

VII. Discussion and Analysis of Financial Status and Operating Results and Risk Management

1. Financial Status

Nonconsolidated Financial Statements

Item	Year	2020	2019	Difference	
				Amount	%
Current Assets		\$ 44,590,593	\$ 43,342,833	\$1,247,760	2.88
Investment		928,313	1,527,238	(598,925)	(39.22)
Real estate, Plant & Equipment		60,111,194	58,779,789	1,331,405	2.27
Intangible Assets		1,002,475	1,059,626	(57,151)	(5.39)
Other Assets		2,113,665	2,436,495	(322,830)	(13.25)
Total Assets		108,746,240	107,145,981	1,600,259	1.49
Current Liabilities		16,865,006	20,404,401	(3,539,395)	(17.35)
Long-term Liabilities		33,476,595	31,843,617	1,632,978	5.13
Total Liabilities		50,341,601	52,248,018	(1,906,417)	(3.65)
Capital Stock		7,791,466	7,791,466	0	0.00
Capital Surplus		231,294	209,852	21,442	10.22
Retained Earnings		38,561,679	35,447,618	3,114,061	8.78
Other shareholders' Equity		(366,982)	(324,741)	(42,241)	(13.01)
Treasury Stock		(229,334)	(96,467)	(132,867)	(137.73)
Equity Belong to Parent Company		45,988,123	43,027,728	2,960,395	6.88
Non-Controlling Interests		12,416,516	11,870,235	546,281	4.6
Total Shareholders' Equity		58,404,639	54,897,963	3,506,676	6.39
Reason for Major Difference:					
1. Decreased of investment: Mature of bonds from subsidiaries.					
2. Increased of treasury stock: increase of shareholding by subsidiaries.					
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	2020	2019	Increase (Decrease)	Difference (%)	Analysis
Net Sales		\$ 76,180,649	\$ 66,525,144	\$ 9,655,505	14.51	
Cost of Sales		61,152,021	53,848,249	7,303,772	13.56	
Gross Profit		15,028,628	12,676,895	2,351,733	18.55	
Operating Expenses		4,310,458	3,964,655	345,803	8.72	
Operating Income		10,718,170	8,712,240	2,005,930	23.02	1
Non-Operating Income/Expenses		(323,219)	(204,722)	(118,497)	(57.88)	2
Net Income Before Tax		10,394,951	8,507,518	1,887,433	22.19	1
Income Tax Expense		2,215,974	1,628,226	587,748	36.10	3
Net Income		8,178,977	\$ 6,879,292	1,299,685	18.89	
Analysis of Difference over 20%						
1. Increased in net income and income before tax were due to revenue increase driven demand from US-China trade tension and impact of COVID-19.						
2. Increased in non-operating expenses were due to strong Taiwan dollar.						
3. Increase in income taxes were due to increase of net income before tax						

(2) Revenue Forecast and Financial Impact:

The World Semiconductor Trade Statistics (WSTS) estimated the global semiconductor market keep positive growth by 8.4% and will reach US\$ 469.4 billion in 2021. According to Industry, Science and Technology International Strategy Center of Industrial Technology Research Institute (ISTI of ITRI), the production value for Taiwan IC industry in 2021 will grow around 3.5% to US\$ 117.8 billion. Overall semiconductor industry outlook is optimistic with positive growth in both global and Taiwan market. Based on the data from IC Insights, the sales and revenue for overall IC market will grow 12% in 2021. According to the analysis of the world's top ten semiconductor companies in 2020, both memory and logic semiconductors have shown substantial growth compared to 2019. Looking forward to the future, with the rise of emerging electronic applications, new functions in artificial intelligence, 5G, ADAS, data centers, remote teaching and various mobile devices will be introduced. The field of semiconductor applications and the number of applications are expected to continue growing in 2021. The deployment of 5G will be the major driver for the coming years. TrendForce estimated global smartphone shipment for 2021 will reach 1.36 billion units, increase 9% from 2020. Canalis identified that remote working and digital learning will be the key trend to drive PC (including desktops, tablets and notebooks) market growth in 2021 and beyond. Global PC shipment will increase 1.4% to reach 464.4 million units in 2021 as Canalis pointed out. According to DIGITIMES Research, global server shipment will rise 5.6%

and hit 17 million units in 2021, according to DIGITIMES Research.

The COVID-19 has disrupted business activities worldwide, and it will still be the major factor to affect the global economy. Also, the ongoing disputes between U.S. and China play a major uncertainty for the global economy.

PTI projects good revenue growth in DRAM, NAND Flash, Logic, and advanced packaging in 2021.

2021 Sale forecast volume:

Item	Sale Forecast Volume
Assembly	15 billion packages
Final Test	9.2 billion packages
Bumping	980 K wafers
Chip Probing	2.6 million wafers
SSD & SiP	140 million pcs

3. Cash Flow

(1) Cash Flow Analysis for 2020

Unit: NT\$ Thousand

Beginning Cash Balance 1/1/2020	2020 Cash Flow from Operating Activities	2020 Cash Flow from Investing Activities	2020 Cash Flow from Financing Activities	Currency Exchange for Cash and Cash Equivalent	Ending Cash Balance 12/31/2020
21,800,048	19,301,292	(16,734,519)	(3,007,278)	(339,731)	21,019,812
2020 Cash Flow Analysis : (1) Operating Activities: Increase cash inflow from change in 2020 depreciation and profit. (2) Investing Activities: Increase of cash outflow was due to acquisition of real estate, property and equipment in 2020. (3) Financing Activities: The increase of cash outflow was due to change in cash dividends payout in 2020.					

(2) Cash Flow Improvement Plan

Not applicable.

(3) Cash Flow Estimation for 2021

Unit: NT\$ Thousand

Beginning Cash Balance 1/1/2021	Estimated 2021 Cash Flow from Operating Activities	Estimated 2021 Cash Outflow	Estimated Ending Cash Balance 12/31/2021	Funding for Cash Flow Shortage	
				Investing Activities	Finance Activities
21,019,812	19,000,000	18,500,000	21,519,812	—	—
1. 2021 Cash Flow Analysis: (1) Operating Activities: The cash inflow is from 2021 estimated net income and depreciation. (2) Investing Activities: The cash flow is for acquisition of real estate, property, and equipment in 2021. (3) Financing Activities: The cash flow is for 2021 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 2020 PTI capital expenditures were for acquiring real estate, property and equipment. 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 equipment, 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

PTI's investment policies conform with its strategies of deep cultivation of core business, strengthening of strategic alliance relationships with major clients and expansion of related industries, excepting to increase return on equity through the investment gains.

Investment Commission had approved no more than US\$51 million investment through Powertech Holding (BVI) Inc. for subsidiary Powertech Technology (Suzhou) Ltd. (PTI Suz) for further expansion in China in 2009. Total investment for PTI Suz was US\$216 million and register capital was US\$72 million. As of end of 2019, PTI Suz accumulated lost was over US\$54 million which was over half of register capital. PTI Suz financial performance has not met expectation after a decade. Supply chain swift from trade tensions and local made incentives from China government created a favorable condition for operations in China. PTI HQ assigned new management team to undergo a serious leadership revolution for PTI Suz and continue funding its operation by increase capital of US\$ 28 million. The capital increased was approved by Apr 2020 board meeting. PTI Suz was expected to improve its financial status with new leadership and favorable operations condition.

Board meeting in Aug 2020 concluded to end the operations of Powertech Technology Akita Inc. due to its poor financial performance and limited foreseeable opportunity.

Board meeting in Aug 2020 concluded to end the operations of Powertech Technology (Singapore) Pte. Ltd. due to its poor financial performance.

Future investment plan will justify with industry condition and potential growing opportunities. Under the direction of strengthen the relationship of alliance and supply chain networking, the Board of Directors will carefully consider all the investment proposals.

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 2020 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 and raw materials were mainly trade in US dollars and Japanese yen as well. Both import and export were affected by currency exchange rate fluctuate. 2020 net foreign exchange lost were about NT\$ 499.31 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 2020.

(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, 2020 net worth was NT\$45.98 billion, and the cap for endorsement and guarantee were NT\$4.59 billion and NT\$22.99 billion which were all above the amount lent out.

3. 8th Annual 12th 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 0.57 ~ 2.2%. As the end of Apr 2020 no outstanding loan balance for Powertech Technology (Singapore) Pte. Ltd.

As of Dec 31 2020, PTI net worth was NT\$46.0 billion and lending amount were NT\$2.3 billion and NT\$4.6 billion for separated entities which were below the lending regulation maximum. The lending for Tera Probe, Inc. JPY 3,487.5 million (NT\$ 964.3 million) also meet the lending guidance.

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\$1.9 billion in 2021 and expects to spend more budgeted amount.

(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. During 2014 and 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

PTI has been devoted on Fan-Out Panel-Level packages (FOPLP) for packaging solution post Moor's Law. Hsin Chu Science Park Plant III will be dedicated for FOPLP. The new facility finished construction in 2020 and expect to pull in equipment in second half of 2021.

(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.