# **Chapter 1: Report to Shareholders**

Dear shareholders, ladies and gentlemen,

2018 was a challenging year! We saw the growth in the first half of 2018 and the decline of growth in the second half due to the intensifying US-China trade war In the beginning of 2018, the global economic development started with a positive outlook but then went downhill, which tested the flexibility and responsiveness of the management of corporations IMF revised downward the 2018 economic growth rate to 3.7%. According to the statistics of Gartner, the total sales of the global semiconductor market was US\$ 476.7 billion, increased by 13.4% compared to 2017. Gartner also estimated the total semiconductor sales globally to be US\$ 488.9 billion, with a marginal growth rate of 2.6% compared to 2018.

According to the statistics of IEK ITIS Program of Industrial Technology Research Institute (ITRI), the total production value of the IC Packaging and Testing industry in 2018 amounted to NT\$ 493 billion, growing by 3.4% compared to 2017. The total production value of the IC Packaging market reached NT\$344.5 billion, up 3.5% from the previous year, and the IC Testing market NT\$ 148.5 billion, going up by 3.1% from 2017. The operational performance of the Company and its subsidiaries (referred hereinafter to as 'the Group') in the past year is as below,

### **Operational Performance in 2018**

1. Outcomes of the 2018 Operational Plan

The combined revenues of the Group in 2018 amounted to NT\$ 371.1 billion, increased by approx. NT\$ 80.7 billion compared to the previous year, with an annual growth rate of 27.8%. The combined revenues of the business area of IC packaging were NT\$ 214.2 billion, going up by NT\$ 61.8 billion with a growth rate of 40.6% from 2017, mainly attributed to the contributions of Siliconware since its joining the Group on Apr. 30, 2018. In addition, in the business area of Electronic Contract Manufacturing (ECM), the combined revenues in 2018 grew by NT\$ 17.9 billion at NT\$ 151.9 billion from 2017 with an annual growth rate of 13.4%.

### 2. Budget Execution

The Company's Financial Forecasting in 2018 has not been disclosed.

### 3. Analysis of Financial Expenditures and Profitability

In 2018, the Company's paid-in capital was NT\$ 43.2 billion. As specified in the Company's 2018 consolidated financial statement, the total equities owned by the Company's proprietors totaled at NT\$ 203 billion, accounting for 38.1% of the total assets of NT\$ 533.4 billion. The long-term capital assets accounted for 175.7% of those of properties, assets and equipment, with a 129% liquidity ratio and 6.5% return on asset (ROA) The financial ratio was not far from that of the previous year. Moreover, although the combined operating profit ratio of 16.5% in 2018 was slightly lower than that of 18.2% in 2017, the net operating profits rose by 5.6% (NT\$ 1.4 billion) from 2017 to NT\$ 26.6 billion in 2018. Net income before taxes was NT\$ 32 billion, going up by NT\$ 1.1 billion at a 3.6% rate from the previous year, attributed by the net income of the Company's proprietors of NT\$ 25.3 billion, We have seen improved profitability in 2018 from 2017.

### 4. Research and Development

With the prevalence of PCs and mobile devices, the technology of single chip integration has gradually matured, a trend that is in line with the Moore's Law that drives the efficiency of global microelectronics

and semiconductors. Moreover, during the course of the diversification of terminal computing triggered by the Internet of Things (IoT) effects, the industry chain strives to advance to a more valuable and higher level of system integration. This highlights the materiality of innovation in heterogeneous integration in the field of IC packing, so that functional integration and the scaling-down technology can be enhanced at the same time, for creating intelligent internet connection environment and devices with better performance and for facilitating a more convenient and intelligent life of humankind. The Group continues to construct platforms of key technologies such as, the advanced system packaging and modulation, flip chip bumping/welding and low and medium pin count packaging. Key products and technologies successfully developed in 2018 are as follows: (1) Flip Chip Packaging (FCP): the process of 7- and 10-nano chips was technically attested. The 14- and 16-nano copper-electroplating processing/Low-K dielectric FCP application, silver-alloy wires for hybrid flip chip ball grid array packages. (2) Wire-bonding packaging: the development of the second generation of advanced embedded component packaging, pressure sensor packaging, technology of bonding copper/gold wires with ultra fine spacing and wire internals, and Mobile DRAM. (3) Wafer Level Packaging: the silicon photonic component technology, Through-Wafer Via, glass substrate panel packaging, hexahedral Wafer Level Chip Scale Packaging (WLCSP), Fan-Out PoP Chip product development, and the die-to-wafer fitting process. (4) Advanced packaging and modulation: low power consumption antenna design and packaging, bendable substrate panel and packaging, dual side thinning and wireless communication modulation, and 5G antenna packaging product development.

Summary of 2019 Business Plan

1. Operational Guideline of the Group

(1) To provide clients with services with the 'ultimate quality'. (2) To generate long-term and stable profits for the Company and clients. (3) To collaborate with vendors and partners to jointly create prosperity. (4) To train employees to become experts and elites in respective fields. (5) To create all employees 'fairly' and 'reasonably'. (6) To provide employees with 'a harmonious, enjoyable and open' work environment.

### 2. Estimated sales volume and supporting info

Based on the industry prospect, future market demands, and the productivity of the Group, the estimated sales volume of the Group in 2019 is as below,

Sales Items	<b>Estimated Sales Volume</b>
Packaging	Approx. 28.8 billion units
Testing	Approx. 5.2 billion units

### 3. Key Production and Sales Policies

2018 in Retrospect. We founded ASE Technologyl Holding Co., Ltd. on Apr. 30, 2018. It's a big leap forward both for the development of the Group and the entire semiconductor industry. As the semiconductor industry is gradually maturing, 'the big will get bigger' doesn't necessary apply into the future. With giants working hands in hands, there will be more talents and capital investment for higher shares of the market. In addition, on the pro forma basis, the Group's revenues of semiconductor packaging and testing in 2018 reached US\$ 8.2 billion. Meanwhile, the revenues of ECM operation amounted to a record-high of US\$ 5 billion. System in Package (SiP) grew by 14% to US\$ 2.2 billion from the previous period. It's estimated that the momentum of growth in SiP will continue to 2019 and even further. In 2018, the capital expenditures of our machinery and equipment were mainly spent on the testing operation.

The annual growth rate reached 4% with that in the second of the 2018 going to 8%. The growth momentum is estimated to last next year. Next year we will continue to increase the capital expenditure in a steadily fashion, with the main focuses on integration of new technologies, Fan-Out Wafer Level Packaging (Fan-Out), and SiP. We will also expand the production base and implement factory automation infrastucture. Our production scale and innovation capacities are our fundamental drivers for continuous growth. And we believe SiP and Fan-Out operations will continue to grow. The Group will forge ahead to work on new development and applications of SiP and Fan-Out, and the integrated solutions of low voltage and embedded power supply.

#### **Future Development Strategies of the Group**

The Group has been through the two phases of growth in Cu Wire and SiP and will embrace the next phase of the great cycle of heterogeneous integration. The designs of semiconductors in the future will definitely not be about that of a chip or die. Instead, it's about a holistic system, i.e. the design of heterogeneous integration. It becomes very important to create a cross-functional platform that integrates SiP electronic design automation with domain knowledge. In the new peak of development in the future, we should reconsider adjustment in the four key areas, including business partners, cooperation models, innovation and economic benefits. Regarding the adjustment of business partners, we will strive to have a voice in terms of value allocation of the global semiconductor industry, increasing cooperation within and across the industries, governments and academia, and connecting allocated business values. As for cooperation models, we will operate and cooperate with specific global competitors. Regarding innovation, as the Moore's Law has not diminished and are gradually slowing down, the heterogeneous integration of IC packaging and testing in the future will determine the efficacy of the execution of the Moore's Law. Lastly, in terms of economic benefits, processes equipped with AI and Industry 4.0 capabilities will appear essential.

### Impacts of the external competitive environment, the regulatory and overall operational environments

Due to the impacts of the intensifying trade conflicts between the US and China, international forecasting institutes have revised down their original optimistic figures. All of a sudden the global economy is overshadowed by trade protectionism. The US-China trade war is intrinsically a political issue. An immense trade deficit lies between both nations and its impacts cover a wide range of areas, including the industrial and real estate industries. Fortunately both parties have stayed refrained and it's expected that the trade war will not deteriorate to a greater extent. Even though the US and China have reached consensus recently, the trade war created a temporary turmoil. The trade issues that lie between both countries still depend on the global economic development. The Group has plannings on the global level and will correspond to the market development and clients' demands to make flexible deployment and adjustment of production capacities. For the outlook in 2019, as uncertainties still exist domestically and internationally, we will not only keep watching out international economic trends and stay watchful but also endeavor for stability and continuous growth.

Jason C.S. Chang, Chairman

## Chapter 2: Company Introduction

- (*-*) Founding Date: Apr. 30, 2018
- (=) Overview:
  - Jan. 2019 In order to integrate all resources and enhance the operational effectiveness of the Group, the Board of Directors passed the resolution in December 2018 that the Company merges with USI Global Inc, the Company's subsidiary which the Company withholds 100% of the subsidiary's shares. The base date is set to be Jan. 31, 2019. After the merger, the Company becomes the surviving company and USI Global Inc becomes the dissolved company.

Mr. Jason C.S. Chang, Chairman of the Company has been awarded with a honorary PhD in Engineering by National Sun Yat-sen University, as a recognition for his contribution to the semiconductor industry.

(二)Business Operation of Key Departments

# Office of Chairman and Chief Executive Officer

Department of ASE Group Audit: internal control, risk management, and assessment and confirmation of the validity of the governance procedures.

# **ASE Group Operation Center**

Office of the Group Chief Operating Officer: compilation of the Group's management reports, review and analysis of the effectiveness of the Group's investment expenditures, coordination and integration across manufacturing plants, implementation of the Group's policies.

# ■ ASE Group Staff Center

Office of the Group Chief Officer of Staff: strategical and market planning, including research into and planning of the industry and market trends, the Company's operational performance, operational investment and strategies.

# ASE Group Financial Center

# Department of ASE Group Accounting Control :

setting the Group's consolidated accounting policies and monitoring compliance of Group's subsidiaries, generating consolidated financial statements, integrating and analyzing the Group's financial data, controlling the financial statements of the subsidiaries.

## ASE Group Board Secretariat Department:

agenda management of functional committees, General Shareholders' Meetings, Board of Directors Meetings, publication of disclosed information (including key information) and reporting of public announcements, application and reporting of external investment cases (investment in Mainland China), generation and management of the Group's annual reports in Chinese and English, communication and coordination with competent authorities (stock exchanges and Investment Commission), monitoring and management of information to be disclosed by the Group's subsidiaries.

### Department of ASE Group Finance:

investment assessment and planning, financial risk management, and capital movement.

### Department of ASE Group Projects:

integration and analysis of management reports, financial support of the withholding companies, account operations, cost management, financial statement analysis, financial management, maintenance and development of the automation of report generation systems, stock affairs, etc.

# Department of the Group Internal Control and Management:

assessment and recommendation of the making of internal policies, operational procedures, management measures and operational standards.

# Department of ASE Group Investor Relations:

management and maintainance of the relationship between the companies and investors. communicating with the capital markets about the operational performance of the companies, strategical directions, fund allocation, corporate governance, etc. feeding back suggestions and thoughts of the investors and capital markets about the companies to the management teams.

# Department of ASE Group Public Relations:

managing the Company's corporate images, establishing and maintaining the relationship with the media and other stakeholders, publishing disclosed information, planning and executing PR events, and risk handling.

# ■ ASE Group Administration Center:

### P8

handling the Group's legal affairs, constructing and executing the Group's compliance topics, being responsible for the Group's corporate governance, and handling the Group's external relations.

### Department of the ASE Group Corporate Sustainability:

performance reporting, implementation and management of corporate sustainability, including issues such as corporate governance, risks, compliance, climate change, research and development, innovation, environmental safety and health, employee care and development, supply chain management, and social engagement. P22

The Company elected the first term of board directors after the promotor's meeting on Dec. 12, 2018. On the same date the Company held its first Board of Directors Meeting of the first term. As of the Date of this Annual Report, there have been thirteen Board of Directors Meetings since the board was established.

Note 3: the new director assumed the position on Jun. 22, 2018. As of the Date of this Annual Report, the director has had ten Board of Directors Meetings to attend.

Note 4: during the election of the directors for the second term, the director had been changed from an individual to juridical director (representative).

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107.11.19 The seventh Board of Director Meeting of the second term	The objective was to plan for and set the number of executive stock options to be issued and rosters of stock subscription ownership The board directors' recusal from agenda items due to conflicts of interest: Summary of Director Joseph Tung - as I, Joseph Tung, Director Jason C.S. Chang, Director Richard H.P. Chang, Director Bough Lin, Director Chi-Wen Tsai, Director Tien Wu, Director Raymond Lo, and Director TS Chen all received executive stock options related to this agenda item for the second time in the	Sheng-Fu You, the acting chairman of this agenda item inquired with the attending directors (excluding the recusing directors) and the resolution of this item was passed unanimously.	Not applicable.
	which, personal interest to the agenda of the meeting of this case are involved. To avoid conflicts of interest, as I, Joseph Tung, Director Jason C.S. Chang, Director Richard H.P. Chang, Director Bough Lin, Director Chi-Wen Tsai, Director Tien Wu, Director Raymond Lo, Director TS Chen are recusing from the discussion and resolution of this agenda item and ask the remaining attending directors to discuss and resolve this item.		

To establish comprehensive and robust supervisory functions and to strengthen the management mechanism of the Board of Directors, the Company has subsequently established Audit Committee and Compensation Committee since the Company was founded, which help enhance the operational performance of the Board of Directors.

# P26(P29~P30)

4. Status of Audit Committee's resolution of key agenda items and the Company's handling of feedback from the Audit Committee:

e Audit Committ			
Audit Committee/D ate/Term Number	Agenda Item	Resolution of Audit Committee	The Company's handling of feedback from the Audit Committee
107.08.09 The second Board of Directors Meeting of the first term	To plan for the issuance of the Company's executive stock options for the first time.	After the guests left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously.	The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this item was passed
107.11.06 The third Board of Directors Meeting of the first term	To plan for negotiating with the Securities and Futures Investors Protection Center (hereinafter referred to as 'SFIPC') in order to stay the litigation against SFIPC's proposal of dismissing the position of Mr. Tien Wu as the Board Director of the Company.	Regarding this agenda item, after the guests left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously. The plan is that, before the conviction of insider trading against Director Tien Wu is affirmed by the supreme court, the Board of Directors authorizes the Chairman of the Company and/or his designated personnel and lawyers to negotiate with SFIPC to reach a consent to stop the legal proceeding of the dismissal of Tien's position as a Board Director. If the consent cannot be reached or if the duration of the stay expires, by law the defense and required appeal procedures still need to carry on.	unanimously. The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this item was passed unanimously.
107.12.06 The fourth Board of Directors Meeting of the first term	To plan for hiring independent experts to provide reasonable opinions about cash consideration in the share	After the guests left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously.	This item was not submitted to the Board of Directors for resolution.

107.12.19 The fifth Board of Directors Meeting of the first term	transfer agreement that the Company's plan to sign with King Yuan Electronics Co (hereinafter referred to as 'King Yuan Electronics') To plan for merge USI Global Inc., the Company's subsidiary which the Company withholds 100% of the subsidiary's shares.	After the guests left the meeting, the chairman inquired with the attending Independent Directors and the resolution of this item was passed unanimously.	The item was submitted to the Board of Directors for resolution. The chairman inquired with the attending Directors and the resolution of this

(2) Each quarter the Company's Certified Public Accountant reports to Independent Directors in an independent communication meeting or other meeting about the results of the review of the financial statement of the same quarter

### Supervisors' Engagement and Operation of the Board of Directors

The Company held a General Shareholders' Meeting on Jun. 21 2018 to conduct a complete reelection of board directors. The three Independent Directors resumed their position on Jun. 22, 2018 and formed the Audit Committee to replace the Supervisors. During the period from Apr. 30 and Jun 21, 2018, the Board of Director Meeting had been held three times.

#### P28 (P31) Table

In 2018, the Company referred to Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and drew up Corporate Governance Code Practice, which has been passed by the Board of Directors for publication and disclosed on the Company's website at http://ir.aseglobal.com/c/ir\_doc.php

In 2018, the Company drew up the Operating Procedures for the Prevention of Insider Trading to avoid any misconduct of insider trading out of not knowing relevant regulations and guidelines and to minimize any predispositions to unintentional mistakes or deliberate wrongdoings of insiders so that the fairness in the stock exchange markets can be fostered and rights and benefits of the investors and the public protected. For details, please refer to the Company's website at http://ir.aseglobal.com/c/ir\_doc.php

#### P29

The Company has set the remuneration for the Directors. The company adheres to Article 23 of the Company's corporation by-laws, where in case of profits, the Company shall appropriate up to 0.75% of its annual profits to remunerate the directors. In addition, in consideration of the Company's overall operating performance and the future industry development trends, the Company referred to Sample Template of 'Self-Evaluation or Peer Evaluation of the Board of Directors of XX Co., Ltd.' and drew up assessment measures of the performance of the Board of Directors in 2017, which has been passed by the Board of Directors for publication and disclosed on the Company's website. By the end of the financial year 2017, the Company conducted its first performance assessment based on the assessment measures that the Company drew up. The assessment result has not only been reported to Chairman and Directors but also submitted to the Compensation Committee as a reference of director performance assessment and remuneration.

#### P30

The Company has established the ASE Group Corporate Sustainability Committee consisting of directors and senior executives. A Corporate Governance Team has been set up within the structure of the Committee.

#### P31

9. Please explain the results and elaborate the improved areas based on corporate governance evaluation report published by Corporate Governance Center, Taiwan Stock Exchange Corporation (TWSE) in the most recent year. In addition, please propose prioritized areas for improvement and relevant measures. (Companies that have not been evaluated do not need to respond to this item.)

In 2018, ASE Technologyl Holding Co., Ltd. was founded and it was not included in the corporate governance evaluation in the most recent year (2017). Therefore, this item is not applicable.

#### P32

Trends and Challenges of Information Security Governance

The Amendment of the Company Act and Case Analysis

Impacts of the US-China Trade War on the Risks of Taiwan-funded Enterprises and the Coping Strategies IP Strategies of R&D and Application of Tax Credits for Corporate R&D Expenditures

How to Successfully Negotiate and Discuss Investment Mergers: A Case Study

Practices of Corporate Governance Evaluation and Corporate Social Responsibilities

Advanced Seminar on Practices of Board Directors and Supervisors - How a Supervisor from a non-F&A

Background Reviews Financial Statements

Latest Amendment of the Company Act

#### P34

To ensure corporate governance and have a comprehensive and robust compensation system for the directors and officers of the Company, the Company set up the Compensation Committee in accordance with Article 14-6 of Securities and Exchange Act and Regulations Governing the Appointment and Exercise of Powers by the Compensation Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter on Apr. 30, 2018. The Compensation Committee consists of three members who are assigned by the Board of Director upon resolution; On Jun 21, 2018, a Special General Shareholders' Meeting was convened to have a complete reelection of directors and on on Jul. 13, 2018 have formally elected Independent Directors to be assigned members of the second term of the Compensation Committee. As stipulated by the regulation, the Compensation Committee must consist of at least one Independent Director from the Company (there are two Independent Directors of the Company being the Committee members), and all members should elect a convenor and meeting chairman from members of Independent Directors and represent the Committee externally. The Compensation Committee are obliged to exercise the due care of a good manager and faithfully perform the following functional authorities:

#### P35

Note 2: The three Committee members were reappointed as the Committee members on Jul. 13, 2018 with the tenure same to that of the current term.

Other required disclosure:

- In case where the Board of Director decides not to take on or modify recommendations of the Compensation Committee, the Board of Director shall specify the date, term number, agenda item and resolution of the item of the Board of Director Meeting where the above decision is made, and how the Company handles the feedback from the Compensation Committee (for instance, if the remunerations resolved by the Board of Directors is better than those recommended by the Compensation Committee, the Board of Director is obliged to specify the difference and rationales herein: None.
- 2. If any members object or hold back the recommendation resolved by the Compensation Committee, and have records or written statements in this regard, the date, term number, agenda item, opinions of all members and how they handled the member's objection of the Board of Director Meeting where the above took place, shall be specified herein: None.

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The Company has set ASE Corporate Sustainability and Citizenship Policy and ASE Corporate Social Responsibility Codes of Practice, and have been disclosed on the Company website respectively at http://www.aseglobal.com/ch/csr.html and http://ir.aseglobal.com/c/ir\_doc.php Based on the relevant policies, the Company and its subsidiaries have launched the program of implementing the Corporate Social Responsibilities (CSR), and Board of Directors will supervise and review the effectiveness of the implementation periodically.

The Company instructs its subsidiaries to set out CSR training programs on an annual basis, provide new and existing employees with regular CRS training according to the programs and assist employees in understanding the essence and approaches of achieving CSR.

The Corporate Sustainability Committee consists of the Company's directors and senior executives and is responsible for guiding and supervising the strategic development of ASE Group globally, environmentally and socially. It reports to the Board of Directors annually and sets up 'Department of AES Group Corporate Sustainability' as the dedicated unit responsible for implementing CSR, evaluating the Group's issues around sustainability, coordinating and driving the target-setting of CSR, and implementing the CSR programs. This unit reports directly to the Committee. The program of implementing CRS focuses on six main areas: corporate governance, environment sustainability, human capitals, supply chain development, corporate citizenship and social engagement, stakeholder engagement and information disclosure.

Deviations from "the Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons

There are no critical deviations from "the Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies".

The Company instructs its subsidiaries to periodically adjust the salary structures and benefits according to the local regulations and market situations. There are no wage differences by genders, ethnicity, nationalities and age.

The company shall comply with the Act of Gender Equality in Employment and will not treat employees differently based on their gender or sexual orientation.

To maintain a high level of disciplines of employees, the Company instructs its subsidiaries to draw up Employee Coaching Guideline, which clearly defines measures for rewards and punishments as highest standard of codes of ethics and commitment that employees shall comply with.

### P37

The Company instructs its subsidiaries to plan a management mechanism of power, water resources and consumables and to continue to improve the efficiency of the supply facilities or optimize the modules. The subsidiaries shall comply with ASE Corporate Sustainability and Citizenship Policy and ASE Corporate Social Responsibility Codes of Practice and achieve the targets of minimizing the consumption of resources including air conditioning, lighting, energy-saving of processes, and water resource recycling.

### P38

To provide employees with a optimum and healthy workplace that is in compliance with the Occupational Safety and Health Act, the Company instructs its subsidiaries to introduce the occupational health and safety management systems, ISO 45001 (the original OHSAS 18001) and TOSHMS, to periodically conduct hazard identification and risk assessment and take suitable improvement measures in order to reduce occupational hazard. The subsidiaries shall also organize occupational safety and health training

and health promotion events for employees.

### P38 (P46)

(10) Has the Company established a V
Information Security and Risk
Management framework and defined information security policies and concrete management proposals that are disclosed on the Company's website or annual reports?

The Company instructs its subsidiaries to establish	There are no critical deviations
'Information Security Policy' that covers the procedures of	f from "the Corporate Social
defining confidential information. This policy specifies	Responsibility Best Practice
the rules that the employees shall comply with in daily	Principles for TWSE/GTSM
operations in order to ensure the confidential level and	Listed Companies".
comprehensiveness of the information proprietary to the	
clients.	
In addition, the Company instructs its subsidiaries that, in	
facing the full automation of the Company's	
manufacturing plants and information security risks of the	
production processes, the subsidiaries shall work with	
personnel who defines information security standard,	
personnel of software development, suppliers and	
personnel of information securities, to look into the	
development strategies of automated manufacturing	
plants and the development status of the new automation	
technologies, list out the vulnerable areas of the company	
assets, and define effective strategies of information	
security of automated plants where appropriate.	

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