

## I. Letter to Shareholders

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Annual General Meeting of Shareholders 2022

Dear Shareholders, Ladies and Gentlemen,

In 2022, there was a dramatic decline in overall market demand due to the international economy being buffeted by series of negative factors such as inflation, the Russo-Ukrainian War, US-China tensions, interest rate increases, uncertain exchange rates, and cross-strait tensions. Vendors continued their rush to reduce inventories as well. The result was the most challenging time that the semiconductor has experienced in well-over a decade; the different rates of recovery in electronic industries is prolonging the inventory adjustment process of customers. The general consensus now is that the industry will only really begin picking up again in the second half of 2023.

In response to these very challenging times, the PTI Group is enforcing tight cost control and reducing our capital expenditures. At the same time, we are also reviewing our production processes in order to optimize our product portfolio in order to accelerate the certification and production of products with high added value such as advanced logic. The PTI Group delivered its best results ever in 2022 with the support of our customers and suppliers, and the combined efforts of all employees. Consolidated revenues reached NT\$83.927 billion; net profit after tax attributable to the parent company reached NT\$8.687 billion, and earnings per share (EPS) was NT\$11.60. To thank our shareholders for their longstanding supports, a cash dividend of NT\$7.0 per share was therefore passed by the Board of Directors this year and now pending approval from shareholders.

Despite the current international upheavals, the talent development, organizational reform, and business unit optimization initiatives that PTI adopted in the past have begun producing result at each Group company in their respective specialties: Greatek Electronics specializes in packaging and testing services for entry and medium-level products; Tera Probe/Tera Power strengthened its collaboration with international customers in Japan, Taiwan, Europe, and US to expand testing services for logic wafers and final products; PTI used its existing advanced packaging and testing technology for memory products as the basis for aggressive expansion of products and customers in advanced logic and heterogeneous integration; Mass production for Bumping, WLP and Flip Chip CSP/BGA processes are now proceeding on schedule. FOPLP (Fan-out Panel Level Packaging) and CIS TSV CSP processes have commenced production in 2022 as well. SIP/SIM/Sub-system based on custom combinations of advanced packaging technologies is now in discussions with customers on the joint development of new products in the future. Once this enters mass production it should give a boost to the sustainable growth of the Company's results.

In the year ahead, new high-end electronic product applications such as AI, 5G communications, autonomous vehicles, and High Performance Computing (HPC) products will also see new upgrades, demand for advanced packaging and testing processes will remain strong. PTI Group will concentrate on this future trend and continue to work closely with our customers and suppliers. Areas of interest include:

1. Continue to maintain our global leadership in quality, technology, and production capacity for memory products:
2. Expansion of businesses based on new technologies: Bumping, Flip Chip CSP/BGA, FOPLP mass production, and Fan-out on wafer level certification.
3. The research, development and manufacture of advanced technologies: Develop high performance products based on TSV connections such as CIS CSP for automotive and safety applications, and High Bandwidth Memory (HBM);
4. Periodic review of short-, medium- and long-term plans for ESG and related key performance indicators to ensure the sustainability of the Company. We will also strengthen our disclosures of related information and actions to keep stakeholders informed.

PTI thanks our shareholders and customers for your support. A quarter of century has now gone by with everyone working diligently together. In the future, PTI will continue to move forward towards realizing our goal of “becoming the World No.1 in technology, quality, and service!”

My thanks go out to all shareholders once again for all the support and encouragement that they provided to employees and management team of the PTI Group!  
I wish everyone all the best of health and success in all endeavors.

Sincerely,  
D.K. Tsai

PTI Chairman

# **Powertech Technology Inc. 2022 Business Report**

## **I. 2022 Business Operations Report**

According to the "World Economic Outlook" report issued by the International Monetary Fund (IMF) in January 2023, global economy growth in 2022 was 3.4% and is expected to drop to 2.9% in 2023, before rising back to 3.1% in 2024. Global economic growth in 2023 and 2024 will therefore be below the historic average of average of 3.8% (2000 ~ 2019). The two years will therefore be the weakest in terms of growth since 2001 with the exception of Global Financial Crisis and COVID-19. The slowdown in global economic activity is worse than expected while inflation is at its highest in decades. High interest rates and the Russian invasion of Ukraine may also continue to put pressure on economic activity. China's announcement of an end to economic lockdown is expected to contribute to global economic growth as well. IMF forecasts suggest that average global inflation will reach 6.6% in 2023 and drop to 4.3% in 2024 but still remain higher than the pre-pandemic average of 3.5% (2017 ~ 2019).

In terms of the global semiconductor performance, a study conducted by the international research and consulting firm Gartner found short-term outlook is deteriorating due to slump in consumer demand triggered by a rapid worsening of the global economic inflation, and higher interest rates in the second half of 2022. The negative impact on the semiconductor market may persist into 2023 as well. Corporate-driven markets such as corporate networks, computing, healthcare and commercial transportation may retain some of their flexibility. On the whole, global semiconductor revenues in 2022 amounted to US\$601.7 billion, a small increase of 1.1% over 2021. The Taiwanese semiconductor industry is still outperforming the rest of the world. The February 2023 statistics compiled by Industry, Science and Technology International Strategy Center (ISTI) at the Industrial Technology Research Institute (ITRI) showed that: The Taiwanese IC industry was worth NT\$4,837 billion in 2022, up 18.5% from 2021. The IC packaging industry in particular was worth NT\$466 billion, up 7% from 2021, while the IC testing industry was worth NT\$218.7 billion, up 7.7% from 2021. Memory applications are becoming more widespread due to the variety of semiconductor products. The Company is doing everything we can to meet the

needs of our customers by continuing with the development of packaging technologies as well as new processes and their related technical capabilities. Despite the downward trend in the semiconductor market and weak demand for consumer electronic products in the second half of 2022, customer-side demand for automotive, servers, high-performance computing and artificial intelligence (AI) is still growing. At PTI, we built on the solid foundations that we established and focused on the development of new products, technologies and customers in recent years. The resulting returns kept the aforementioned impacts within an acceptable range. As a result, PTI saw small gains in overall revenue and profits compared to the preceding year. In the future, we will continue to focus on technology development, the delivery of high quality and services, and expand our production capacity in order to satisfy customer demand and secure their trust. We will also respond to changing market conditions by cutting back on capital expenditure and closely control our operating costs in the hopes of seeing an economic recovery in the second half of 2023.

Details of 2022 revenue and profitability are reported as follow:

1. 2022 Operations Results

PTI Consolidated revenue of 2022 was NT\$83.93 billion, which was 0.16% increase from 2021 consolidated revenue of NT\$83.79 billion. 2022 net income belonged to parent company was NT\$8.69 billion which was 2.37% declined from 2021 NT\$8.90 billion.

2. Financial Status

2022 Consolidated Statement of Cash Flow	(in NT\$1,000)
a. Net cash inflow from operating activities	22,922,620
b. Net cash outflow from investing activities (Changes mainly from acquisition of machinery and equipment)	18,927,395
c. Net cash outflow from financing activities (Mainly for distribution of cash dividends and repayment of bank loans)	6,760,954

### 3. Profitability Analysis

Analysis Items		2022	2021
Profitability	Operating Income / Capital Ratio	163.97%	186.42%
	Pre-tax Net Income / Capital Ratio	179.67%	188.74%
	Return on Assets	9.22%	10.48%
	Return on Equity	16.59%	19.27%
	Net Income (Loss) Ratio	10.35%	10.62%
	Net Income(Loss) Per Share	\$11.60	\$11.54

### 4.R&D Updates

PTI has been constantly devoted to new technologies and production technologies development to meet industry standards and customers' demand. 2022 R&D expenses were NT\$2.46 billion which was about 2.93% of consolidated revenue. In addition to DRAM and NAND Flash products, PTI has been developing advanced packaging & testing and heterogeneous integration, such as Flip Chip (FC), System in Package (SiP), Wafer Level Package (WLP), CMOS image sensor (CIS), 2.5D/3D Through Silicon Via (TSV), and Fan-Out Panel Level Package (FOPLP). PTI has completed the lab for Antenna in Package (AiP) and Radio Frequency (RF) to provide certify services of 5G products. Apply TSV technologies on CIS products to enhance performance of health care, surveillance, and automotive devices. FOPLP has been engaged with customers in development and certification to provide comprehensive solutions.

## II. 2022 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:

The 2023 semiconductor sales forecast issued by World Semiconductor Trade Statistics (WSTS) in November 2022 expected the global semiconductor market to decline by 4.1% to US\$557 billion. The biggest decline will be in memory products with a drop of 17%. While the semiconductor industry in Taiwan is being buffeted by global inflation, consecutive rate increases, the Russo-Ukrainian War, geopolitics and other factors, the Industry, Science and Technology International Strategy Center (ISTI) of ITRI expects the Taiwanese semiconductor industry to maintain positive growth. The Taiwanese IC industry is expected to grow by 6.1% and be worth NT\$5 trillion in 2023, demonstrating the resilient global competitiveness of Taiwan's semiconductor industry.

In 2023, growing popularity of 5G product applications such as well as emerging applications such as artificial intelligence (AI), electric vehicles, autonomous vehicles, data centers, distance learning, low-earth orbit satellites, e-healthcare, home electronic products and various mobile devices mean that semiconductors will remain continue to lead the ICT industry in expected growth.

The impact of COVID-19 is coming to an end along with its influence on the global economy. The whole world will revert back to their pre-pandemic ways of life in 2023. Friction in geopolitics and global trade remains a serious problem however and how they will impact on the overall economic market must be closely monitored.

All production this year including the packaging and testing markets for logic IC and memory products will need to take demand and rate of destocking into account with a more conservative outlook expected. Predicted production for each type of product in 2023 is therefore as shown in the table below:

2023 Sale forecast volume:

<b>Item</b>	<b>Sale Forecast Volume</b>
Assembly	16 billion packages
Final Test	10 billion packages
Bumping	1,000 K wafers
Chip Probing	3.2 million wafers
SSD & SiP	120 million pcs

### 3. Production and Marketing Strategies:

- (1) Provide the turn-key services to customers for cycle time and overall cost reduction.
- (2) Maintain the leading position in memory packaging and testing market.
- (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 packaging (FOPLP) 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.S. Leu

Head of Accounting: Evan Tseng