commencement date until the exercise date of the option. Main factors considered include contractual terms and conditions for the optional periods, significant leasehold improvements undertaken over the contract term, the importance of the underlying asset to the lessee's operations, etc. The lease term is reassessed if a significant change in circumstances that are within control of the Corporation occur.

### Key Sources of Estimation Uncertainty

a. Lessees' incremental borrowing rates

In determining a lessee's incremental borrowing rate used in discounting lease payments, a risk-free rate for the same currency and relevant duration is selected as a reference rate, and the lessee's credit spread adjustments and lease specific adjustments (such as asset type, secured position, etc.) are also taken into account.

## 6. CASH AND CASH EQUIVALENTS

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Checking accounts and demand deposits	\$ 21,798,976	\$ 18,543,547
Cash on hand	<u>1,072</u>	<u>595</u>
	<u>\$ 21,800,048</u>	<u>\$ 18,544,142</u>

The market rate intervals of cash in bank and cash equivalents at the end of the reporting period were as follows:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Bank deposits	0%-2.92%	0%-3.10%

## 7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Financial assets at FVTPL - current</u>		
Financial assets mandatorily classified as at FVTPL		
Derivative financial assets (not under hedge accounting)		
Foreign exchange forward contracts	\$ 20,555	\$ 5,841
Non-derivative financial assets		
Mutual funds	<u>50,652</u>	<u>50,376</u>
	<u>\$ 71,207</u>	<u>\$ 56,217</u>

### Financial liabilities at FVTPL - current

Financial liabilities held for trading		
Derivative financial liabilities (not under hedge accounting)		
Foreign exchange forward contracts	<u>\$ 3,953</u>	<u>\$ 2,223</u>

At the end of the year, outstanding foreign exchange forward contracts not under hedge accounting were as follows:

	<b>Currency</b>	<b>Maturity Date</b>	<b>Contract Amount (In Thousands)</b>
<u>December 31, 2019</u>			
Sell foreign exchange forward contracts	USD to NTD	2020.01.02-2020.03.17	USD 64,491
	USD to JPY	2020.01.06-2020.05.11	USD 22,037
<u>December 31, 2018</u>			
Sell foreign exchange forward contracts	USD to NTD	2019.01.03-2019.03.13	USD 58,190
	USD to JPY	2019.01.02-2019.05.10	USD 10,618
	USD to CNY	2019.01.04-2019.01.08	USD 1,168

The Corporation entered into foreign exchange forward contracts to manage exposures to exchange rate fluctuations of foreign currency denominated assets and liabilities. However, those contracts did not meet the criteria of hedge effectiveness and therefore were not accounted for using hedge accounting.

## 8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

### Investments in equity instruments at FVTOCI

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Non-current</u>		
Domestic investments		
Listed shares		
Ordinary shares - Solid State System Co., Ltd.	<u>\$ 26,093</u>	<u>\$ 26,803</u>

These investments in equity instruments are not held for trading. Instead, they are held for medium to long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Corporation's strategy of holding these investments for long-term purposes.

## 9. FINANCIAL ASSETS AT AMORTIZED COST

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Current</u>		
Domestic investments		
Corporate bonds - 02 Taiwan Power Company 1B Bond	\$ 150,388	\$ -
Corporate bonds - P04 FENC 4 Bond	100,000	-
Corporate bonds - 01 TSMC 1B Bond	-	100,015
Corporate bonds - P04 Hon Hai 4C Bond	-	100,000
Time deposits with original maturities of more than 3 months	8,429	8,605
Pledged time deposits	21,712	21,763
Restricted deposits	<u>269,203</u>	<u>318,534</u>
	<u>\$ 549,732</u>	<u>\$ 548,917</u>
<u>Non-current</u>		
Domestic investments		
Corporate bonds - P06 Taiwan Power Company 1A Bond	\$ 300,001	\$ 300,001
Corporate bonds - P07 Taiwan Power Company 1A Bond	200,001	200,001
Corporate bonds - P08 Taiwan Power Company 3A Bond	100,001	-
Corporate bonds - P06 Taiwan Power Company 3A Bond	100,000	100,001
Corporate bonds - P06 FPC 1A Bond	100,000	100,000
Corporate bonds - 02 Taiwan Power Company 1B Bond	-	151,518
Corporate bonds - P04 FENC 4 Bond	-	100,000
Time deposits with original maturities of more than 3 months	612,268	992,774
Pledged time deposits	<u>88,874</u>	<u>96,815</u>
	<u>\$ 1,501,145</u>	<u>\$ 2,041,110</u>

On October 20, 2015, the Corporation bought corporate bonds issued by TSMC, which have an effective interest rate of 0.91%; a premium value of \$101,740 thousand (par value \$100,000 thousand); and maturity on January 11, 2019.

On October 23, 2015, the Corporation bought corporate bonds issued by HON HAI PRECISION IND. CO., LTD., which have an effective interest rate of 1.15%; a premium value of \$100,001 thousand (par value \$100,000 thousand); and maturity on September 29, 2019.

On November 16, 2015, the Corporation bought corporate bonds issued by Far Eastern New Century Corporation, which have an effective interest rate of 1.25%; a premium value of \$100,001 thousand (par value \$100,000 thousand); and maturity date of November 16, 2020.

On September 26, 2016, the Corporation bought corporate bonds issued by Taiwan Power Company with an effective interest rate of 0.63%, a premium value of \$154,054 thousand (par value \$150,000 thousand) and a maturity date of May 6, 2020.

On April 21, 2017, the Corporation bought corporate bonds issued by Taiwan Power Company with an effective interest rate of 1.13%, a premium value of \$300,002 thousand (par value \$300,000 thousand) and a maturity date of April 21, 2022.

On May 19, 2017, the Corporation bought corporate bonds issued by Formosa Plastics Corporation with an effective interest rate of 1.09%, a premium value of \$100,001 thousand (par value \$100,000 thousand) and maturity dates of May 19, 2021 and May 19, 2022 with par value \$50,000 thousand due on both dates.

On December 15, 2017, the Corporation bought corporate bonds issued by Taiwan Power Company with an effective interest rate of 0.88%, a premium value of \$100,001 thousand (par value \$100,000 thousand) and maturity dates of December 15, 2021 and December 15, 2022 with par value \$50,000 thousand due on both dates.

On May 14, 2018, the Corporation bought corporate bonds issued by Taiwan Power Company with an effective interest rate of 0.70% at premium value \$200,001 thousand (par value \$200,000 thousand) and a maturity date of May 14, 2021.

On September 12, 2019, the Corporation bought corporate bonds issued by Taiwan Power Company with an effective interest rate of 0.72% at premium value \$100,001 thousand (par value \$100,000 thousand) and maturity dates of September 12, 2023 and September 12, 2024 at par value of \$50,000 thousand, respectively.

The ranges of interest rates for time deposits with original maturities of more than 3 months were approximately 0.001%-2.42% and 0.001%-1.92% per annum as of December 31, 2019 and 2018, respectively.

Refer to Note 27 for information relating to their credit risk management and impairment.

Refer to Note 29 for information relating to investments in financial assets at amortized cost pledged as security.

## 10. NOTES AND ACCOUNTS RECEIVABLE

	December 31	
	2019	2018
<u>Notes receivable</u>		
Notes receivable - operating	\$ 63,517	\$ 78,037
<u>Accounts receivable</u>		
At amortized cost		
Gross carrying amount	9,514,936	8,926,869
Less: Allowance for impairment loss	(59,481)	(38,081)
	<u>9,455,455</u>	<u>8,888,788</u>
	<u>\$ 9,518,972</u>	<u>\$ 8,966,825</u>

### At amortized cost

The average credit period of sales of goods was 30 days to 150 days. No interest was charged on accounts receivable. In order to minimize credit risk, the management of the Corporation has delegated a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debt. In addition, the Corporation reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, the management believes the Corporation's credit risk was significantly reduced.

The Corporation applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of lifetime expected loss provision for all accounts receivable. The expected credit losses on accounts receivable are estimated using a provision matrix by reference to the past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecasted direction of economic conditions at the reporting date. As the Corporation's historical credit loss experience does not show significantly different loss patterns for different customer segments, the provision for loss allowance based on past due status is not further distinguished according to the Corporation's different customer base.

The Corporation writes off an accounts receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery. For accounts receivable that have been written off, the Corporation continues to engage in enforcement activity to attempt to recover the receivables due. Where recoveries are made, these are recognized in profit or loss.

The following table details the loss allowance of accounts receivable based on the Corporation's provision matrix.

### December 31, 2019

	Not Past Due	Up to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days	Total
Gross carrying amount	\$ 9,369,105	\$ 110,544	\$ 2,473	\$ 2,934	\$ 29,880	\$ 9,514,936
Loss allowance (Lifetime ECLs)	(6,820)	(17,525)	(2,322)	(2,934)	(29,880)	(59,481)
Amortized cost	<u>\$ 9,362,285</u>	<u>\$ 93,019</u>	<u>\$ 151</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 9,455,455</u>



## December 31, 2018

	Not Past Due	Up to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days	Total
Gross carrying amount	\$ 8,668,966	\$ 184,436	\$ 57,213	\$ 10,235	\$ 6,019	\$ 8,926,869
Loss allowance (Lifetime ECLs)	<u>(6,133)</u>	<u>(15,943)</u>	<u>(4,093)</u>	<u>(8,029)</u>	<u>(3,883)</u>	<u>(38,081)</u>
Amortized cost	<u>\$ 8,662,833</u>	<u>\$ 168,493</u>	<u>\$ 53,120</u>	<u>\$ 2,206</u>	<u>\$ 2,136</u>	<u>\$ 8,888,788</u>

The movements of the loss allowance of accounts receivable were as follows:

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Balance at January 1	\$ 38,081	\$ 39,473
Add: Impairment loss	21,400	-
Less: Amounts written off	<u>-</u>	<u>(1,392)</u>
Balance at December 31	<u>\$ 59,481</u>	<u>\$ 38,081</u>

## 11. INVENTORIES

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Raw materials	\$ 3,458,332	\$ 3,402,888
Supplies	<u>420,693</u>	<u>420,072</u>
	<u>\$ 3,879,025</u>	<u>\$ 3,822,960</u>

The nature of the cost of goods sold was as follows:

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Cost of inventories sold	<u>\$ 53,848,249</u>	<u>\$ 54,209,337</u>
(Reversal) write-downs of inventories	<u>\$ (16,056)</u>	<u>\$ 103,083</u>
Unallocated production overhead	<u>\$ 3,345,202</u>	<u>\$ 3,327,060</u>
Sales of scrap	<u>\$ 119,655</u>	<u>\$ 146,515</u>

## 12. SUBSIDIARIES

a. Subsidiaries included in the consolidated financial statements

Investor	Investee	Nature of Activities	Proportion of Ownership (%)		Remark
			December 31		
			2019	2018	
Powertech Technology Inc.	Powertech Holding (BVI) Inc.	Investment business	100	100	-
	Greatek Electronics Inc. (“GEI”)	Semiconductor assembly and testing services	43	43	Notes 1 and 2
	Powertech Technology (Singapore) Pte. Ltd.	Integrated circuit testing and assembly services	100	100	-
	Powertech Technology (Xian) Ltd.	Semiconductor testing design, manufacturing, sales business and assembly services	36	36	-

(Continued)

Investor	Investee	Nature of Activities	Proportion of Ownership (%)		Remark
			2019	2018	
Powertech Technology Inc.	Powertech Technology Japan Ltd.	Investment business	100	100	-
	Tera Probe, Inc.	Wafer probing test services	12	12	Note 2
	TeraPower Technology Inc.	Wafer probing test services	49	49	-
Powertech Holding (BVI) Inc.	PTI Technology (Singapore) Pte. Ltd.	Investment business	100	100	-
PTI Technology (Singapore) Pte. Ltd.	Powertech Technology (Suzhou) Ltd.	Semiconductor testing design, manufacturing, sales business and assembly services	100	100	-
Powertech Technology (Singapore) Pte. Ltd.	Powertech Technology (Xian) Ltd.	Semiconductor testing design, manufacturing, sales business and assembly services	64	64	-
Powertech Technology Japan Ltd.	Tera Probe, Inc.	Wafer probing test services	49	47	Notes 2 and 3
	Powertech Technology Akita Inc.	Semiconductor assembly and testing service	100	100	-
Tera Probe, Inc.	TeraPower Technology Inc.	Wafer probing test services	51	51	-
	Tera Probe Aizu, Inc.	Wafer probing test services	100	100	-
(Concluded)					

(Concluded)

Note 1: On the reelection of the directors and supervisors of Greatek Electronics Inc., the PTI obtained the majority of the board seats and Greatek Electronics Inc., became a subsidiary of the PTI even though the PTI has only 43% ownership of Greatek Electronics Inc.

Note 2: Subsidiaries that have material non-controlling interests.

Note 3: Powertech Technology Japan Ltd.'s shareholding in Tera Probe, Inc. changed to 49% after Tera Probe, Inc.'s repurchase of treasury shares in 2019.

b. Details of subsidiaries that have material non-controlling interests

Name of Subsidiary	Principal Place of Business	Proportion of Ownership and Voting Rights Held by Non-controlling Interests	
		December 31	
		2019	2018
Greatek Electronics Inc.	Zhunan Township, Miaoli County	57%	57%
Tera Probe, Inc.	Japan	39%	41%

Name of Subsidiary	Profit Allocated to Non-controlling Interests For the Year Ended December 31		Accumulated Non-controlling Interests December 31	
	2019	2018	2019	2018
Greatek Electronics Inc.	<u>\$1,061,051</u>	<u>\$1,334,852</u>	<u>\$9,485,870</u>	<u>\$9,326,563</u>
Tera Probe, Inc.	<u>\$ (20,409)</u>	<u>\$ (56,566)</u>	<u>\$2,384,365</u>	<u>\$2,747,578</u>

Summarized financial information in respect of each of the Corporation's subsidiaries that has material non-controlling interests is set out below. The summarized financial information below represents amounts before intragroup eliminations.

Greatek Electronics Inc.

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Current assets	\$ 8,177,381	\$ 7,351,080
Non-current assets	11,338,830	11,473,480
Current liabilities	(2,610,535)	(2,369,720)
Non-current liabilities	<u>(251,046)</u>	<u>(235,776)</u>
Equity	<u>\$ 16,654,630</u>	<u>\$ 16,219,064</u>
Equity attributable to:		
Owners of the Corporation	\$ 7,146,699	\$ 6,958,819
Non-controlling interests	<u>9,508,931</u>	<u>9,260,245</u>
	<u>\$ 16,654,630</u>	<u>\$ 16,219,064</u>
	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Operating revenue	<u>\$ 12,030,481</u>	<u>\$ 12,356,434</u>
Net income for the year	\$ 1,895,899	\$ 2,375,453
Other comprehensive income (loss) for the year	<u>75,419</u>	<u>(67,552)</u>
Total comprehensive income for the year	<u>\$ 1,971,318</u>	<u>\$ 2,307,901</u>
Net income attributable to:		
Owners of the Corporation	\$ 813,439	\$ 1,019,192
Non-controlling interests	<u>1,082,460</u>	<u>1,356,261</u>
	<u>\$ 1,895,899</u>	<u>\$ 2,375,453</u>
Total comprehensive income attributable to:		
Owners of the Corporation	\$ 845,797	\$ 990,208
Non-controlling interests	<u>1,125,521</u>	<u>1,317,693</u>
	<u>\$ 1,971,318</u>	<u>\$ 2,307,901</u>
Net cash inflow (outflow) from :		
Operating activities	\$ 4,161,216	\$ 4,504,087
Investing activities	(2,042,449)	(3,103,917)
Financing activities	<u>(1,537,014)</u>	<u>(1,706,442)</u>
Net cash inflow (outflow)	<u>\$ 581,753</u>	<u>\$ (306,272)</u>
Dividends paid to non-controlling interests		
Greatek Electronics Inc.	<u>\$ 876,910</u>	<u>\$ 974,345</u>

Tera Probe, Inc.

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Current assets	\$ 2,423,564	\$ 3,111,580
Non-current assets	4,954,776	5,566,923
Current liabilities	(973,622)	(1,844,532)
Non-current liabilities	<u>(662,624)</u>	<u>(845,862)</u>
Equity	<u>\$ 5,742,094</u>	<u>\$ 5,988,109</u>
Equity attributable to:		
Owners of the Corporation	\$ 3,482,580	\$ 3,559,332
Non-controlling interests	<u>2,259,514</u>	<u>2,428,777</u>
	<u>\$ 5,742,094</u>	<u>\$ 5,988,109</u>
	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Operating revenue	<u>\$ 1,836,339</u>	<u>\$ 2,474,427</u>
Net loss for the year	\$ (141,923)	\$ (214,235)
Other comprehensive loss for the year	<u>(37,479)</u>	<u>(148,799)</u>
Total comprehensive loss for the year	<u>\$ (179,402)</u>	<u>\$ (363,034)</u>
Net loss attributable to:		
Owners of the Corporation	\$ (85,834)	\$ (127,341)
Non-controlling interests	<u>(56,089)</u>	<u>(86,894)</u>
	<u>\$ (141,923)</u>	<u>\$ (214,235)</u>
Total comprehensive loss attributable to:		
Owners of the Corporation	\$ (108,422)	\$ (215,787)
Non-controlling interests	<u>(70,980)</u>	<u>(147,247)</u>
	<u>\$ (179,402)</u>	<u>\$ (363,034)</u>
Cash flow inflow (outflow) from:		
Operating activities	\$ (680,593)	\$ 1,189,726
Investing activities	1,789,890	(2,429,457)
Financing activities	<u>(1,093,887)</u>	<u>1,860,481</u>
Net cash inflow	<u>\$ 15,410</u>	<u>\$ 620,750</u>

The share of profit or loss and other comprehensive income of those subsidiaries for the years ended December 31, 2019 and 2018 was based on the subsidiaries' financial statements audited by the auditors for the same years.

### 13. PROPERTY, PLANT AND EQUIPMENT

**December 31,  
2019**

Assets used by the Corporation

**\$ 58,779,789**

**a. 2019**

	Land	Building	Machinery and Equipment	Office Equipment	Leasehold Improvements	Other Equipment	Construction in Progress	Advance Payments	Spare parts	Total
<u>Cost</u>										
Balance at January 1, 2019	\$ 3,322,250	\$ 26,944,810	\$ 91,234,066	\$ 2,343,814	\$ 362,214	\$ 3,650,775	\$ 907,019	\$ 6,016,130	\$ 147,694	\$ 134,928,772
Additions	121,366	39,369	1,245,105	10,539	9,072	27,804	1,470,754	7,316,366	394,774	10,635,149
Disposals	-	(135,390)	(3,054,507)	(212,021)	(313)	(61,174)	(5,329)	(1,465)	(380,789)	(3,850,988)
Reclassified	-	445,886	7,390,120	248,795	63,792	94,398	(954,249)	(8,051,723)	75	(762,906)
Effect of foreign currency exchange differences	(306)	(74,586)	(240,619)	(25,360)	(8,576)	(6,083)	(4,981)	(4,576)	(337)	(365,424)
Balance at December 31, 2019	<u>3,443,310</u>	<u>27,220,089</u>	<u>96,574,165</u>	<u>2,365,767</u>	<u>426,189</u>	<u>3,705,720</u>	<u>1,413,214</u>	<u>5,274,732</u>	<u>161,417</u>	<u>140,584,603</u>
<u>Accumulated depreciation</u>										
Balance at January 1, 2019	-	9,698,433	57,403,617	1,658,423	228,673	3,091,424	-	-	13,277	72,093,847
Depreciation expense	-	1,510,944	10,060,200	276,419	22,050	227,539	-	-	383,442	12,480,594
Disposals	-	(122,769)	(2,720,480)	(187,267)	(313)	(55,396)	-	-	(380,789)	(3,467,014)
Reclassified	-	6,841	(372,035)	-	(6,841)	(11,503)	-	-	-	(383,538)
Effect of foreign currency exchange differences	-	(40,510)	(175,897)	(19,418)	(4,992)	(5,312)	-	-	(341)	(246,470)
Balance at December 31, 2019	<u>-</u>	<u>11,052,939</u>	<u>64,195,405</u>	<u>1,728,157</u>	<u>238,577</u>	<u>3,246,752</u>	<u>-</u>	<u>-</u>	<u>15,589</u>	<u>80,477,419</u>
<u>Accumulated impairment</u>										
Balance at January 1, 2019	1,762	260,090	353,465	112,819	80,298	-	45,638	-	-	854,072
Recognition (revolution) of Impairment loss	-	186,737	327,828	(8,024)	-	-	-	-	-	506,541
Disposals	-	(5)	-	(1,299)	-	-	-	-	-	(1,304)
Effect of foreign currency exchange differences	(9)	(12,729)	(14,832)	(2,496)	(1,635)	-	(213)	-	-	(31,914)
Balance at December 31, 2019	<u>1,753</u>	<u>434,093</u>	<u>666,461</u>	<u>101,000</u>	<u>78,663</u>	<u>-</u>	<u>45,425</u>	<u>-</u>	<u>-</u>	<u>1,327,395</u>
Carrying amounts at December 31, 2019 and January 1, 2020	<u>\$ 3,441,557</u>	<u>\$ 15,733,057</u>	<u>\$ 31,712,299</u>	<u>\$ 536,610</u>	<u>\$ 108,949</u>	<u>\$ 458,968</u>	<u>\$ 1,367,789</u>	<u>\$ 5,274,732</u>	<u>\$ 145,828</u>	<u>\$ 58,779,789</u>

Powertech Technology Akita Inc. and Tera Probe, Inc. expects a decrease in the future cash flows of buildings, machinery and equipment and office equipment. Therefore, impairment losses of \$506,541 thousand was recognized in other gains and losses for the year ended December 31, 2019.

The above items of property, plant and equipment used by the Corporation are depreciated on a straight-line basis over their estimated useful lives as follows:

**Buildings**

Main plants	3-51 years
Mechanical and electrical power equipment	1-26 years
Wafer fab	10-16 years
Fire control equipment	10-26 years
Others	2-51 years
Machinery and equipment	1-15 years
Office equipment	1-15 years
Leasehold improvements	10-50 years
Other equipment	1-16 years
Spare parts	0.5-2 years

Property, plant and equipment used by the Corporation and pledged as collateral for bank borrowings are set out in Note 29.

b. 2018

	Land	Building	Machinery and Equipment	Office Equipment	Leasehold Improvements	Other Equipment	Construction in Progress	Advance Payments	Spare parts	Total
<u>Cost</u>										
Balance at January 1, 2018	\$ 3,317,858	\$ 23,246,329	\$ 83,927,064	\$ 2,729,624	\$ 407,994	\$ 3,647,390	\$ 872,522	\$ 8,257,379	\$ 121,581	\$ 126,527,741
Additions	3,203	223,013	2,231,604	12,332	18,044	64,574	2,560,902	11,585,158	351,928	17,050,758
Disposals	-	(545,656)	(7,352,301)	(696,224)	(95,175)	(159,598)	(185,285)	(7,500)	(326,281)	(9,368,020)
Reclassified	-	4,020,150	11,739,880	259,481	18,073	88,110	(2,354,305)	(13,828,008)	-	(56,619)
Effect of foreign currency exchange differences	1,189	974	687,819	38,601	13,278	10,299	13,185	9,101	466	774,912
Balance at December 31, 2018	<u>3,322,250</u>	<u>26,944,810</u>	<u>91,234,066</u>	<u>2,343,814</u>	<u>362,214</u>	<u>3,650,775</u>	<u>907,019</u>	<u>6,016,130</u>	<u>147,694</u>	<u>134,928,772</u>
<u>Accumulated depreciation</u>										
Balance at January 1, 2018	-	8,708,794	53,515,329	2,023,118	265,799	2,912,733	-	-	11,149	67,436,922
Depreciation expense	-	1,473,068	10,066,565	277,308	55,488	312,270	-	-	328,046	12,512,745
Disposals	-	(483,870)	(6,730,724)	(668,062)	(94,025)	(137,910)	-	-	(326,281)	(8,440,872)
Reclassified	-	6,832	9,244	41	(6,873)	(19)	-	-	-	9,225
Effect of foreign currency exchange differences	-	(6,391)	543,203	26,018	8,284	4,350	-	-	363	575,827
Balance at December 31, 2018	<u>-</u>	<u>9,698,433</u>	<u>57,403,617</u>	<u>1,658,423</u>	<u>228,673</u>	<u>3,091,424</u>	<u>-</u>	<u>-</u>	<u>13,277</u>	<u>72,093,847</u>
<u>Accumulated impairment</u>										
Balance at January 1, 2018	-	207,722	56,697	85,568	77,811	-	-	-	-	427,798
Recognition of impairment loss	1,733	56,259	289,034	41,271	176	-	44,851	-	-	433,324
Disposals	-	(122)	-	(13,735)	-	-	-	-	-	(13,857)
Effect of foreign currency exchange differences	29	(3,769)	7,734	(285)	2,311	-	787	-	-	6,807
Balance at December 31, 2018	<u>1,762</u>	<u>260,090</u>	<u>353,465</u>	<u>112,819</u>	<u>80,298</u>	<u>-</u>	<u>45,638</u>	<u>-</u>	<u>-</u>	<u>854,072</u>
Carrying amounts at December 31, 2018	<u>\$ 3,320,488</u>	<u>\$ 16,986,287</u>	<u>\$ 33,476,984</u>	<u>\$ 572,572</u>	<u>\$ 53,243</u>	<u>\$ 559,351</u>	<u>\$ 861,381</u>	<u>\$ 6,016,130</u>	<u>\$ 134,417</u>	<u>\$ 61,980,853</u>

Tera Probe, Inc. and Powertech Technology Akita Inc. expected a decrease in the future cash flows of land, buildings, machinery and equipment, office equipment, leasehold improvements and construction in progress. Therefore, impairment losses of \$433,324 thousand were recognized in other gains and losses for the year ended December 31, 2018. Tera Probe, Inc. determined the recoverable amount of the relevant assets on the basis of their value in use, and the discount rate used in measuring value in use was 3.30% per annum; Powertech Technology Akita Inc. evaluated that the carrying amount of some machinery and equipment could not be recovered.

The above items of property, plant and equipment used by the Corporation are depreciated on a straight-line basis over their estimated useful lives as follows:

**Buildings**

Main plants	3-51 years
Mechanical and electrical power equipment	1-26 years
Wafer fab	6-16 years
Fire control equipment	2-26 years
Others	1-56 years
Machinery and equipment	1-20 years
Office equipment	1-25 years
Leasehold improvements	4-8 years
Other equipment	1-16 years
Spare parts	0.5-2 years

Property, plant and equipment used by the Corporation and pledged as collateral for bank borrowings are set out in Note 29.

## 14. LEASE ARRANGEMENTS

### a. Right-of-use assets - 2019

	<b>December 31, 2019</b>
<u>Carrying amounts</u>	
Land	\$ 1,449,085
Buildings	121,589
Machinery and equipment	354,892
Transportation equipment	<u>337</u>
	<u>\$ 1,925,903</u>
	<b>For the Year Ended December 31, 2019</b>
Additions to right-of-use assets	<u>\$ 69,231</u>
Depreciation charge for right-of-use assets	
Land	\$ 37,113
Buildings	97,250
Machinery and equipment	96,000
Transportation equipment	<u>311</u>
	<u>\$ 230,674</u>

### b. Lease liabilities - 2019

	<b>December 31, 2019</b>
<u>Carrying amounts</u>	
Current	<u>\$ 211,549</u>
Non-current	<u>\$ 1,546,096</u>

Range of discount rate for lease liabilities was as follows:

	<b>December 31, 2019</b>
Land	1.10%-1.69%
Buildings	0.69%-3.77%
Machinery and equipment	0.80%-2.32%
Transportation equipment	1.13%

c. Other lease information  
2019

**For the Year  
Ended  
December 31,  
2019**

Expenses relating to short-term leases	<u>\$ 36,923</u>
Total cash (outflow) for leases	<u>\$(326,423)</u>

The Corporation leases certain land, office, machines, vehicles and office equipment which qualify as short-term leases. The Corporation has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

2018

The Corporation as lessee

The PTI leases land from Tang Eng Iron Works Co., Ltd. under a renewable agreement that will expire before December 2023.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

**December 31,  
2018**

Not later than 1 year	\$ 16,697
Later than 1 year and not later than 5 years	<u>66,788</u>
	<u>\$ 83,485</u>

The lease payments recognized in profit or loss were as follows:

**For the Year  
Ended  
December 31,  
2018**

Minimum lease payments	<u>\$ 16,697</u>
------------------------	------------------

Powertech Technology (Singapore) Pte. Ltd. leased equipment and office space from IBM and Cambridge Industrial Trust under a renewable agreement which will expire in May 2021.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

**December 31,  
2018**

Not later than 1 year	\$ 45,155
Over 1 year and up to 5 years	<u>63,544</u>
	<u>\$ 108,699</u>



The lease payments recognized in profit or loss were as follows:

**For the Year  
Ended  
December 31,  
2018**

Minimum lease payments \$ 43,921

Tera Probe, Inc. leased equipment and office space from Micron Memory Japan, Inc., Advantest Finance Inc., Aizu Fujitsu Semiconductor Limited and Hitachi Capital Corporation, etc. under renewable agreements which expired before May 2019.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

**December 31,  
2018**

Not later than 1 year \$ 201,448

The lease payments recognized in profit or loss were as follows:

**For the Year  
Ended  
December 31,  
2018**

Minimum lease payments \$ 190,075

## 15. INTANGIBLE ASSETS

	Computer Software	Goodwill	Core Techniques	Client Relationships	Royalty	Technical Services	Total
<u>Cost</u>							
Balance at January 1, 2019	\$ 661,534	\$ 979,819	\$ 250,103	\$ 220,775	\$ 1,765	\$ 88,894	\$ 2,202,890
Additions	23,730	-	-	-	8,331	-	32,061
Disposals	(69,598)	-	-	-	-	-	(69,598)
Reclassifications	24,339	-	-	-	-	-	24,339
Effect of foreign currency exchange differences	(2,667)	-	(744)	-	(8)	-	(3,419)
Balance at December 31, 2019	<u>637,338</u>	<u>979,819</u>	<u>249,359</u>	<u>220,775</u>	<u>10,088</u>	<u>88,894</u>	<u>2,186,273</u>
<u>Accumulated amortization</u>							
Balance at January 1, 2019	523,810	-	250,103	172,165	1,354	88,894	1,036,326
Amortization expense	110,117	-	-	25,231	2,206	-	137,554
Disposals	(69,598)	-	-	-	-	-	(69,598)
Effect of foreign currency exchange differences	(1,588)	-	(744)	-	(9)	-	(2,341)
Balance at December 31, 2019	<u>562,741</u>	<u>-</u>	<u>249,359</u>	<u>197,396</u>	<u>3,551</u>	<u>88,894</u>	<u>1,101,941</u>
<u>Accumulated impairment</u>							
Balance at January 1, 2019	4,360	-	-	-	-	-	4,360
Recognition of Impairment loss	20,786	-	-	-	-	-	20,786
Effect of foreign currency exchange differences	(440)	-	-	-	-	-	(440)
Balance at December 31, 2019	<u>24,706</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>24,706</u>
Carrying amounts at December 31, 2019	<u>\$ 49,891</u>	<u>\$ 979,819</u>	<u>\$ -</u>	<u>\$ 23,379</u>	<u>\$ 6,537</u>	<u>\$ -</u>	<u>\$ 1,059,626</u>

(Continued)

	Computer Software	Goodwill	Core Techniques	Client Relationships	Royalty	Technical Services	Total
<u>Cost</u>							
Balance at January 1, 2018	\$ 615,883	\$ 979,819	\$ 285,501	\$ 220,775	\$ 1,679	\$ 88,894	\$ 2,192,551
Additions	33,090	-	-	-	-	-	33,090
Disposals	(50,667 )	-	-	-	-	-	(50,667 )
Reclassifications	47,976	-	-	-	-	-	47,976
Effect of foreign currency exchange differences	15,252	-	(35,398 )	-	86	-	(20,060 )
Balance at December 31, 2018	<u>661,534</u>	<u>979,819</u>	<u>250,103</u>	<u>220,775</u>	<u>1,765</u>	<u>88,894</u>	<u>2,202,890</u>
<u>Accumulated amortization</u>							
Balance at January 1, 2018	424,757	-	285,501	146,933	1,174	84,537	942,902
Amortization expense	114,333	-	-	25,232	118	4,357	144,040
Disposals	(30,643 )	-	-	-	-	-	(30,643 )
Reclassifications	3,195	-	-	-	-	-	3,195
Effect of foreign currency exchange differences	12,168	-	(35,398 )	-	62	-	(23,168 )
Balance at December 31, 2018	<u>523,810</u>	<u>-</u>	<u>250,103</u>	<u>172,165</u>	<u>1,354</u>	<u>88,894</u>	<u>1,036,326</u>
<u>Accumulated impairment</u>							
Balance, beginning of year	-	-	-	-	-	-	-
Impairment loss	4,285	-	-	-	-	-	4,285
Disposals	-	-	-	-	-	-	-
Effects of foreign currency exchange differences	75	-	-	-	-	-	75
Balance, end of year	<u>4,360</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,360</u>
Carrying amounts at December 31, 2018	<u>\$ 133,364</u>	<u>\$ 979,819</u>	<u>\$ -</u>	<u>\$ 48,610</u>	<u>\$ 411</u>	<u>\$ -</u>	<u>\$ 1,162,204</u>

(Concluded)

Powertech Technology Akita Inc. and Tera Probe, Inc. expects a decrease in the future cash flows of computer software. Therefore, impairment losses of \$20,786 thousand was recognized in other gains and losses for the year ended December 31, 2019.

Tera Probe, Inc. expected that the estimated future cash flows of computer software would decrease. Therefore, an impairment loss of \$4,285 thousand was recognized for the year ended December 31, 2018. Tera Probe, Inc. determined the recoverable amount of the relevant assets on the basis of their value in use, and the discount rate used in measuring the value in use was 3.30 % per annum.

The above items of intangible assets were amortized on a straight-line basis over their estimated useful lives as follows:

Computer software	2-10 years
Core techniques	5 years
Client relationships	9 years
Royalty	1-10 years
Technical services	2-4 years

## 16. OTHER ASSETS

	<u>December 31</u>	
	<u>2019</u>	<u>2018</u>
<u>Current</u>		
Tax refund receivables	\$ 400,846	\$ 467,876
Payment on behalf of others	77,934	284,195
Lease prepayments	-	2,566
Others	<u>76,010</u>	<u>58,211</u>
	<u>\$ 554,790</u>	<u>\$ 812,848</u>

(Continued)

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Non-current</u>		
Lease prepayments	\$ -	\$ 63,520
Refundable deposits	65,095	45,635
Prepayments for equipment	59,843	4,060
Other	<u>1,147</u>	<u>23,945</u>
	<u>\$ 126,085</u>	<u>\$ 137,160</u>
		(Concluded)

Lease prepayments include land use rights for land in mainland China.

## 17. BORROWINGS

### a. Short-term bank loans

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Unsecured borrowings</u>		
Working capital loan	<u>\$ 1,182,283</u>	<u>\$ 843,953</u>

The effective interest rate ranges on the working capital loan was 0.68%-5.00% and 0.68%-4.40% as of December 31, 2019 and 2018, respectively.

### b. Long-term debt

The long-term debt of the Corporation are all floating rate debt, which include:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
1) Secured borrowings (Note 29)	\$ 12,948,198	\$ 13,534,928
2) Unsecured borrowings	<u>16,690,219</u>	<u>17,699,048</u>
	29,638,417	31,233,976
Less: Current portions	<u>(182,305)</u>	<u>(361,637)</u>
	<u>\$ 29,456,112</u>	<u>\$ 30,872,339</u>

1) Repayable continually from November 2021 to December 2038; interest rate range was 1.11%-1.21% as of December 31, 2019 and 1.14%-1.25% as of December 31, 2018.

2) Repayable continually from July 2020 to September 2024; interest rate range was 0.69%-3.90% as of December 31, 2019 and 0.69%-3.77% as of December 31, 2018.

For the PTI's long-term debt, the financing banks required the PTI to show compliance with

requirements to maintain the current ratio, fixed ratio, liability ratio, financial liability ratio, equity ratio, interest coverage ratio, tangible assets and net asset value as well as the ability to repay the current portion of long-term liabilities in its annual and semiannual consolidated financial statements. As of December 31, 2019, the PTI was in compliance with these ratio requirements.

## 18. FINANCE LEASE PAYABLES - 2018

**December 31,  
2018**

### Minimum lease payments

Not later than 1 year	\$ 133,422
Later than 1 year and not later than 5 years	<u>166,085</u>
	299,507
Less: Future finance charges	<u>(5,074)</u>
Present value of minimum lease payments	<u>\$ 294,433</u>

### Present value of minimum lease payments

Not later than 1 year	\$ 130,994
Later than 1 year and not later than 5 years	<u>163,439</u>
	<u>\$ 294,433</u>

Powertech Technology (Singapore) Pte. Ltd., Tera Probe, Inc. and TeraPower Technology Inc. leased some of its manufacturing equipment under finance leases. The average lease terms were between three and five years.

Interest rates for all obligations under finance leases were fixed at their respective contract dates ranging from 0.40% to 5.19% per annum.

## 19. OTHER LIABILITIES

**December 31**

**2019                      2018**

### Current

Accrued expenses and other current liabilities		
Salaries and bonuses	\$ 1,963,983	\$ 2,001,199
Payables for insurance	209,634	201,643
Payables for utilities	200,331	185,893
Agency receipts	154,335	133,357
Indemnification payables (a)	55,787	99,321
Payables for annual leave	62,966	24,621
Others	<u>4,368,846</u>	<u>4,578,908</u>
	<u>\$ 7,015,882</u>	<u>\$ 7,224,942</u>

(Continued)

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Non-current</u>		
Other liabilities		
Guarantee deposits	\$ 1,347	\$ 4,260
Others	<u>329,801</u>	<u>376,989</u>
	<u>\$ 331,148</u>	<u>\$ 381,249</u>
		(Concluded)

- a. Indemnification payables are measured at the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

## 20. RETIREMENT BENEFIT PLANS

### a. Defined contribution plan

The PTI, GEI and TeraPower Technology Inc. adopted a pension plan under the Labor Pension Act (the LPA), which is a state-managed defined contribution plan. Under the LPA, the Corporation makes monthly contributions to employees' individual pension accounts at 6% of monthly salaries and wages.

### b. Defined benefit plan

The defined benefit plan adopted by the Corporation's subsidiaries the PTI, GEI and TeraPower Technology Inc. in accordance with the Labor Standards Law belongs to the defined benefit plan administered by the government of the ROC. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the six months before retirement. The PTI, GEI and TeraPower Technology Inc. contribute amounts equal to 2% of total monthly salaries and wages to a pension fund administered by the pension fund monitoring committee. Pension contributions are deposited in the Bank of Taiwan in the committee's name. Before the end of each year, the Corporation assesses the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Corporation is required to fund the difference in one appropriation that should be made before the end of March of the next year. The pension fund is managed by the Bureau of Labor Funds, Ministry of Labor ("the Bureau"); the Corporation has no right to influence the investment policy and strategy.

The amounts included in the consolidated balance sheets in respect of the Corporation's defined benefit plans were as follows:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Present value of defined benefit obligation	\$ 1,015,642	\$ 1,119,258
Fair value of plan assets	<u>(621,650)</u>	<u>(716,466)</u>
Net defined benefit liabilities	<u>\$ 393,992</u>	<u>\$ 402,792</u>
Net defined benefit assets	\$ (1,793)	\$ (1,738)
Net defined benefit liabilities	<u>395,785</u>	<u>404,530</u>
	<u>\$ 393,992</u>	<u>\$ 402,792</u>

Movements in net defined benefit liabilities were as follows:

	<b>Present Value of the Defined Benefit Obligation</b>	<b>Fair Value of the Plan Assets</b>	<b>Net Defined Benefit Liabilities</b>
Balance at January 1, 2018	<u>\$ 1,052,260</u>	<u>\$ (656,262)</u>	<u>\$ 395,998</u>
Service cost			
Current service cost	46,199	-	46,199
Net interest expense (income)	<u>11,186</u>	<u>(7,058)</u>	<u>4,128</u>
Recognized in profit or loss	<u>57,385</u>	<u>(7,058)</u>	<u>50,327</u>
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	-	(23,281)	(23,281)
Actuarial loss - changes in demographics assumptions	4,959	-	4,959
Actuarial loss - changes in financial assumptions	25,592	-	25,592
Actuarial loss - experience adjustments	21,244	(5,234)	16,010
Others	<u>(2,835)</u>	<u>-</u>	<u>(2,835)</u>
Recognized in other comprehensive income	<u>48,960</u>	<u>(28,515)</u>	<u>20,445</u>
Contributions from the employer	<u>-</u>	<u>(54,918)</u>	<u>(54,918)</u>
Benefits paid	<u>(57,337)</u>	<u>42,721</u>	<u>(14,616)</u>
Effects of foreign currency exchange differences	<u>17,990</u>	<u>(12,434)</u>	<u>5,556</u>
Balance at December 31, 2018	<u>1,119,258</u>	<u>(716,466)</u>	<u>402,792</u>
Service cost			
Current service cost	41,899	-	41,899
Past service cost and gain on settlements	(8,561)	-	(8,561)
Net interest expense (income)	<u>9,896</u>	<u>(6,612)</u>	<u>3,284</u>
Recognized in profit or loss	<u>43,234</u>	<u>(6,612)</u>	<u>36,622</u>
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	-	(22,261)	(22,261)
Actuarial loss - changes in demographics assumptions	46	-	46
Actuarial loss - changes in financial assumptions	12,447	-	12,447
Actuarial loss - experience adjustments	32,030	(6,763)	25,267
Others	<u>6,943</u>	<u>-</u>	<u>6,943</u>
Recognized in other comprehensive income	<u>51,466</u>	<u>(29,024)</u>	<u>22,442</u>
Contributions from the employer	<u>-</u>	<u>(47,233)</u>	<u>(47,233)</u>
Benefits paid	<u>(193,809)</u>	<u>177,878</u>	<u>(15,931)</u>
Liabilities extinguished on settlement	<u>(698)</u>	<u>-</u>	<u>(698)</u>
Effects of foreign currency exchange differences	<u>(3,809)</u>	<u>(193)</u>	<u>(4,002)</u>
Balance at December 31, 2019	<u>\$ 1,015,642</u>	<u>\$ (621,650)</u>	<u>\$ 393,992</u>

Through the defined benefit plans under the Labor Standards Law, the Corporation is exposed to the following risks:

- 1) Investment risk: The plan assets are invested in domestic and foreign equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets shall not be below the interest rate for a 2-year time deposit with local banks.
- 2) Interest risk: A decrease in the government/corporate bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.
- 3) Salary risk: The present value of the defined benefit obligation is calculated using the future salaries of plan participants. As such, an increase in the salaries of the plan participants will increase the present value of the defined benefit obligation.

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Discount rates	0.38%-1.38%	0.43%-1.38%
Expected rates of salary increase	2.25%-4.88%	2.25%-5.00%
Return on plan assets	0.80%	1.00%-1.10%

If possible reasonable change in each of the significant actuarial assumptions will occur and all other assumptions will remain constant, the present value of the defined benefit obligation would increase (decrease) as follows:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Discount rate		
0.50% increase	<u>\$(57,284)</u>	<u>\$(56,964)</u>
0.50% decrease	<u>\$ 60,665</u>	<u>\$ 60,394</u>
Expected rate of salary increase		
0.50% increase	<u>\$ 48,405</u>	<u>\$ 48,166</u>
0.50% decrease	<u>\$(45,818)</u>	<u>\$(45,518)</u>

The sensitivity analysis presented above may not be representative of the actual change in the present value of the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Expected contributions to the plan for the next year	<u>\$ 41,376</u>	<u>\$ 48,643</u>
Average duration of the defined benefit obligation	8-17 years	8-18 years

## 21. EQUITY

### a. Capital stock

#### 1) Common shares

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Shares authorized (in thousands of shares)	<u>1,500,000</u>	<u>1,500,000</u>
Shares authorized (in thousands of dollars)	<u>\$ 15,000,000</u>	<u>\$ 15,000,000</u>
Shares issued and fully paid (in thousands of shares)	<u>779,147</u>	<u>779,147</u>
Shares issued (in thousands of dollars)	<u>\$ 7,791,466</u>	<u>\$ 7,791,466</u>

Fully paid common shares, which have a par value of \$10, carry 1 vote per share and carry a right to dividends.

Out of the shares authorized, 15,000 thousand shares were reserved for the issuance of employee share options.

As of December 31, 2019, 82 thousand units of GDSs of the PTI were trading on the Luxembourg Stock Exchange. The number of common shares represented by the GDSs was 163 thousand shares (one GDS represents 2 common shares).

### b. Capital surplus

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
May be used to offset a deficit, distributed as cash dividends, or <u>transferred to capital stock (1)</u>		
Share premium	\$ 1,929	\$ 1,929
<u>May be used to offset a deficit only</u>		
Arising from treasury share transactions	136,272	125,712
Changes in percentage of ownership interests in subsidiaries (2)	<u>71,651</u>	<u>93</u>
	<u>\$ 209,852</u>	<u>\$ 127,734</u>

1) The premium from shares issued in excess of par may be used to offset a deficit; in addition, when the Corporation has no deficit, such capital surplus may be distributed as cash dividends or transferred to capital (limited to a certain percentage of the Corporation's capital surplus and once a year).

2) Such capital surplus arises from the effects of changes in ownership interests in subsidiaries resulting from equity transactions other than actual disposals or acquisitions or from changes in capital surplus of subsidiaries accounted for using the equity method.



c. Retained earnings and dividend policy

Under the PTI's Articles of Incorporation, the PTI should make appropriations from its net income in the following order:

- 1) Offset deficits.
- 2) Set aside as legal reserve 10% of the remaining profit.
- 3) Appropriate as special reserve.
- 4) After the above-mentioned amounts have been deducted, any remaining profit from the previous years and the current year's undistributed retained earnings shall be used by the PTI's board of directors as the basis for proposing a distribution plan, which should be resolved by the shareholders as to whether the amount should be distributed as dividends or retained within the PTI.

Dividends are distributed in the form of cash, common shares or a combination of cash and common shares. In consideration of the PTI being in a capital-intensive industry as well as the present and future investment environment, capital demand, market competition, capital budget, shareholders' interests, balanced dividend considerations and long-term financial plans, the PTI's Articles of Incorporation provide that the total cash dividends paid in any given year should be at least 20% of total dividends distributed.

For the policies on the distribution of employees' compensation and remuneration of directors after the amendment, refer to employees' compensation and remuneration of directors in Note 23(f).

Items referred to under Rule No. 1010012865 and Rule No. 1010047490 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the PTI. Distributions can be made out of any subsequent reversal of the debit to other equity items.

An appropriation of earnings to a legal reserve shall be made until the legal reserve equals the PTI's capital surplus. The legal reserve may be used to offset deficit. If the PTI has no deficit and the legal reserve has exceeded 25% of the PTI's capital surplus, the excess may be transferred to capital or distributed in cash.

The appropriations of earnings for 2018 and 2017, which were approved in the shareholders' meetings on May 31, 2019 and June 8, 2018, respectively, were as follows:

	<b>Appropriation of Earnings For the Year Ended December 31</b>	
	<b>2018</b>	<b>2017</b>
Legal reserve	\$ 623,428	\$ 584,926
Special reserve	\$ (142,558)	\$ 337,628
Cash dividends	\$ 3,739,904	\$ 3,506,160
Cash dividends per share (NT\$)	\$ 4.8	\$ 4.5

The appropriation of earnings for 2019 had been proposed by the PTI's board of directors on March 10, 2020. The appropriations and dividends per share were as follows:

	<b>For the Year Ended December 31, 2019</b>
Legal reserve	<u>\$ 582,611</u>
Special reserve	<u>\$ 129,671</u>
Cash dividends	<u>\$ 3,506,160</u>
Cash dividends per share (NT\$)	<u>\$ 4.5</u>

The appropriation of earnings for 2019 is subject to the resolution of the shareholders in the shareholders' meeting to be held on May 28, 2020.

d. Other equity items

1) Exchange differences on translating the financial statements of foreign operations

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Balance at January 1	<u>\$(170,725)</u>	<u>\$(319,150)</u>
Recognized for the year		
Exchange differences on translating the financial statements of foreign operations	<u>(128,961)</u>	<u>148,425</u>
Other comprehensive income recognized for the year	<u>(128,961)</u>	<u>148,425</u>
Balance at December 31	<u>\$(299,686)</u>	<u>\$(170,725)</u>

2) Unrealized valuation gain (loss) on financial assets at FVTOCI

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Balance at January 1	<u>\$ (24,345)</u>	<u>\$ (18,478)</u>
Recognized for the year		
Unrealized loss - equity instruments	<u>(710)</u>	<u>(5,867)</u>
Other comprehensive income recognized for the year	<u>(710)</u>	<u>(5,867)</u>
Balance at December 31	<u>\$ (25,055)</u>	<u>\$ (25,055)</u>

e. Non-controlling interests

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Balance at January 1	\$ 12,074,141	\$ 11,676,332
Share in profit for the year	1,040,642	1,278,286
Other comprehensive income (loss) for the year		
Exchange differences on translating the financial statements of foreign entities	(205,160)	91,104
Unrealized loss on financial assets at FVTOCI	-	(26,326)
Remeasurement on defined benefit plans	(9,903)	(12,632)
Donations from shareholders	75	55
Cash dividends to shareholders from subsidiaries	(939,230)	(1,037,884)
The Corporation's shares held by its subsidiaries treated as treasury shares	(18,829)	(18,915)
Changes in ownership interest in subsidiaries	(71,501)	-
Increase in non-controlling interests	<u>-</u>	<u>124,121</u>
Balance at December 31	<u>\$ 11,870,235</u>	<u>\$ 12,074,141</u>

f. Treasury shares

<b>Purpose of Buy-Back</b>	<b>Share Held by Subsidiary (In Thousands of Shares)</b>
Number of shares at January 1, 2018	1,800
Increase during the year	<u>400</u>
Number of shares at December 31, 2018	2,200
Increase during the year	<u>450</u>
Number of shares at December 31, 2019	<u><u>2,650</u></u>

The PTI's shares held by its subsidiaries at the end of the reporting period were as follows:

<b>Name of Subsidiary</b>	<b>Number of Shares Held (In Thousands of Shares)</b>	<b>Carrying Amount</b>	<b>Market Price</b>
<u>December 31, 2019</u>			
Greatek Electronics Inc	2,650	\$ 264,470	\$ 264,470
<u>December 31, 2018</u>			
Greatek Electronics Inc.	2,200	\$ 145,420	\$ 145,420

The PTI's shares held by its subsidiary are treated as treasury shares.

## 22. REVENUE

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Revenue from contracts with customers		
Revenue from packaging services	\$ 43,629,693	\$ 45,521,205
Revenue from testing services	22,474,733	22,091,275
Others	<u>420,718</u>	<u>426,899</u>
	<u>\$ 66,525,144</u>	<u>\$ 68,039,379</u>

### a. Contract information

As the Corporation fulfills its obligations in the contract for testing services, the customer simultaneously receives and consumes the benefits provided by the Corporation. The Corporation has the right to revenue collection for the portion of testing services that have been fulfilled, and the revenue from testing services is recognized over time. The Corporation fulfills its obligations in the contract for packaging services when the customer creates or enhances the goods they have control of. The Corporation has the right to revenue collection for the portion of packaging services that have been fulfilled, and the revenue from packaging services is recognized over time.

### b. Contract balances

	<b>December 31, 2019</b>	<b>December 31, 2018</b>	<b>January 1, 2018</b>
Notes and accounts receivable (including related parties) (Note 10)	<u>\$ 13,771,460</u>	<u>\$ 11,846,133</u>	<u>\$ 12,412,484</u>
Contract assets			
Revenue from services	<u>\$ 2,170,456</u>	<u>\$ 1,671,214</u>	<u>\$ 1,683,071</u>
Contract liabilities			
Revenue from services	<u>\$ 62,458</u>	<u>\$ 39,323</u>	<u>\$ 43,742</u>

The changes in the contract asset and the contract liability balances primarily result from the timing difference between the Corporation's performance and the respective customer's payment.

Revenue recognized in the current reporting period from the contract liabilities at the beginning of the year and from the performance obligations which were satisfied in the previous periods is as follows:

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
From the contract liabilities at the beginning of the year		
Revenue from processing services	<u>\$ 25,549</u>	<u>\$ 28,183</u>

c. Disaggregation of revenue from contracts with customers

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
<u>Type of goods or services</u>		
Revenue from packaging services	\$ 43,629,693	\$ 45,521,205
Revenue from testing services	22,474,733	22,091,275
Others	<u>420,718</u>	<u>426,899</u>
	<u>\$ 66,525,144</u>	<u>\$ 68,039,379</u>
<u>Primary geographical markets</u>		
Japan	\$ 23,245,391	\$ 22,270,182
Singapore	13,147,802	14,947,281
Taiwan (The principal place of business of the Corporation)	13,401,920	13,752,607
America	12,634,897	13,167,078
Europe	2,367,141	2,052,881
China and Hong Kong	1,133,562	1,381,878
Others	<u>594,431</u>	<u>467,472</u>
	<u>\$ 66,525,144</u>	<u>\$ 68,039,379</u>

**23. NET PROFIT FROM CONTINUING OPERATIONS**

a. Other gains and losses

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Fair value changes of financial assets and financial liabilities		
Financial assets mandatorily classified as at FVTPL	\$ 66,647	\$ 20,933
Financial liabilities classified as held for trading	(49,979)	(98,205)
Impairment loss of non-financial assets	(527,327)	(437,609)
Others	<u>527,826</u>	<u>96,889</u>
	<u>\$ 17,167</u>	<u>\$(417,992)</u>

b. Other income

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Rental income		
Operating lease rental income	\$ 118,373	\$ 120,112
Interest income		
Bank deposits	106,239	72,226
Financial assets measured at amortized cost	10,059	11,298
Repurchase agreements collateralized by bonds	32	879
Others	<u>-</u>	<u>346</u>
	<u>\$ 234,703</u>	<u>\$ 204,861</u>

c. Finance costs

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Interest on bank loans	\$ 379,720	\$ 448,034
Interest on lease liabilities	28,787	-
Capitalized interest	(62,077)	(97,509)
Others	<u>14</u>	<u>-</u>
	<u>\$ 346,444</u>	<u>\$ 350,525</u>

Information about capitalized interest was as follows:

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Capitalized interest	\$ 62,077	\$ 97,509
Capitalization rate	1.144%-1.190%	1.19%-2.66%

d. Depreciation and amortization

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Property, plant and equipment	\$ 12,480,594	\$ 12,510,177
Right-of-use assets	230,674	-
Intangible assets	<u>137,554</u>	<u>144,040</u>
Total	<u>\$ 12,848,822</u>	<u>\$ 12,654,217</u>
An analysis of depreciation by function		
Operating costs	\$ 12,087,485	\$ 11,967,746
Operating expenses	<u>623,783</u>	<u>542,431</u>
	<u>\$ 12,711,268</u>	<u>\$ 12,510,177</u>
An analysis of amortization by function		
Operating costs	\$ 122,083	\$ 132,955
Marketing	92	137
General and administrative	7,473	7,979
Research and development	<u>7,906</u>	<u>2,969</u>
	<u>\$ 137,554</u>	<u>\$ 144,040</u>

e. Employee benefit expense

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Post-employment benefits (Note 20)		
Defined contribution plans	\$ 548,453	\$ 529,814
Defined benefit plans	<u>36,622</u>	<u>50,327</u>
	585,075	580,141
Termination benefits	1,201	-
Other employee benefits	<u>14,873,927</u>	<u>15,358,217</u>
Total employee benefit expense	<u>\$ 15,460,203</u>	<u>\$ 15,938,358</u>
An analysis of employee benefit expense by function		
Operating costs	\$ 13,081,461	\$ 13,379,685
Operating expenses	<u>2,378,742</u>	<u>2,558,673</u>
	<u>\$ 15,460,203</u>	<u>\$ 15,938,358</u>

f. Employees' compensation and remuneration of directors

According to the Articles of Incorporation of the PTI, the PTI accrued employees' compensation and remuneration of directors at the rates between 5% and 7.5% and no higher than 1.5%, respectively, of net profit before income tax, employees' compensation, and remuneration of directors. However, if the PTI has accumulated deficits (including adjustment of unappropriated earnings), the PTI should retain the net profit in advance for deducting accumulated deficits. The employees' compensation and remuneration of directors for the years ended December 31, 2019 and 2018 which were approved by the PTI's board of directors on March 10, 2020 and March 14, 2019, respectively, are as follows:

Accrual rate

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Employees' compensation	5.39%	5.37%
Remuneration of directors	1.08%	1.07%

Amount

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
	<b>Cash</b>	<b>Cash</b>
Employees' compensation	\$ 394,109	\$ 420,813
Remuneration of directors	78,822	84,163

If there is a change in the amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in the accounting estimate.

There is no difference between the actual amounts of employees' compensation and remuneration of directors paid and the amounts recognized in the consolidated financial statements for the years ended December 31, 2018 and 2017.

Information on the employees' compensation and remuneration of directors resolved by the PTI's board of directors in 2020 and 2019 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

g. Gains or losses on foreign currency exchange

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Foreign exchange gains	\$ 459,530	\$ 991,709
Foreign exchange losses	<u>(569,678)</u>	<u>(776,370)</u>
Net (losses) gains	<u><u>\$(110,148)</u></u>	<u><u>\$ 215,339</u></u>

## 24. INCOME TAXES

a. Major components of tax expense recognized in profit or loss

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Current tax		
In respect of the current year	\$ 1,646,674	\$ 1,937,697
Income tax on unappropriated earnings	32,864	227,862
Adjustments for prior years	<u>(23,204)</u>	<u>(44,052)</u>
	<u>1,656,334</u>	<u>2,121,507</u>
Deferred tax		
In respect of the current year	(28,108)	(207,356)
Adjustments to deferred tax attributable to changes in tax rates and laws	<u>-</u>	<u>8,624</u>
	<u>(28,108)</u>	<u>(198,732)</u>
Income tax expenses recognized in profit or loss	<u><u>\$ 1,628,226</u></u>	<u><u>\$ 1,922,775</u></u>



A reconciliation of accounting profit and income tax expense is as follows:

	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Profit before income tax	<u>\$ 8,507,518</u>	<u>\$ 9,435,337</u>
Income tax expense calculated at the statutory rate	\$ 2,000,569	\$ 2,410,983
Nondeductible expenses in determining taxable income	(210,554)	(303,934)
Tax-exempt income	-	(90,421)
Income tax on unappropriated earnings	32,864	227,862
Generation of temporary differences	(194,592)	(194,367)
Unrecognized loss carryforwards	-	(112,952)
Adjustments to deferred tax attributable to changes in tax rates and laws	-	8,624
Adjustments for prior years' tax	(23,204)	(44,052)
Others	<u>23,143</u>	<u>21,032</u>
Income tax expense recognized in profit or loss	<u>\$ 1,628,226</u>	<u>\$ 1,922,775</u>

The Income Tax Act in the ROC was amended in 2018, and the corporate income tax rate was adjusted from 17% to 20%. In addition, the rate of the corporate surtax applicable to the 2018 unappropriated earnings was reduced from 10% to 5%.

In July 2019, the President of the ROC announced the amendments to the Statute for Industrial Innovation, which stipulate that the amounts of unappropriated earnings in 2018 and thereafter that are reinvested in the construction or purchase of certain assets or technologies are allowed as deduction when computing the income tax on unappropriated earnings. The Corporation has already deducted the amount of capital expenditure from the unappropriated earnings in 2018 that was reinvested when calculating the tax on unappropriated earnings for the year ended December 2019.

b. Current tax liabilities

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Current tax liabilities		
Tax payable	<u>\$ 778,495</u>	<u>\$ 1,603,899</u>

c. Deferred tax assets and liabilities

The movements of deferred tax assets and deferred tax liabilities were follows:

For the year ended December 31, 2019

	<b>Balance, Beginning of Year</b>	<b>Movements in the Year</b>	<b>Balance, End of Year</b>
<u>Deferred tax assets</u>			
Temporary differences	<u>\$ 357,829</u>	<u>\$ 26,678</u>	<u>\$ 384,507</u>
<u>Deferred tax liabilities</u>			
Temporary differences	<u>\$ 115,906</u>	<u>\$ (1,430)</u>	<u>\$ 114,476</u>

For the year ended December 31, 2018

	<b>Balance, Beginning of Year</b>	<b>Movements in the Year</b>	<b>Balance, End of Year</b>
<u>Deferred tax assets</u>			
Temporary differences	<u>\$ 172,963</u>	<u>\$ 184,866</u>	<u>\$ 357,829</u>
<u>Deferred tax liabilities</u>			
Temporary differences	<u>\$ 203,163</u>	<u>\$ (87,257)</u>	<u>\$ 115,906</u>

d. Items for which no deferred tax assets have been recognized in the consolidated balance sheets

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Loss carryforwards		
Expiry in 2020	\$ 25,158	\$ 26,057
Expiry in 2021	29,735	30,799
Expiry in 2022	12,274	-
Expiry in 2023	2,580	-
Expiry in 2024	<u>4,644</u>	<u>-</u>
	<u>\$ 74,391</u>	<u>\$ 56,856</u>
Deductible temporary differences	<u>\$ -</u>	<u>\$ 26,504</u>

e. Income tax assessments

Income tax returns through 2016 have been assessed by the tax authorities.

## 25. EARNINGS PER SHARE

Unit: NT\$ Per Share

	For the Year Ended December 31	
	2019	2018
Basic earnings per share	\$ <u>7.52</u>	\$ <u>8.02</u>
Diluted earnings per share	\$ <u>7.47</u>	\$ <u>7.95</u>

The earnings and weighted average number of common shares outstanding used in the computation of earnings per share were as follows:

### Net Profit for the Year

	For the Year Ended December 31	
	2019	2018
Profit for the year attributable to the owner of the Corporation	\$ 5,838,650	\$ 6,234,276
Effect of potentially dilutive common shares:		
Employees' compensation	<u>-</u>	<u>-</u>
Earnings used in the computation of diluted earnings per share	<u>\$ 5,838,650</u>	<u>\$ 6,234,276</u>

Weighted average number of common shares outstanding (in thousands of shares):

	For the Year Ended December 31	
	2019	2018
Weighted average number of common shares used in the computation of basic earnings per share	776,772	776,846
Effect of potentially dilutive common shares:		
Employees' compensation	<u>5,143</u>	<u>7,222</u>
Weighted average number of common shares used in the computation of dilutive earnings per share	<u>781,915</u>	<u>784,068</u>

If the PTI offered to settle compensation paid to employees in cash or shares, the PTI assumed the entire amount of the compensation will be settled in shares, and the resulting potential shares were included in the weighted average number of shares outstanding used in the computation of diluted earnings per share, as the effect is dilutive. Such dilutive effect of the potential shares is included in the computation of diluted earnings per share until the number of shares to be distributed to employees is resolved in the following year.

## 26. CAPITAL MANAGEMENT

The Corporation manages its capital to ensure its ability to continue as a going concern while maximizing the return to stakeholders. The Corporation's overall strategy remains unchanged from the previous year.

The capital structure of the Corporation consists of net debt (borrowings offset by cash and cash equivalents) and equity of the Corporation (comprising issued capital, reserves, retained earnings, other equity and non-controlling interests).

## 27. FINANCIAL INSTRUMENTS

### a. Fair value of financial instruments not measured at fair value

#### December 31, 2019

	Carrying Amount	Fair Value			
		Level 1	Level 2	Level 3	Total
<u>Financial assets</u>					
Financial assets at amortized cost					
Domestic corporate bonds	\$ 1,050,391	\$ -	\$ 1,054,730	\$ -	\$ 1,054,730

#### December 31, 2018

	Carrying Amount	Fair Value			
		Level 1	Level 2	Level 3	Total
<u>Financial assets</u>					
Financial assets at amortized cost					
Domestic corporate bonds	\$ 1,151,536	\$ -	\$ 1,156,991	\$ -	\$ 1,156,991

The above-mentioned level 2 fair value measurement was based on quoted prices from the Taipei Exchange.

b. Fair value of financial instruments that are measured at fair value on a recurring basis

1) Fair value hierarchy

December 31, 2019

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Mutual funds	\$ 50,652	\$ -	\$ -	\$ 50,652
Derivative instruments	<u>-</u>	<u>20,555</u>	<u>-</u>	<u>20,555</u>
	<u>\$ 50,652</u>	<u>\$ 20,555</u>	<u>\$ -</u>	<u>\$ 71,207</u>
Financial assets at FVTOCI				
Investments in equity instruments				
Domestic listed shares and emerging market shares	<u>\$ 2,093</u>	<u>\$ 24,000</u>	<u>\$ -</u>	<u>\$ 26,093</u>
Financial liabilities at FVTPL				
Derivative instruments	<u>\$ -</u>	<u>\$ 3,953</u>	<u>\$ -</u>	<u>\$ 3,953</u>

December 31, 2018

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Mutual funds	\$ 50,376	\$ -	\$ -	\$ 50,376
Derivative instruments	<u>-</u>	<u>5,841</u>	<u>-</u>	<u>5,841</u>
	<u>\$ 50,376</u>	<u>\$ 5,841</u>	<u>\$ -</u>	<u>\$ 56,217</u>
Financial assets at FVTOCI				
Investments in equity instruments				
Domestic listed shares and emerging market shares	<u>\$ 2,303</u>	<u>\$ 24,500</u>	<u>\$ -</u>	<u>\$ 26,803</u>
Financial liabilities at FVTPL				
Derivative instruments	<u>\$ -</u>	<u>\$ 2,223</u>	<u>\$ -</u>	<u>\$ 2,223</u>

There were no transfers between Levels 1 and 2 in the current and prior years.

2) Valuation techniques and inputs applied for the purpose of Level 2 fair value measurement

Financial Instruments	Valuation Techniques and Inputs
Derivatives - foreign currency forward contracts	Discounted cash flow: Future cash flows are estimated based on observable forward exchange rates at the end of the reporting period and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.
Unlisted securities	Using the market approach and the binomial option pricing model to calculate the fair value.

c. Categories of financial instruments

	December 31	
	2019	2018
<u>Financial assets</u>		
Financial assets at fair value through profit or loss (FVTPL)		
Mandatorily classified as at FVTPL	\$ 71,207	\$ 56,217
Financial assets at amortized cost (Note 1)	37,978,171	33,352,629
Financial assets at FVTOCI		
Equity instruments	26,093	26,803
<u>Financial liabilities</u>		
Financial liabilities at fair value through profit or loss (FVTPL)		
Held for trading	3,953	2,223
Financial liabilities at amortized cost (Note 2)	41,191,156	40,652,073

Note 1: The balances include financial assets measured at amortized cost, which comprise cash and cash equivalents, debt investments, time deposits with original maturities of more than 3 months, notes and accounts receivable (including related parties), other receivables (including related parties), pledged time deposits and refundable deposits.

Note 2: The balances include financial liabilities measured at amortized cost, which comprise short-term loans, notes and accounts payable (including related parties), other payables (including related parties), accrued expenses and other current liabilities and long-term debt (including current portion).

d. Financial risk management objectives and policies

The Corporation's major financial instruments include equity investments, accounts receivable, accounts payable, and borrowings. The Corporation's corporate treasury function provides services to the business, coordinates access to domestic and international financial markets, monitors and manages the financial risks relating to the operations of the Corporation through internal risk reports which analyze exposures by degree and magnitude of risks. These risks include market risk (including currency risk, interest rate risk and other price risk), credit risk and liquidity risk.

The Corporation sought to minimize the effects of these risks by using derivative financial instruments to hedge risk exposures. The use of financial derivatives was governed by the Corporation's policies approved by the board of directors, which provided written principles on foreign exchange risk, interest rate risk, credit risk, the use of financial derivatives and non-derivative financial instruments, and the investment of excess liquidity. Compliance with policies and exposure limits was reviewed by the internal auditors on a continuous basis. The Corporation did not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes.

The corporate treasury function, an independent body that monitors risks and policies implemented to mitigate risk exposures, reports quarterly to the Corporation's board of directors.

#### 1) Market risk

The Corporation's activities exposed it primarily to the financial risks of changes in foreign currency exchange rates (see (a) below) and interest rates (see (b) below). The Corporation entered into a variety of derivative financial instruments (included forward exchange contracts) to manage its exposure to foreign currency risk.

There had been no change to the Corporation's exposure to market risks or the manner in which these risks were managed and measured.

##### a) Foreign currency risk

The Corporation's operating activities are partially denominated in foreign currencies and thus have natural hedging effects. The Corporation's management of foreign currency risk is for risk hedging instead of speculative purposes.

The strategy of foreign currency risk management is to review the net position exposed to foreign currency risk and manage the risk of the net position. The Corporation selects the instruments to hedge against currency exposure taking into consideration the hedging cost and period. The Corporation currently utilizes derivative financial instruments, including buy/sell foreign exchange forward contracts, to hedge against foreign currency exchange risk.

For the carrying amounts of the Corporation's foreign currency denominated monetary assets and monetary liabilities at the end of the reporting period, refer to Note 31.

The Corporation uses forward exchange contracts to reduce foreign currency risk exposure. It is the Corporation's policy to negotiate the terms of the hedge derivatives to match the terms of the hedged item to maximize hedge effectiveness.

As net investments in foreign operations are for strategic purposes, they are not hedged by the Corporation.

##### Sensitivity analysis

The Corporation was mainly exposed to the USD and JPY.

The following table details the Corporation's sensitivity to a 5% increase and decrease in the functional currency against the relevant foreign currencies. The sensitivity analysis included outstanding foreign currency denominated monetary items and foreign currency forward contracts designated as cash flow hedges, and adjusted their translation at the end of the reporting period for a 5% change in foreign currency rates. The sensitivity analysis included cash and cash equivalents, accounts receivable, other receivables, accounts payable, other payables, short-term bank loans and long-term debt. The number below indicates the decrease/increase in pre-tax profit when the functional currency strengthens 5% against the relevant currency.

	<b>USD Impact</b>		<b>JPY Impact</b>	
	<b>For the Year Ended December 31</b>		<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
Profit or loss	\$(461,897)	\$(408,898)	\$ 108,585	\$ 18,485

b) Interest rate risk

As the Corporation owns assets at both fixed and floating interest rates, the Corporation is exposed to interest rate risk. The Corporation's interest rate risk also comes from borrowings at floating interest rates. Since the Corporation's bank borrowings are at floating interest rates, fluctuations in interest rates will affect cash flow in the future but will not affect the fair value.

The carrying amounts of the Corporation's financial assets and financial liabilities with exposure to interest rate risk at the end of the reporting period were as follows.

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Fair value interest rate risk		
Financial assets	\$ 8,338,326	\$ 9,445,057
Financial liabilities	1,429,181	1,049,454
Cash flow interest rate risk		
Financial assets	14,460,789	10,536,721
Financial liabilities	29,391,519	31,322,908

Sensitivity analysis

The sensitivity analysis below was determined based on the Corporation's exposure to interest rate risk for non-derivative instruments at the end of the reporting period. For floating rate assets and liabilities, the analysis was prepared assuming the amount of both the assets and the liabilities outstanding at the end of the reporting period was outstanding for the whole year.

If interest rates had been 0.1% higher/lower and all other variables were held constant, the Corporation's pre-tax loss for the year ended December 31, 2019 and 2018 would decrease/increase by \$14,931 thousand and \$20,786 thousand, respectively, which was mainly attributable to the Corporation's exposure to interest rate risk on its variable-rate net liabilities.

c) Other price risk

The Corporation was exposed to equity price risk through its investments in listed equity securities. Equity investments are held for strategic rather than trading purposes. The Corporation does not actively trade these investments. The Corporation's equity price risk was mainly concentrated on equity instruments in the electronics industry sector listed on the Tokyo Stock Exchange and the Taipei Exchange.



### Sensitivity analysis

The sensitivity analysis below was determined based on the exposure to equity price risks at the end of the reporting period.

If equity prices had been 5% higher/lower, pre-tax profit for the years ended December 31, 2019 and 2018 would have increased/decreased by \$2,533 thousand and \$2,519 thousand, respectively, as a result of the changes in fair value of financial assets at FVTPL, and the post-tax other comprehensive income for the year ended December 31, 2019 and 2018 would have increased/decreased by \$1,305 thousand and \$1,340 thousand, respectively, as a result of the changes in fair value of financial assets at FVTOCI.

## 2) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations, resulting in a financial loss to the Corporation. As at the end of the reporting period, the Corporation's maximum exposure to credit risk which will cause a financial loss to the Corporation due to failure of the counterparty to discharge an obligation arises from the carrying amount of the respective recognized financial assets as stated in the consolidated balance sheets.

In order to minimize credit risk, the management of the Corporation has established rules for credit and accounts receivable management to ensure that follow-up action is taken to recover overdue debt. In addition, the Corporation reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate impairment losses are made for irrecoverable amounts.

In this regard, the directors of the Corporation consider that the Corporation's credit risk was significantly reduced.

The credit risk on liquid funds and derivatives was limited because the counterparties are banks with good credit ratings.

The counterparties of trade receivables cover a large number of customers, spread across diverse industries and geographical areas. Ongoing credit evaluation is performed on the financial condition of trade receivables.

The Corporation's concentration of credit risk was related to the three largest customers within the Corporation. Besides the aforementioned customers, there was no other customer that accounted for 10% of total gross accounts receivable at any time during the years 2019 and 2018. The three largest customers are creditworthy counterparties; therefore, the Corporation believes the concentration of credit risk is insignificant.

### Credit risk management for investments in debt instruments

The Corporation only invests in debt instruments that are rated the equivalent of investment grade or higher and have low credit risk for the purpose of impairment assessment. The credit rating information is supplied by independent rating agencies. The Corporation's exposure and the external credit ratings are continuously monitored. The Corporation reviews changes in bond yields and other public information and makes an assessment whether there has been a significant increase in credit risk since the last period to the reporting date.

The Corporation considers the historical default rates of each credit rating supplied by external rating agencies, the current financial condition of debtors, and industry forecasts to estimate 12-month or lifetime expected credit losses. The Corporation's current credit risk grading framework comprises the following categories:

Category	Description	Basis for Recognizing	
		Expected Credit Losses	Expected Loss Rate
Performing	The counterparty has a low risk of default and a strong capacity to meet contractual cash flows	12m ECL	-

### 3) Liquidity risk

The Corporation manages liquidity risk by monitoring and maintaining a level of cash and cash equivalents deemed adequate to finance the Corporation's operations and mitigate the effects of fluctuations in cash flows.

The Corporation relies on bank borrowings as a significant source of liquidity. As of December 31, 2019 and 2018, the Corporation had available unutilized short-term bank loan facilities of approximately \$7,999,617 thousand and \$6,578,487 thousand, respectively.

#### a) Liquidity and interest rate risk tables for non-derivative financial liabilities

The following table details the Corporation's remaining contractual maturities for its non-derivative financial liabilities with agreed repayment periods. The tables had been drawn up based on the undiscounted cash flows of financial liabilities from the earliest date on which the Corporation can be required to pay. The tables include both interest and principal cash flows.

Specifically, bank loans with a repayment on demand clause were included in the earliest time band regardless of the probability of the banks choosing to exercise their rights. The maturity dates for other non-derivative financial liabilities were based on the agreed repayment dates.

#### December 31, 2019

	On Demand or Less than 1 Month	1-3 Months	3 Months to 1 Year	1-5 Years	5+ Years
Non-interest bearing liabilities	\$ 3,603,185	\$ 5,490,588	\$ 1,266,398	\$ 5,385	\$ 4,900
Lease liabilities	23,740	45,572	169,487	360,036	1,712,721
Fixed interest rate liabilities	424,202	531,564	165,834	307,581	-
Variable interest rate liabilities	-	-	242,989	26,560,882	2,587,648
	<u>\$ 4,051,127</u>	<u>\$ 6,067,724</u>	<u>\$ 1,844,708</u>	<u>\$27,233,884</u>	<u>\$ 4,305,269</u>

Additional information about the maturity analysis for lease liabilities:

	<b>Less than 1 Year</b>	<b>1-5 Years</b>	<b>5-10 Years</b>	<b>10-15 Years</b>	<b>15-20 Years</b>	<b>20+ Years</b>
Lease liabilities	<u>\$ 238,799</u>	<u>\$ 360,036</u>	<u>\$ 237,228</u>	<u>\$ 235,048</u>	<u>\$ 233,688</u>	<u>\$1,006,757</u>

December 31, 2018

	<b>On Demand or Less than 1 Month</b>	<b>1-3 Months</b>	<b>3 Months to 1 Year</b>	<b>1-5 Years</b>	<b>5+ Years</b>
Non-interest bearing liabilities	\$ 3,437,665	\$ 3,947,536	\$ 1,188,943	\$ -	\$ -
Fixed interest rate liabilities	-	136,277	276,458	636,719	-
Variable interest rate liabilities	<u>-</u>	<u>707,330</u>	<u>216,519</u>	<u>26,601,190</u>	<u>3,797,869</u>
	<u>\$ 3,437,665</u>	<u>\$ 4,791,143</u>	<u>\$ 1,681,920</u>	<u>\$27,237,909</u>	<u>\$ 3,797,869</u>

b) Liquidity and interest rate risk table for derivative financial liabilities

The following table details the Corporation's liquidity analysis of its derivative financial instruments. The table is based on the undiscounted gross inflows and outflows on those derivatives that require gross settlement.

December 31, 2019

	<b>On Demand or Less than 1 Month</b>	<b>1-3 Months</b>	<b>3 Months to 1 Year</b>
<u>Gross settled</u>			
Foreign exchange forward contracts			
Inflows	\$1,265,547	\$ 763,849	\$ 74,267
Outflows	<u>(1,254,065)</u>	<u>(758,166)</u>	<u>(74,830)</u>
	<u>\$ 11,482</u>	<u>\$ 5,683</u>	<u>\$ (563)</u>

December 31, 2018

	<b>On Demand or Less than 1 Month</b>	<b>1-3 Months</b>	<b>3 Months to 1 Year</b>
<u>Gross settled</u>			
Foreign exchange forward contracts			
Inflows	\$1,656,354	\$ 409,507	\$ 88,180
Outflows	<u>(1,655,351)</u>	<u>(408,106)</u>	<u>(86,966)</u>
	<u>\$ 1,003</u>	<u>\$ 1,401</u>	<u>\$ (1,214)</u>

c) Financing facilities

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Secured bank loan facilities which may be mutually extended:		
Amount used	\$ 12,948,198	\$ 13,534,928
Amount unused	<u>2,030,000</u>	<u>-</u>
	<u>\$ 14,978,198</u>	<u>\$ 13,534,928</u>

## 28. TRANSACTIONS WITH RELATED PARTIES

Balances and transactions between the PTI and its subsidiaries, which were related parties of the PTI, had been eliminated on consolidation and are not disclosed in this note. Details of transactions between the PTI and other related parties are disclosed below.

### a. Related Party Name and Relationship

<u>Related Party Name</u>	<u>Relationship with the Corporation</u>
Toshiba Corporation	Substantial related party
Kioxia Corporation (known as Toshiba Memory Corporation before October 1, 2019)	Substantial related party
Toshiba International Procurement Hong Kong, Ltd.	Substantial related party

(Continued)

<u>Related Party Name</u>	<u>Relationship with the Corporation</u>
Toshiba Information Systems (Japan) Corporation	Substantial related party
Kingston Technology International Ltd.	Substantial related party
Kingston Digital International Ltd.	Substantial related party
Kingston Solution, Inc.	Substantial related party
Kingston Technology Far East Corp.	Substantial related party
Realtek Singapore Private Limited	Substantial related party
Realtek Semiconductor Corp.	Substantial related party
Weltrend Semiconductor, Inc. (No longer the related party of the Group since May 29, 2018.)	Substantial related parties

(Concluded)

### b. Sales of goods

<u>Line Item</u>	<u>Related Party Category/Name</u>	<u>For the Year Ended December 31</u>	
		<u>2019</u>	<u>2018</u>
Sales of goods	Substantial related parties		
	Kioxia Corporation	\$ 17,934,247	\$ 14,821,258
	Other	<u>2,793,805</u>	<u>2,196,783</u>
		<u>\$ 20,728,052</u>	<u>\$ 17,018,041</u>

Sales transactions with related parties were based on normal commercial prices and terms. In general, the payment terms for the sales of the Corporation is from 30 days to 150 days starting from the first day of the month following the invoice date.

c. Purchases

<b>Related Party Category</b>	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Substantial related parties	<u>\$ 410,346</u>	<u>\$ 31,724</u>

The purchase prices and payment terms were based on negotiations and thus not comparable with those in the market.

d. Operating costs

<b>Related Party Category</b>	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Substantial related parties	<u>\$ -</u>	<u>\$ 273</u>

Operating costs from transactions with related parties include subcontracting costs and other costs. The terms of the transactions with related parties were made under a subcontracting cooperation agreement with terms not comparable with those in the market.

e. Miscellaneous income

<b>Related Party Category</b>	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Substantial related parties	<u>\$ -</u>	<u>\$ 120</u>

The rental amount and payment terms with related parties were based on cooperation agreements and were thus not comparable with those in the market.

f. Other gains and losses

<b>Related Party Category</b>	<b>For the Year Ended December 31</b>	
	<b>2019</b>	<b>2018</b>
Substantial related parties	<u>\$(15,218)</u>	<u>\$ 10</u>

Other gains and losses mainly includes the compensation, difference from collections and payment transfers. The compensation with related parties were based on negotiations and were thus not comparable with those in the market.

g. Contract assets

Related Party Category/Name	December 31	
	2019	2018
Substantial related parties		
Kioxia Corporation	\$ 725,270	\$ 511,952
Other	<u>97,462</u>	<u>64,763</u>
	<u>\$ 822,732</u>	<u>\$ 576,715</u>

For the years ended December 31, 2019 and 2018, no impairment loss was recognized for contract assets from related parties.

h. Accounts receivable from related parties (excluding loans to related parties and contract assets)

Line Item	Related Party Category/Name	December 31	
		2019	2018
Accounts receivable from related parties	Substantial related parties		
	Kioxia Corporation	\$ 3,685,943	\$ 2,451,389
	Realtek Semiconductor Corp.	311,225	227,774
	Kingston Technology International Ltd.	213,896	143,561
	Others	<u>41,424</u>	<u>56,584</u>
		<u>\$ 4,252,488</u>	<u>\$ 2,879,308</u>

The outstanding accounts receivable from related parties are unsecured. For the years ended December 31, 2019 and 2018, no impairment loss was recognized for accounts receivable from related parties.

i. Payables to related parties (excluding loans from related parties)

Line Item	Related Party Category/Name	December 31	
		2019	2018
Accounts payable - related parties	Substantial related parties		
	Toshiba International Procurement Hong Kong, Ltd.	<u>\$ 120,603</u>	<u>\$ -</u>

The outstanding accounts payable from related parties are unsecured.

- j. Acquisition of property, plant and equipment

Related Party Category	Purchase Price	
	For the Year Ended December	
	31	
	2019	2018
Substantial related parties	\$ <u>-</u>	\$ <u>1,101</u>

The transactions of property, plant and equipment with related parties were based on negotiations of cooperation agreements for which there were no comparable terms under the agreements.

- k. Other receivables from related parties

Related Party Category / Name	December 31	
	2019	2018
Substantial related parties		
Kioxia Corporation	\$ 5,363	\$ 15,773
Realtek Singapore Pte. Ltd.	1,152	-
Other	<u>10</u>	<u>308</u>
	\$ <u>6,525</u>	\$ <u>16,081</u>

- l. Other payables from related parties

Related Party Category	December 31	
	2019	2018
Substantial related parties		
Kioxia Corporation	\$ <u>17,447</u>	\$ <u>569</u>

- m. Payable expenses and other current liabilities

Related Party Category	December 31	
	2019	2018
Substantial related parties	\$ <u>-</u>	\$ <u>7,301</u>

- n. Compensation of key management personnel

	For the Year Ended December	
	31	
	2019	2018
Short-term benefits	\$ 363,692	\$ 366,469
Post-employment benefits	<u>6,249</u>	<u>1,836</u>
	\$ <u>369,941</u>	\$ <u>368,305</u>

The remuneration of directors and key executives was determined by the remuneration committee based on the performance of individuals and market trends.



## 29. ASSETS PLEDGED AS COLLATERAL OR FOR SECURITY

The following assets had been pledged or mortgaged as collateral mainly for long-term debt, guarantee deposits for exports, L/C, guarantees for settlement and bonded inventories.

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
Property, plant and equipment	\$ 16,818,916	\$ 19,333,168
Pledged deposits (classified as financial assets at amortized cost - current)	21,712	21,763
Restricted deposits (classified as financial assets at amortized cost - current)	269,203	318,534
Pledged deposits (classified as financial assets at amortized cost - non-current)	<u>88,874</u>	<u>96,815</u>
	<u>\$ 17,198,705</u>	<u>\$ 19,770,280</u>

## 30. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

The Corporation's significant commitments and contingencies as of December 31, 2019 were as follows:

- a. From September 2017 to September 2018, the PTI signed contracts worth \$1,811,372 thousand with Jian Ming Contractor Co., Ltd. for factory engineering. As of December 31, 2019, the PTI has paid a total of \$683,947 thousand.
- b. From September 2017 to June 2018 and January 2019 to December 2019, the PTI signed the purchase agreements of equipment worth \$2,254,499 thousand and \$704,996 with Advantest Corporation, respectively. As of December 31, 2019, the PTI has paid \$2,254,499 thousand and \$140,404 thousand, respectively.
- c. From October 2018 to October 2019 and October 2019 to November 2019, the PTI signed the purchase agreements of equipment worth \$507,766 thousand and \$588,182 thousand with Fasford Technology Co., Ltd., respectively. As of December 31, 2019, the PTI has paid \$136,303 thousand and \$0, respectively.
- d. From November 2018 to October 2019, the PTI signed the purchase agreements of equipment worth \$506,086 thousand with DISCO Corporation. As of December 31, 2019, the PTI has paid a total of \$258,906 thousand.
- e. From January 2019 to January 2020, the PTI signed the purchase agreements of equipment worth \$502,923 thousand with Nextest Systems Corporation. As of December 31, 2019, the PTI has paid a total of \$138,223 thousand.
- f. The unused credit amounts were as follows:

	<b>December 31</b>	
	<b>2019</b>	<b>2018</b>
JPY	<u>\$ -</u>	<u>\$ 483,640</u>

### 31. SIGNIFICANT FINANCIAL ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The Corporation's significant financial assets and liabilities denominated in foreign currencies aggregated by the foreign currencies other than functional currencies and the related exchange rates between the foreign currencies and the respective functional currencies were as follows:

December 31, 2019			
	Foreign Currency	Exchange Rate	Carrying Amount
<u>Financial assets</u>			
Monetary items			
USD		30.106	
	\$ 467,634	(USD:NTD)	\$ 14,078,589
USD		6.9662	
	10,440	(USD:RMB)	314,307
USD		108.6400	
	14,807	(USD:JPY)	445,780
JPY	422,851	0.2771 (JPY:NTD)	117,172
JPY	28,647	0.0641 (JPY:RMB)	7,938
JPY	825,187	0.0092 (JPY:USD)	228,659
SGD		0.7429	
	3,270	(SGD:USD)	73,135
RMB		0.1435	
	31,585	(RMB:USD)	136,501
RMB		4.3217	
	9,480	(RMB:NTD)	40,970
EUR		33.7488	
	18	(EUR:NTD)	<u>607</u>
			<u>\$ 15,443,658</u>
Non-monetary items			
USD		30.106	
	593	(USD:NTD)	\$ 17,865
JPY	9,708	0.2771 (JPY:NTD)	<u>2,690</u>
			<u>\$ 20,555</u>

## Financial liabilities

### Monetary items

USD		30.106	
	169,180	(USD:NTD)	\$ 5,093,333
USD		6.9662	
	8,099	(USD:RMB)	243,828
USD		108.6400	
	8,755	(USD:JPY)	263,578
EUR		33.7488	
	457	(EUR:NTD)	15,423
JPY	7,842,529	0.2771 (JPY:NTD)	2,173,165
JPY	185,421	0.0641 (JPY:RMB)	51,380
JPY	1,085,952	0.0092 (JPY:USD)	300,917
RMB		0.1435	
	43,912	(RMB:USD)	189,774
RMB		4.3217	
	89	(RMB:NTD)	385
SGD		0.7429	
	1,734	(SGD:USD)	<u>38,782</u>

\$ 8,370,565

### Non-monetary items

USD		30.106	
	8	(USD:NTD)	\$ 252
JPY	13,356	0.2771 (JPY:NTD)	<u>3,701</u>

\$ 3,953

December 31, 2018			
	Foreign Currency	Exchange Rate	Carrying Amount
<u>Financial assets</u>			
Monetary items			
USD		30.733	
	\$ 381,991	(USD:NTD)	\$ 11,739,729
USD		6.8658	
	7,530	(USD:RMB)	231,419
USD	24,290	110.4 (USD:JPY)	746,505
JPY	1,018,342	0.2784 (JPY:NTD)	283,506
JPY	2,197	0.0622 (JPY:RMB)	612
JPY	1,662,052	0.0091 (JPY:USD)	462,715
SGD		0.7316	
	3,379	(SGD:USD)	75,978
RMB		0.1456	
	14,023	(RMB:USD)	62,770
RMB		4.4762	
	4,517	(RMB:NTD)	20,219
EUR		35.2031	
	40	(EUR:NTD)	<u>1,408</u>
			<u>\$ 13,624,861</u>
Non-monetary items			
USD		30.733	
	101	(USD:NTD)	\$ 3,116
JPY	9,787	0.2784 (JPY:NTD)	<u>2,725</u>
			<u>\$ 5,841</u>
<u>Financial liabilities</u>			
Monetary items			
USD		30.733	
	110,319	(USD:NTD)	\$ 3,390,434
USD		6.8658	
	18,638	(USD:RMB)	572,802
USD	18,757	110.4 (USD:JPY)	576,459
EUR		35.2031	
	1,245	(EUR:NTD)	43,828
JPY	2,459,309	0.2784 (JPY:NTD)	684,672
JPY	27,248	0.0622 (JPY:RMB)	7,586
JPY	1,523,956	0.0091 (JPY:USD)	424,269
RMB		0.1456	
	36,914	(RMB:USD)	165,234
SGD		0.7316	
	1,944	(SGD:USD)	<u>43,712</u>
			<u>\$ 5,908,996</u>

Non-monetary items

USD		30.733	
	34	(USD:NTD)	\$ 1,047
JPY	3,999	0.2784 (JPY:NTD)	1,113
RMB		4.4762	
	14	(RMB:NTD)	<u>63</u>
			<u>\$ 2,223</u>

For the years ended December 31, 2019 and 2018, realized and unrealized net foreign exchange (losses) gains were \$(110,148) thousand and \$215,339 thousand, respectively. It is impractical to disclose net foreign exchange gains (losses) by each significant foreign currency due to the variety of the foreign currency transactions and currencies of the Corporation.

### 32. SEPARATELY DISCLOSED ITEMS

Except for the following, the Corporation has no other significant transactions, investees and investments in mainland China that need to be disclosed as required by the Securities and Futures Bureau.

- a. Financing provided to others: Table 1 (attached)
- b. Endorsements/guarantees provided: Table 2 (attached)
- c. Marketable securities held: Table 3 (attached)
- d. Marketable securities acquired or disposed of at costs or prices amounting to at least NT\$300 million or 20% of the paid-in capital: None.
- e. Acquisition of individual real estate at costs of at least NT\$300 million or 20% of the paid-in capital: None.
- f. Disposal of individual real estate at prices of at least NT\$300 million or 20% of the paid-in capital: None.
- g. Total purchases from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: Table 4 (attached)
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: Table 5 (attached)
- i. Derivative transactions: Note 7.
- j. Intercompany relationships and significant intercompany transactions: Table 6 (attached).
- k. Information of investees: Table 7 (attached)
- l. Information on investments in mainland China: Table 8 (attached)

Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, ownership percentage, net income of investees, investment income or loss, carrying amount of the investments at the end of the period, repatriations of investment income, and limit on the amount of investments in the mainland China area: Note 32 (j).

### 33. SEGMENT INFORMATION

- a. The revenues, operating results and financial information of each plant presented to the chief operating decision maker are consistent with the information in the consolidated financial statements. The segment revenues and operating results for the years ended December 31, 2019 and 2018 are shown in the consolidated income statements for the years ended December 31, 2019 and 2018. The segment assets as of December 31, 2019 and 2018 are shown in the consolidated balance sheets as of December 31, 2019 and 2018.
- b. Geographical information

The Corporation's revenue from continuing operations from external customers and information about its non-current assets by geographical location are detailed below.

	Revenue		Non-current Assets	
	For the Year Ended		December 31	
	2019	2018	2019	2018
Japan	\$ 23,245,391	\$ 22,270,182	\$ 2,047,337	\$ 4,039,712
Singapore	13,147,802	14,947,281	834,420	850,875
Taiwan	13,401,920	13,752,607	56,253,554	55,173,147
America	12,634,897	13,167,078	-	-
Europe	2,367,141	2,052,881	-	-
China and Hong Kong	1,133,562	1,381,878	2,630,007	3,079,323
Others	<u>594,431</u>	<u>467,472</u>	<u>-</u>	<u>-</u>
	<u>\$ 66,525,144</u>	<u>\$ 68,039,379</u>	<u>\$ 61,765,318</u>	<u>\$ 63,143,057</u>

Non-current assets exclude financial instruments, deferred tax assets, and other assets.

- c. Major customers

Sales to customers amounting to at least 10% of total gross sales:

Customer	For the Year Ended December 31			
	2019		2018	
	Amount	% of Total	Amount	% of Total
A	\$ 17,934,998	27	\$ 14,923,812	22
B	14,818,184	22	18,482,277	27
C	9,319,159	14	8,673,567	13

TABLE 1

POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

FINANCING PROVIDED TO OTHERS  
FOR THE YEAR ENDED DECEMBER 31, 2019  
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Lender	Borrower	Financial Statement Account	Related Party	Highest Balance for the Period	Ending Balance	Actual Amount Borrowed	Interest Rate	Nature of Financing	Business Transaction Amounts	Reasons for Short-term Financing	Allowance for Impairment Loss	Collateral		Financing Limit for Each Borrower (Notes 3 and 4)	Aggregate Financing Limits (Notes 3 and 4)	Note
													Item	Value			
0	POWERTECH TECHNOLOGY INC.	Powertech Technology (Singapore) Pte. Ltd.	Other receivables	Note 1	\$ 1,806,360	\$ 903,180	\$ 903,180	2.0%-2.8%	For short-term financing	\$ -	Working capital	\$ -	-	\$ -	\$ 2,151,386	\$ 4,302,773	-
		Powertech Technology (Suzhou) Ltd.	Other receivables	Note 2	1,445,088	722,544	-	2.0%-2.8%	For short-term financing	-	Working capital	-	-	-	2,151,386	4,302,773	-
1	Tera Probe, Inc.	Tera Probe Aizu, Inc.	Other receivables	Note 1	210,596	210,596	182,886	1%	For short-term financing	-	Working capital	-	-	-	287,105	574,209	-

Note 1: Direct investments, the Corporation’s 100%-owned subsidiary.

Note 2: Indirect investments, the Corporation’s 100%-owned subsidiary.

Note 3: The amount of financing provided by the PTI to any individual shall not exceed five percent of the PTI’s net worth. The aggregate amount available for financing not exceed ten percent of the PTI’s net worth.

Note 4: The amount of financing provided by Tera Probe, Inc. to any individual shall not exceed five percent of Tera Probe, Inc.’s net worth. The aggregate amount available for financing shall not exceed ten percent of Tera Probe, Inc.’s net worth.



**TABLE 2****POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES****ENDORSEMENTS/GUARANTEES PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2019  
(In Thousands of New Taiwan Dollars)**

No.	Endorser/Guarantor	Endorsee/Guarantee		Limits on Endorsement/Guarantee Given on Behalf of Each Party (Note 3)	Maximum Amount Endorsed/Guaranteed During the Period	Outstanding Endorsement/Guarantee at the End of the Period	Actual Borrowing Amount	Amount Endorsed/Guaranteed by Collaterals	Ratio of Accumulated Endorsement/Guarantee to Net Equity In Latest Financial Statements (%)	Aggregate Endorsement/Guarantee Limit (Note 3)	Endorsement/Guarantee Given by Parent on Behalf of Subsidiaries	Endorsement/Guarantee Given by Subsidiaries on Behalf of Parent	Endorsement/Guarantee Given on Behalf of Companies in Mainland China	Note
		Name	Relationship											
0.	Powertech Technology Inc.	Powertech Technology (Singapore) Pte. Ltd.	Note 1	\$ 4,302,773	\$ 903,180	\$ 903,180	\$ 161,669	\$ -	2.1	\$ 21,513,864	Yes	-	-	-
		Powertech Technology (Suzhou) Ltd.	Note 2	4,302,773	602,120	602,120	223,580	-	1.4	21,513,864	Yes	-	Yes	-

Note 1: Direct investment; the Corporation's 100%-owned subsidiary.

Note 2: Indirect investment; the Corporation's 100%-owned subsidiary.

Note 3: The amount of guarantee provided by the PTI to any individual entity shall not exceed ten percent of the PTI's net worth. The aggregate guarantee amount shall not exceed fifty percent of the PTI's net worth.

**TABLE 3****POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES****MARKETABLE SECURITIES HELD****DECEMBER 31, 2019****(In Thousands of New Taiwan Dollars)**

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	December 31, 2019				Note
				Number of Shares (In Thousands)	Carrying Value	% of Ownership	Fair Value	
Powertech Technology Inc.	<u>Stock</u> Solid state system Co., Ltd.	-	Financial assets at fair value through other comprehensive profit or loss - non-current	2,617	\$ 26,093	-	\$ 26,093	Note 3
Greatek Electronics Inc.	<u>Fund</u> FSITC Money Market Fund	-	Financial assets at fair value through profit or loss - current	283	50,652	-	50,652	Note 4
	<u>Bond</u> P08 Taipower 3A	-	Financial assets at amortized cost. - non-current	100	100,001	-	99,999	Note 2
	P06 Taipower 1A	-	Financial assets at amortized cost. - non-current	300	300,001	-	302,697	Note 2
	P07 Taipower 1A	-	Financial assets at amortized cost. - non-current	200	200,001	-	199,999	Note 2
	02 Taipower 1B	-	Financial assets at amortized cost. - current	150	150,388	-	150,362	Note 2
	P06 Taipower 3A	-	Financial assets at amortized cost. - non-current	100	100,000	-	100,497	Note 2
	P04 FENC 4	-	Financial assets at amortized cost. - current	100	100,000	-	100,444	Note 2
	P06 FPC 1A	-	Financial assets at amortized cost. - non-current	100	100,000	-	100,732	Note 2
	<u>Stock</u> POWERTECH TECHNOLOGY INC.	Greatek Electronics Inc.'s parent company	Financial assets at fair value through other comprehensive profit or loss - non-current	2,650	264,470	-	264,470	Note 1
	SAMHOP Microelectronics Corp.	-	Financial assets at fair value through profit or loss - non-current	268	-	3	-	Note 5
	Terawins Inc.	-	Financial assets at fair value through profit or loss - non-current	643	-	2	-	Note 5
	Airwave Technologies Inc.	-	Financial assets at fair value through profit or loss - non-current	93	-	1	-	Note 5

Note 1: The fair value was based on stock closing price as of December 31, 2019.

Note 2: The fair value was based on trading market in hundreds of new Taiwan dollars as of December 31, 2019.

Note 3: The fair value of common stock was based on stock closing price, and the fair value of privately placed shares was determined using valuation techniques as of December 31, 2019.

Note 4: The fair value was based on the net asset value of the fund as of December 31, 2019.

Note 5: The fair value was based on the carrying value as of December 31, 2019.

Note 6: As of December 31, 2019, the above marketable securities had not been pledged or mortgaged.

**TABLE 4****POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES****TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL  
FOR THE YEAR ENDED DECEMBER 31, 2019****(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)**

Company Name	Related Party	Nature of Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts (Payable) Receivable		Note
			Purchase/ Sale	Amount	% of Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% of Total	
Powertech Technology Inc.	Kioxia Corporation	Corporate director's parent company	Sale	\$17,628,210	41	Note 1	\$ -	-	\$3,601,484	44	-
	Kingston Solution, Inc.	The parent company of the related party is the juristic-person director of the the Corporation.	Sale	129,090	-	Note 1	-	-	24,644	-	-
	Kingston Technology International Ltd.	The ultimate parent company of the related party is the juristic-person director of the the Corporation.	Sale	1,338,159	3	Note 1	-	-	213,896	3	-
	Toshiba International Procurement Hong Kong, Ltd.	Corporate director's sister company.	Purchase	410,197	2.83	Note 1	-	-	120,603	3	-
Greatek Electronics Inc.	Realtek Semiconductor Corp.	Parent company of Greatek Electronics Inc.'s corporate supervisor.	Sale	1,023,929	9	Net 60 days from monthly closing dates	Note 2	-	311,225	10	-
	Realtek Singapore Private Limited	Same parent company as the Corporate's director.	Sale	301,036	3	Net 60 days from monthly closing dates	Note 2	-	16,059	1	-
TeraPower Technology Inc.	Kioxia Corporation	Parent company of corporate director of TeraPower Technology Inc.'s ultimate parent company.	Sale	306,037	11	Net 90 days from monthly closing dates	-	-	-	-	-

Note 1: Mainly paid on the 30th to 90th days after the month of the invoice date.

Note 2: The sales price of Greatek Electronics Inc. sold to related parties is determined based on general trading practices.

**TABLE 5****POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES****RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL****DECEMBER 31, 2019****(In Thousands of New Taiwan Dollars)**

Company Name	Related Party	Nature of Relationship	Ending Balance	Turnover Rate	Overdue		Amounts Received in Subsequent Period	Allowance for Bad Debt
					Amount	Action Taken		
Powertech Technology Inc.	Kioxia Corporation	Corporate director's parent company	\$ 3,601,484	5.85	\$ -	-	\$ 3,601,484	\$ -
	Kingston Technology International Ltd.	The ultimate parent company of the related party is the juristic-person director of the the Corporation.	213,896	7.49	-	-	213,896	-
Greatek Electronics Inc.	Realtek Semiconductor Corp.	Parent company of Greatek Electronics Inc.'s corporate supervisor	311,225	3.80	-	-	203,302	-

TABLE 6

**POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES**

**INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS**  
**FOR YEAR ENDED DECEMBER 31, 2019**  
(In Thousands of New Taiwan Dollars)

Company Name	Counterparty	Transaction Flow	Intercompany Transactions			
			Financial Statement Item	Amount	Terms	Percentage to Consolidated Total Gross Sales or Total Assets
Powertech Technology Inc.	Powertech Technology (Suzhou) Ltd.	1	Sales	\$ 16,621	Note 3	-
	TeraPower Technology Inc.	1	Sales	27,255	Note 3	-
	Powertech Technology Akita Inc.	1	Sales	14,492	Note 3	-
	Tera Probe, Inc.	1	Sales	750	Note 3	-
	Greatek Electronics Inc.	1	Sales	60	Note 3	-
	Powertech Technology (Singapore) Pte. Ltd.	1	Sales	497	Note 3	-
	Powertech Technology (Suzhou) Ltd.	1	Purchase	2,763	Note 2	-
	Powertech Technology (Singapore) Pte. Ltd.	1	Purchase	510	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Subcontract costs	684,712	Note 2	1%
	Greatek Electronics Inc.	1	Subcontract costs	44,723	Note 2	-
	TeraPower Technology Inc.	1	Subcontract costs	5,592	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Rent income	8,483	Note 2	-
	TeraPower Technology Inc.	1	Rent income	1,178	Note 2	-
	Tera Probe, Inc.	1	Rent	16,989	Note 2	-
	TeraPower Technology Inc.	1	Rent	3,482	Note 2	-
	TeraPower Technology Inc.	1	Other gains and losses	2,854	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Other gains and losses	1,204	Note 2	-
	Greatek Electronics Inc.	1	Other gains and losses	57,209	Note 2	-
	Powertech Technology (Xian) Ltd.	1	Other gains and losses	22,300	Note 2	-
	Powertech Technology Akita Inc.	1	Other gains and losses	8,042	Note 2	-
	Powertech Technology (Singapore) Pte. Ltd.	1	Other gains and losses	1,038	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Interest income	7,707	Note 2	-
	Powertech Technology (Singapore) Pte. Ltd.	1	Interest income	18,619	Note 2	-
	TeraPower Technology Inc.	1	Accounts receivable from related parties	2,611	Note 3	-
	Powertech Technology (Xian) Ltd.	1	Other receivable from related parties	198,679	Note 2	-
	TeraPower Technology Inc.	1	Other receivable from related parties	664	Note 2	-
	Greatek Electronics Inc.	1	Other receivable from related parties	499	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Other receivable from related parties	12,751	Note 2	-
	Powertech Technology (Singapore) Pte. Ltd.	1	Other receivable from related parties	905,616	Note 2	1%
	Powertech Technology Akita Inc.	1	Other receivable from related parties	8,777	Note 2	-
	Tera Probe, Inc.	1	Other receivable from related parties	301	Note 2	-
	Powertech Technology Akita Inc.	1	Disposal of property, plant and equipment	11,806	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Disposal of property, plant and equipment	960	Note 2	-
	Powertech Technology (Xian) Ltd.	1	Purchase of property, plant and equipment	267	Note 2	-
	Powertech Technology (Xian) Ltd.	1	Disposal of property, plant and equipment	6,572	Note 2	-
	TeraPower Technology Inc.	1	Other payable to related parties	13,719	Note 2	-
	Powertech Technology (Suzhou) Ltd.	1	Other payable to related parties	79,931	Note 2	-
	Greatek Electronics Inc.	1	Other payable to related parties	21,786	Note 2	-
	Powertech Technology (Japan) Ltd.	1	Other payable to related parties	5,558	Note 2	-
	Powertech Technology Akita Inc.	1	Other payable to related parties	3,907	Note 2	-
	Tera Probe, Inc.	1	Other payable to related parties	5,041	Note 2	-

(Continued)

Company Name	Counterparty	Transaction Flow	Intercompany Transactions			
			Financial Statement Item	Amount	Terms	Percentage to Consolidated Total Gross Sales or Total Assets
Tera Probe, Inc. Powertech Technology (Singapore) Pte. Ltd.	TeraPower Technology Inc.	1	Other receivable from related parties	\$ 2,707	Note 2	-
	Greatek Electronics Inc.	2	Sales	1,220	Note 4	-
	Greatek Electronics Inc.	2	Accounts receivable from related parties	546	Note 4	-

Note 1: No. 1 - from the parent company to the subsidiary. No. 2 - from the subsidiary to the subsidiary.

Note 2: The transactions for related parties were negotiated and thus not comparable with those in the market.

Note 3: The selling prices with subsidiaries were negotiated and thus not comparable with those in the market, and the collection period with subsidiaries was same as common customer.

Note 4: The selling prices with sister companies were negotiated and thus not comparable with those in the market, and the collection period with sister companies was same as common customer.

(Concluded)

**POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES**
**INFORMATION OF INVESTEES**
**DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars)**

Investor	Investee	Location	Main Businesses and Products	Investment Amount		Balance as of December 31, 2019			Net Income (Loss) of the Investee	Investment Gain (Loss)	Note
				December 31, 2019	December 31, 2018	Number of Shares (In Thousands)	% of Ownership	Carrying Value			
Powertech Technology Inc.	TeraPower Technology Inc.	Hsinchu	Wafer probing test services	\$ 1,153,964	\$ 1,153,964	73,386	49	\$ 2,206,573	\$ 13,001	\$ 99,156	Notes 1 and 2
	Powertech Holding (BVI) Inc.	British Virgin Islands	Investment business	1,679,370	1,679,370	50	100	749,033	(10,621)	(10,621)	Notes 1 and 2
	Greatek Electronics Inc.	Miaoli	Semiconductor assembly and testing services	6,169,948	6,169,948	244,064	43	8,071,185	1,895,899	785,996	Notes 1 and 2
	Powertech Technology (Singapore) Pte. Ltd.	Singapore	Integrated circuit testing and assembly services	USD 85,000	USD 85,000	85,000	100	1,465,300	27,645	27,645	Notes 1 and 2
	Powertech Technology Japan Ltd.	Japan	Investment business	USD 103,052	USD 103,052	-	100	2,969,362	(168,819)	(148,668)	Note 1
Powertech Holding (BVI) Inc.	Tera Probe, Inc.	Japan	Wafer probing test services	\$ 230,616	\$ 230,616	1,077	12	366,394	(141,923)	(7,708)	Note 1
	PTI Technology (Singapore) Pte. Ltd.	Singapore	Investment business	USD 51,000	USD 51,000	103	100	USD 23,754	USD (351)	USD (351)	Note 1
Powertech Technology Japan Ltd.	Tera Probe, Inc.	Japan	Wafer probing test services	USD 43,963	USD 43,963	4,440	49	USD 93,098	USD (4,551)	USD (2,209)	Note 1
	Powertech Technology Akita Inc.	Japan	Semiconductor assembly and testing services	USD 48,917	USD 48,917	6	100	USD 18,218	USD (24,452)	USD (24,452)	Note 1
Tera Probe, Inc.	TeraPower Technology Inc.	Hsinchu	Wafer probing test services	JPY 4,348,056	JPY 4,348,056	76,381	51	JPY 4,348,056	JPY 43,827	JPY 22,352	Note 1
	Tera Probe Aizu, Inc.	Japan	Wafer probing test services	JPY 221,616	JPY 221,616	180	100	JPY 221,616	JPY (331,578)	JPY (331,578)	Note 1

Note 1: Amount was recognized on the basis of reviewed financial statements.

Note 2: Including unrealized intercompany gains (losses).

POWERTECH TECHNOLOGY INC. AND SUBSIDIARIES

INFORMATION ON INVESTMENTS IN MAINLAND CHINA  
DECEMBER 31, 2019

(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company accounted for using the equity method	Main Businesses and Products	Total Amount of Paid-in Capital	Investment Type	Accumulated Outflow of Investments from Taiwan as of January 1, 2019	Investment Flows		Accumulated Outflow of Investments from Taiwan as of December 31, 2019	Net Income (Loss) of the Investee	Percentage of Ownership in Investment	Investment Gain (Loss) (Note 2)	Carrying Value as of December 31, 2019 (Note 2)	Accumulated Inward Remittance of Earnings as of December 31, 2019	Note
					Outflow	Inflow							
Powertech Technology (Suzhou) Ltd.	Semiconductor testing and assembly services	\$ 2,167,632 (US\$ 72,000)	Note 1	\$ 1,535,406 (US\$ 51,000)	\$ -	\$ -	\$ 1,535,406 (US\$ 51,000)	\$ (11,159) (US\$ (349))	100%	\$ (11,159) (US\$ (349))	\$ 714,955 (US\$ 23,748)	\$ -	-
Powertech Technology (Xian) Ltd.	Semiconductor testing and assembly services	2,107,420 (US\$ 70,000)	Note 1	1,993,469 (US\$ 66,215)	-	-	1,993,469 (US\$ 66,215)	533,418 (US\$ 17,246)	100%	533,418 (US\$ 17,246)	3,174,527 (US\$ 105,445)	116,324 (US\$ 3,785)	-

Investee Company accounted for using the equity method	Accumulated Investment in Mainland China as of December 31, 2019 (US\$ in Thousands)	Investment Amounts Authorized by the Investment Commission, MOEA (US\$ in Thousands)	Ceiling Amount on of the Corporation’s Investment in Mainland China
Powertech Technology (Suzhou) Ltd. Powertech Technology (Xian) Ltd.	US\$ 51,000 US\$ 66,215	US\$ 51,000 US\$ 70,000	\$ 25,816,637

Note 1: Indirect investments through Powertech Holding (BVI) Inc., the Corporation’s 100%-owned subsidiary.

Note 2: Amount was recognized on the basis of reviewed financial statements.

Note 3: Based on the exchange rate as of December 31, 2019.



## VII. Discussion and Analysis of Financial Status and Operating Results and Risk Management

### 1. Financial Status

#### Nonconsolidated Financial Statements

Item \ Year	2019	2018	Difference	
			Amount	%
Current Assets	\$ 43,342,833	\$ 37,889,542	\$ 5,453,291	14.39
Investment	1,527,238	2,067,913	(540,675)	(26.15)
Fixed Assets	58,779,789	61,980,853	(3,201,064)	(5.16)
Intangible Assets	1,059,626	1,162,204	(102,578)	(8.83)
Other Assets	2,436,495	494,989	1,941,506	392.23
Total Assets	107,145,981	103,595,501	3,550,480	3.43
Current Liabilities	20,404,401	18,580,671	1,823,730	9.82
Long-term Liabilities	31,843,617	31,937,463	(93,846)	(0.29)
Total Liabilities	52,248,018	50,518,134	1,729,884	3.42
Capital Stock	7,791,466	7,791,466	0	0.00
Capital Surplus	209,852	127,734	82,118	64.29
Retained Earnings	35,447,618	33,361,411	2,086,207	6.25
Other shareholders' Equity & Treasury Stock	(324,741)	(195,070)	(129,671)	(66.47)
Equity Belong to Parent Company	(96,467)	(82,315)	(14,152)	(17.19)
Non-Controlling Interests	43,027,728	41,003,226	2,024,502	4.94
Total Shareholders' Equity	11,870,235	12,074,141	(203,906)	(1.69)
Reason for Major Difference:				
1.Decrease of investment: decrease of financial assets considering increase of costs.				
2.Increase of other assets: increase of recognized assets.				
3.Increase of capital surplus: increase of subsidiary ownership.				
4.Decrease of other equity: exchange loss from 2019 foreign financial statements conversation.				
Note: The listed numbers were from consolidated report and audited by CPA using IFRS.				

## 2. Operating Results

### (1) Comparison and Analysis Table for Operating Results for Last Two Years

#### Nonconsolidated Financial Statements

Unit: NT\$ Thousands

Item	Year	2019	2018	Increase (Decrease)	Difference (%)	Analysis
Net Sales		\$ 66,525,144	\$ 68,039,379	\$ (1,514,235)	(2.23)	
Cost of Sales		53,848,249	54,209,337	(361,088)	(0.67)	
Gross Profit		12,676,895	13,830,042	(1,153,147)	(8.34)	
Operating Expenses		3,964,655	4,046,388	(81,733)	(2.02)	
Operating Income		8,712,240	9,783,654	(1,071,414)	(10.95)	
Non-Operating Income/Expenses		(204,722)	(348,317)	143,595	41.23	1
Net Income Before Tax		8,507,518	9,435,337	(927,819)	(9.83)	
Income Tax Expense		1,628,226	1,922,775	(294,549)	(15.32)	
Net Income		\$ 6,879,292	\$ 7,512,562	(633,270)	(8.43)	
Analysis of Difference over 20%						
1. Increased in non-operating income/expenses due to increase of non-financial assets lost						
2 Increased in income tax expenses primarily due to increase in profit before tax.						

### (2) Revenue Forecast and Financial Impact:

WSTS expected the global semiconductor market to begin recovering in 2020 and achieve sales of up to US\$426 billion, up 4.8% from 2019. ITRI ISTI statistics suggested that the Taiwanese IC industry output will grow by 7% in 2020. The global and Taiwanese semiconductor industries can therefore expect an improvement in the overall climate in 2020 compared to 2019.

In terms of IC product categories, IC Insights statistics indicated that the DRAM market remained the largest IC product category despite plummeting 38% between 2018 and 2019. The NAND Flash market was also expected to decline by 32%. Together, DRAM and NAND Flash was estimated to account for 29% of the global IC product market in 2019. The memory market will begin to thaw in 2020 according to statistical data from ISTI. The growth rate of 17% will put it slightly above the semiconductor industry average. The DRAM and NAND Flash markets will each grow by 13% and 32% to reach US\$70.8 billion and US\$50.8 billion respectively. In terms of terminal application IC, data provided by IC Insights showed that communication IC was the largest category and accounted for more than 36%, followed by computer IC and consumer IC.

Thanks to demand driven by 5G and AI applications, Gartner predicted that global shipments of end products such as personal computers, tablets and mobile phones to grow by 0.8% to 2.16 billion units in 2020. DIGITIMES Research estimated that global shipments of smart phones will grow by 4.3% and rise back up to 1.4 billion units in 2020; The size of the global data center market is expected to grow by 10% in 2020 and reach US\$206.2 billion.

The US-China trade situation remains the biggest source of uncertainty in the global economy however. China is the largest semiconductor market and its investment in localization of the semiconductor industry supply chain may have affect supply and demand in the global semiconductor market. These risk factors may lead to restrictions on market competition for existing vendors.

Growth is expected by PTI in DRAM, NAND Flash, Logic and advanced product components.

2020 Sales forecast as below:

<b>Services</b>	<b>Forecast Volume</b>
Assembly	12.5 billion pcs
Testing	8.0 billion pcs
Bumping	900 k wafers
Chip Probing	2.5 k wafers
SSD +SIP	9.5 million pcs

### 3. Cash Flow

#### (1) Cash Flow Analysis for 2019

Unit: NT\$ Thousand

Beginning Cash Balance 1/1/2019	2019 Cash Flow from Operating Activities	2019 Cash Flow from Investing Activities	2019 Cash Flow from Financing Activities	Currency Exchange for Cash and Cash Equivalent	Ending Cash Balance 12/31/2019
18,544,142	17,955,080	(8,064,186)	(6,250,418)	(384,570)	21,800,048
2019 Cash Flow Analysis : (1) Operating Activities: Increase cash inflow from change in 2019 depreciation and profit. (2) Investing Activities: Increase of cash outflow was due to acquisition of real estate, property and equipment's in 2019. (3) Financing Activities: The increase of cash outflow was due to change in cash dividends payout in 2019.					

#### (2) Cash Flow Improvement Plan

Not applicable.

#### (3) Cash Flow Estimation for 2020

Unit: NT\$ Thousand

Beginning Cash Balance 1/1/2020	Estimated 2020 Cash Flow from Operating Activities	Estimated 2020 Cash Outflow	Estimated Ending Cash Balance 12/31/2020	Funding for Cash Flow Shortage	
				Investing Activities	Finance Activities
21,800,048	18,000,000	19,000,000	20,800,048	—	—
1. 2020 Cash Flow Analysis: (1) Operating Activities: The cash inflow is from 2020 estimated net income and depreciation. (2) Investing Activities: The cash flow is for acquisition of real estate, property, and equipment in 2020. (3) Financing Activities: The cash flow is for 2020 cash dividends payout and payback bank loan. 2. Funding for Cash Flow Shortage: Not Applicable.					

#### **4. Effects of Major Capital Expenditures on Financial Status in Most Recent Year**

##### **(1) Major Capital Expenditures and Sources of Capital**

Majority of 2018 PTI capital expenditures were for acquiring real estate, property and equipments. The sources of capital were from the Company's own funds and bank loans. In order to stay competitive, PTI has constantly devoted on production efficiency modification, new technology research, upgrade equipments, and capacity expansion to meet customer satisfaction.

#### **5. Investment Policy in Recent Years, Main Causes for Profits or Losses, Improvement Plans, and Investment Plans for the Coming Year**

Our investment strategy mainly complements the development of our core business. The emphasis is on strengthening our strategic alliances with key customers and expanding our business reach in related industries. We shareholder equity to be increased through investment returns. For an overview of PTI's investment businesses in 2019, please refer to the information on affiliated enterprises provided in Appendix 8: Special Disclosure.

In 2009, PVI established Powertech Technology (Suzhou) Ltd. (Hereafter referred to as "PTI Suzhou") as an indirect investment through Powertech Holding (B.V.I.) Inc. The amount of investment fell within the limit of US\$51,000,000 set by the MOEA Investment Commission for investment in China. The establishment of PTI Suzhou marked our official entry into the packaging and testing sector in Mainland China. After more than ten years of development, PTI Suzhou has now recorded US\$216 million investments with the local government and has a registered capital of US\$72 million. As of December 31, 2019, short-term bank loans amounted to US\$19 million and the debt-to-equity ratio was 54%. Cumulative losses were approximately US\$54 million and represented more than half of paid-in capital. The financial structure and performance were therefore less than ideal. In 2019 we saw the US-China trade war and the Chinese government continuing to offer incentives for the development of the semiconductor industry. The government's push for Chinese companies to move their production sites back to China from overseas may prove beneficial to PTI Suzhou. To take advantage of this opportunity, PTI replaced the management team at PTI Suzhou with a new team from the parent company in 2019. In addition to continued loans and endorsements/guarantees, the investment of additional US\$28 million in PTI Suzhou was passed by the 17th session of the 8th Board of Directors in April 2020, increasing its registered capital from US\$72 million to US\$100 million. We hope the coming of the new management, products and customers will lead to a gradual expansion in revenue and lower production costs. This will in turn hopefully reduce operating costs at PTI Suzhou leading to improved profitability and financial structure.

Our investment plan for the upcoming year will be based on the overall state of the industry and the needs of business development. Consolidation of strategic partnerships and the extension of our business reach in related industries will be the key principles. The investment plan will be carefully assessed before being submitted to the Board of Directors for discussion and approval.

## **6. Risk Analysis and Assessment in the Recent Year and as of Publication Date of Annual Report**

### **(1) Effects of Changes in Interest Rates, Foreign Exchange Rates and Inflation on Corporate Finance, and Future Response Measures:**

#### **1. Interest Rate**

The semiconductor packaging and testing industry where our company is in is capital intensive therefore large fund is required for the Company to invest into fixed assets. Besides the Company's own funds, the sources of the Company's funding are primarily bank loans, thus the Company's profitability is affected by interest rate movement. To minimize this risk, PTI compares the level of interest rates of its bank loans on a regular basis with market average rate and negotiate timely with the correspondent banks to obtain better interest rates to ensure the financing costs are at comparatively low level.

#### **2. Foreign Exchange Rate:**

##### **(1) Effects**

Exportation account for 79.85% of 2019 PTI's net sales, so the majority of trade were conducted in foreign currency and US dollars is the most common currency used. Majority of equipment's and raw materials were mainly trade in US dollars. Both import and export were affected by currency exchange rate fluctuate. 2019 net foreign exchange gains were about NT\$ 110.15 million.

##### **(2) Future Response Measures**

- Foreign currencies from exporting income balance out with importing expenses which creates mutual hedging effects to eliminate exchange rate risks.
- Finance staff collected information regarding changes of foreign exchange rates, including supply and demand of foreign currencies, monetary tightness condition of the correspondent banks, and trend analysis of exchange rates, which will then serve as reference information to respond to future exchange rate movements.
- To timely purchase foreign currencies based on the Company's future foreign currency requirements, in order to determine the cost and reduce the impact of

movements in exchange rates.

- To use the bank credit at the right time to convert foreign currency loans to NT dollars borrowing.
- To apply financial instruments such as derivatives of forward exchange to avoid the risks of changes in exchange rates leading to exchange loss on assets, liabilities and future transactions denominated by foreign currencies.

### 3. Inflation:

No significant impact of inflation on the PTI's profitability and business operations in 2019.

## (2) Policies, Main Causes of Gain or Loss and Future Response Measures with Respect to High-risk, High-leveraged Investments, Lending or Endorsement Guarantees, and Derivatives Transactions:

1. PTI has not engaged in any high-risk or high-leveraged investments.
2. PTI proposed and approved by board to authorized Chairman to lend Powertech Technology (Singapore) Pte. Ltd. US\$50 m in 2014. Board had reduced the endorsement and guarantees limit to US\$30 m in Mar 2016 after review its funding needs. According to Article of Incorporation, PTI and its subsidiary should not endorse and guarantee to a single entity more than 10% and 50% PTI's net worth. As of Dec 31, 2019 net worth was NT\$43.03 b, and the cap for endorsement and guarantee were NT\$4.3 b and NT\$21.50 b which were all above the amount lent out.
3. 8<sup>th</sup> Annual 12<sup>th</sup> Board meeting on May 3, 2019 approved to lend Powertech Technology (Suzhou) Ltd. no more than US\$24 million and Powertech Technology (Singapore) Pte. Ltd. no more than US\$30 million at the period no longer than 1 year for capacity expansion at estimated annual interest rate 3.0%. As the date of printing, actual lending amount was US\$0 for Powertech Technology (Suzhou) Ltd. and US\$30.0 million (NT\$907.6 million) for Powertech Technology (Singapore) Pte. Ltd.  
As of Dec 31 2019, PTI net worth was NT\$43.03 billion and lending amount were NT2.2 billion and NT\$4.3 billion for separated entities which were below the lending regulation maximum. The lending for Tera Probe, Inc. JPY 1,1455 million (NT\$ 317.4 million) also meet the lending regulation.
4. No major currency exchange gain or loss from currency investment as of the date of printing.

## (3) Future Research and Development Plans and R&D Expenses from Expected Investments

The Company has put much emphasis on the development of talents since its establishment. Setting up a R&D department in 1998 and the R&D technology center in

2006, PTI has continually introduced new processes and technologies of packaging and testing. To adapt to the future semiconductor memory device trend towards being versatile, high-speed, highly reliable and high density and the development of new products of our customers, PTI will proactively develop and introduce new technologies in the future. PTI budgets to invest in R&D about NT\$1.7 b in 2020 and expects to spend similar amount as previous year.

(4) Effects of and Response to Changes in Policies and Regulations Relating to Corporate Finance and Sales.

PTI has always pay close attention to any international and domestic policies changes, and PTI will make appropriate modifications to the operating systems when necessary. As of the publication date of this annual report, there is no significant change or impact of law on PTI's operations.

(5) Effects of and Response to Changes in Technology and in Industry Relating to Corporate Finance and Sales:

The semiconductor industry, where PTI belongs to, is under rapid changes in products and technology. To adapt to these rapid changes, PTI needs to upgrade its processes and develop new technologies constantly, upgrade its equipment, and expand its capacities in a timely manner. To reduce the risks of overexpansion at the same time keep up with the product development trend, PTI has established collaborative relationships and co-op with strategic alliances with major customers to develop advanced technology capabilities. In addition, PTI has invested in related industries to form a complete supply chain network and diversify the risks caused by market changes. PTI also strengthen its cost control and cash management skills to maintain competitiveness and eliminate the impacts of changes in technology and in industry relating to corporate finance and sales.

(6) The Impact of Changes in Corporate Image on Corporate Risk Management, and the Company's Response Measures:

Since the establishment of the Company, PTI has consistently maintained an ethical business practices, and has actively strengthened its internal and quality management to build up customer trusts. PTI has a good corporate image and there has been no corporate crisis in recent years caused by changes in corporate image.

(7) Expected Benefits from, Risks Relating to and Response to Merger and Acquisition Plans

No plan of merger and acquisition as of the date of printing.

(8) Expected Benefits from, Risks Relating to and Response to Factory Expansion Plans

Hsin Chu Science Park Plant III is under construction and expect to complete by second



half of 2020. The new facility is dedicated for Fan-Out Panel-Level packages (FOPLP).

(9) Risks Relating to and Response to Excessive Concentration on Supply Sources and Customer

The supply sources and major customers of the Company have been disclosed in related sections of this report. As the concentration level of the upper stream memory IC markets gets intense, sales of the downstream packaging and testing providers will get more concentrated. PTI has proactively developed new customers, collaborative relationships, and strategic alliances with existing customers to eliminate the highly customer concentrated risks. PTI has also actively reached out to non-memory IC packaging and testing business. The results are noticeable. In terms of supply sources, PTI has been actively seeking qualified alternative suppliers to reduce the risks of excessive concentration.

(10) Effects, Risks, and Solution for Share Transfers of Shareholders With 10% Or More Shares: None

(11) Effects, Risks, and Solution of Changes in Control over the Company: None.

(12) For litigation or non-litigious matters, clearly state if the Company or the Company's directors, supervisors, president, actual person in charge, shareholders with 10% shareholdings or more, and affiliated companies that have been concluded or pending major litigations, non-litigation or administrative litigation matters, whose outcome may have major impact on shareholders' equity or securities prices:

1. The Company's major litigations, non-litigation or administrative litigation matters: None.

2. Major litigations, non-litigation or administrative litigation matters of the Company's directors, supervisors, president, actual person in charge, shareholders with 10% shareholdings or more and affiliated companies: None.

(13) Other Important Risks and Remedies: None.

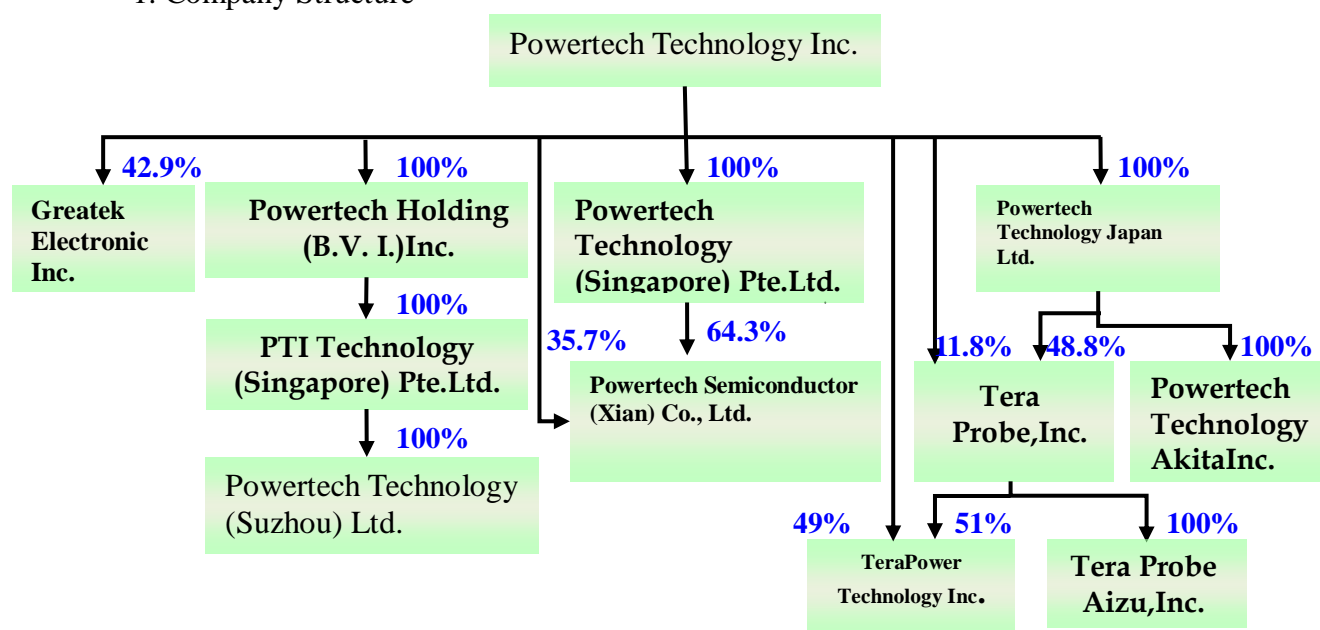
**7. Other Important Matters: None.**

## VIII. Special Notes

### 1. Summary of Affiliated Companies

#### (1) Profile of Affiliated Companies

##### 1. Company Structure



##### 2. Names, Date of Establishment, Address, Paid-in Capital and Major Business Items of Consolidated Subsidiaries :

Dec 31 2019 ; Unit : Thousands

Entity Name	Date of Establishment	Address	Paid-In Capital Amount	Major Services
Powertech Holding (B.V.I.) Inc.	Aug 2009	P.O. Box 3444 Road Town, Tortola, B.V.I.	US\$52,000	Investment
PTI Technology (Singapore) Pte. Ltd.	Nov 1994	8 Marina Boulevard #05-02 Marina Bay Financial Centre Tower 1 Singapore 018981	US\$72,102	Investment
Powertech Technology (Suzhou) Ltd.	Aug 1995	No. 33, Xinghai Street, Suzhou Industrial Park, Suzhou, China	US\$72,000	Packaging and Final Testing Services
Greatek Electronics Inc.	Mar 1983	No. 136, Gung-Yi Rd., Chunan Town, Miaoli, Taiwan.	NT\$5,688,459	Packaging and Final Testing Services
Powertech Technology (Singapore) Pte. Ltd.	Dec 2005	12 Ang Mo Kio Street 65, Level 3 Singapore 509060	US\$85,000	Bumping Services
Powertech Semiconductor (Xian) Co., Ltd.	May 2015	Part B, Shaanxi Xi'an Export Processing Zone, No. 28, Xinxu Avenue, Xi'an, Shaanxi 710119 China	US\$70,000	Packaging and Final Testing Services
Powertech Technology Japan Ltd.	Jan 2017	3F, Shiodome Building, #180-181, 1-2-20 Kaigan,	JPY 100,000	Investment & Packaging and Testing

Entity Name	Date of Establishment	Address	Paid-In Capital Amount	Major Services
		Minato-ku,Tokyo, 105-0022, Japan		Services
Tera Probe, Inc.	Aug 2005	KAKiYA Bldg., 2-7-17 Shin-Yokohama, Kohoku-ku, Yokohama City, Kanagawa	JPY 11,823,312	Chip Probing Services
Tera Probe Aizu, Inc.	Oct 2015	No.4 Kogyo Danchi, Monden-Machi, Aizu Wakamatsu City, Fukushima Prefecture, Japan	JPY 45,000	Chip Probing Services
TeraPower Technology Inc.	Aug 2008	No.20, wenhua Rd.,Hsinchu Industrial Park. Hukou , Hsinchu 303, Taiwan	NT\$1,497,670	Chip Probing Services
Powertech Technology Akita Inc.	Apr 1969	89-2 Yamada, Yuwaishida, Akita-shi Akita 010-1222, Japan	JPY 495,000	Packaging and Final Testing Services

3. Presumed to Have Control and Affiliation Relationship: None.

4. Business Items of Affiliated Companies:

The business items of PTI and its affiliated companies cover manufacturing, marketing & sales and investments of electronics.

5. The Names and the Shareholding or Funding Status of the Directors, Committee Members, and President of Each Affiliated Company:

Apr 13, 2020

Name of Company	Title	Name or Representative	Shareholding	
			Number of shares (capital contribution)	%
Powertech Holding (B.V.I.) Inc.	Director	Powertech Technology Inc. Legal Rep Director: D.K. Tsai	US\$ 52,000,000	100%
PTI Technology (Singapore) Pte. Ltd.	Director	Powertech Holding (B.V.I.) Inc. Legal Rep Director: D. K. Tsai, J.Y. Hung ,Jeswant Singh S/O Darshan Singh	US\$ 51,000,000	100%
Powertech Technology (Suzhou) Ltd.	Chairman	PTI Technology (Singapore) Pte. Ltd. Legal Rep Director: J.S. Leu	US\$50,900,000	100%
	Director	PTI Technology (Singapore) Pte. Ltd. Legal Rep Director: D. K. Tsai, J.Y. Hung		
	Supervisor	PTI Technology (Singapore) Pte. Ltd. Legal Rep Director: Evan Tseng		

Name of Company	Title	Name or Representative	Shareholding	
			Number of shares (capital contribution)	%
	President	Hong Bin Ji	-	-
Greatek Electronics Inc	Chairman	Powertech Technology Inc. Legal Rep Director: D. K. Tsai	NT\$244,064,379	42.91%
	Director	Powertech Technology Inc. Legal Rep Director: Boris Hsieh, J.S. Leu, Chien-Chao Ning, Evan Tseng		
	Director	Hung-Wei Venture Capital Company: Eric Chang	5,823,602	1.02%
	Independent Director	Chi-Yung Wu	0	0%
	Independent Director	Chu-Chien Feng	0	0%
	Independent Director	M.J. Chuang	0	0%
	President	Chien-Chao Ning	2,242,224	0.39%
Powertech Technology (Singapore) Pte. Ltd.	Director	Powertech Technology Inc. Legal Rep Director: DK Tsai, J.Y Hung, Evan Tseng, Tay Hua Nguan	US\$ 85,000,000	100%
	President	Tonwey Cheng	-	-
Powertech Semiconductor (Xian) Pte. Ltd.	Chairman	Powertech Technology (Singapore) Pte. Ltd Legal Rep Director: J.S. Leu	US\$ 45,000,000	64%
	Director	Powertech Technology (Singapore) Pte. Ltd Legal Rep Director: J.Y. Hung		
	Supervisor	Powertech Technology (Singapore) Pte. Ltd Legal Rep Director: Yohan Lin		
	Director	Powertech Technology Inc. Legal Rep Director: Evan Tseng	US\$ 25,000,000	36%
	President	Chris Yeh		
Powertech Technology Japan Ltd.	Executive Director	DK Tsai	JPY 100,000,000	100%
Tera Probe, Inc.	Chairman	Tsuyoshi Yokoyama (Powertech Technology Japan Ltd)	4,440,300	48.8%
	Director	DK Tsai, Phu Le, Evan Tseng, Koji Iwama (Powertech Technology Inc.)	1,077,100	11.8%
	Director	Tsuyoshi Yokoyama	500	0.00%
	Director	Naoki Mori	0	0%
	Director	Naohiko Urasaki	0	0%
	Director	Takayuki Mashiko	0	0%
Tera Probe Aizu, Inc.	Chairman & President	Hiroaki Harada (Tera Probe, Inc.)	180,000	100%
	Director	Naokazu Jinushi, Hajime Funatani		
	Supervisor	Takayuki Mashiko		
TeraPower Technology Inc.	Chairman	Tera Probe, Inc. Legal Rep Director : JY Hung	76,381,170	51.0%

Name of Company	Title	Name or Representative	Shareholding	
			Number of shares (capital contribution)	%
	Director	Tera Probe, Inc. Legal Rep Director : Tsuyoshi Yokoyama, Naokazu Jinushi		
	Director	Powertech Technology Inc. Legal Rep Director: Evan Tseng, Noty Lin	73,385,830	49.0%
	Supervisor	Takayuki Mashiko, Yohan Lin	-	-
	President	Noty Lin	-	-
Powertech Technology Akita Inc.	Chairman & President	Shinji Kagaya (Powertech Technology Japan Ltd)	6,202	100%
	Director	DK Tsai, Evan Tseng,		
	Supervisor	Yohan Lin		

## 6. Operations of Affiliated Companies

Unit: NT\$ Thousands

Name of Company	Paid-in Capital	Total Assets	Total Liabilities	Equity	Revenues	Operating Income	Net income (loss) (after tax)	Earnings Per Share (NT\$) (After tax) Note
Powertech Holding (B.V.I.) Inc.	1,568,673	930,705	0	930,705	0	0	(10,258)	N/A
PTI Technology (Singapore) Pte. Ltd.	2,170,689	895,204	56	895,148	0	0	(10,855)	N/A
Powertech Technology (Suzhou) Ltd.	2,531,626	1,918,984	1,024,034	894,950	1,630,012	6,475	(9,000)	N/A
Greatek Electronics Inc	5,688,459	19,516,211	2,861,581	16,654,630	12,030,481	2,339,220	1,895,899	3.33
Powertech Technology (Singapore) Pte. Ltd.	2,559,010	3,094,970	1,180,742	1,914,228	243,831	(285,270)	27,657	N/A
Powertech Semiconductor (Xian) Pte. Ltd.	2,107,420	4,414,598	1,240,071	3,174,527	5,094,371	547,166	533,306	N/A
Powertech Technology Japan Ltd.	27,710	3,674,140	1,543,829	2,130,311	0	0	(816,208)	N/A
Powertech Technology Akita Inc.	131,780	1,150,114	693,345	456,769	815,636	(189,198)	(749,421)	N/A
Tera Probe Inc.	3,276,240	7,378,340	1,636,246	5,742,094	1,836,193	(178,097)	(142,156)	(15.31)
TeraPower Technology Inc.	1,497,670	9,972,331	5,862,098	4,110,233	2,827,730	57,650	13,001	0.09

Note: No need to calculate EPS for limited companies

**Affiliated Companies Overview:****REPRESENTATION LETTER**

Mar 10, 2020

The entities that are required to be included in the combined financial statements of Powertech Technology Inc. as of and for the year ended December 31, 2019 under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with the International Financial Reporting Standards No. 10, “Consolidated Financial Statements.” In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, Powertech Technology Inc. and Subsidiaries do not prepare a separate set of combined financial statements.

Sincerely,

Duh-Kung Tsai

Chairman  
Powertech Technology Inc.

Affiliated Companies Report: None.

**2. Private Placement Securities as of the Date of Annual Report Printing: None.**

**3. Status of PTI Common Shares and GDR Acquired, Disposed of, and Held by Subsidiaries in 2019 and as of the Publication Date of this Annual Report:**

Unit: NTD K; Shares; %

Name of Subsidiary	Capital Received	Source of Fund	% Holding by PTI	Date	Acquired Shares and Amount	Sold Shares and Amount	Investment Gain/Lost	As of Printing Date	
								Holding Shares	Amount
Greatek Electronic Inc.	5,688,459	Self-Funding	42.91%	2017	1,800,000 shares NT\$158,719	-	-	4,750,000	410,129
				2018	400,000 shares NT\$33,130				
				2019	450,000 shares NT\$32,981				
				As of Report Date	2,100,000 shares NT\$185,299				

Note:

No creation of pledge by the above subsidiary.

PTI did not endorse and guarantee for the above subsidiary.

No fund lent by PTI to the above subsidiary.

**4. Other Necessary Supplement: None.**

**5. Any Events in 2019 and as of the Publication Date of this Annual Report that Had Significant Impacts on Shareholders' Right or Security Prices as Stated in Item 2 Paragraph 2 of Article 36 of Securities and Exchange Law of Taiwan: None.**