

IV. Capital Overview

4.1 Capital and Shares

4.1.1 Source of Capital

A. Type of Stock

March 31, 2020

Share Type	Authorized Capital			Remarks
	Issued Shares	Un-issued Shares	Total Shares	
Common Share	1,967,692,886	1,062,857,114	3,030,550,000	-

4.1.2 Status of Shareholders

March 31, 2020

Item	Government Agencies	Financial Institutions	Other Juridical Person	Domestic Natural Persons	Foreign Institutions & Natural Persons	Total
Number of Shareholders	3	64	245	80,402	590	81,304
Shareholding (shares)	14,342,326	45,781,153	570,991,331	563,142,763	773,435,313	1,967,692,886
Percentage	0.73%	2.32 %	29.02 %	28.62 %	39.31 %	100.00%

4.1.3 Shareholding Distribution Status

The par value for each share is NT\$10

March 31, 2020

Class of Shareholding (Unit : Share)	Number of Shareholders	Shareholding (Shares)	Percentage
1 ~ 999	40,659	8,767,227	0.45%
1,000 ~ 5,000	27,751	63,040,965	3.20%
5,001 ~ 10,000	5,976	45,419,088	2.31%
10,001 ~ 15,000	2,015	24,963,128	1.27%
15,001 ~ 20,000	1,178	21,340,078	1.08%
20,001 ~ 30,000	1,200	29,913,097	1.52%
30,001 ~ 40,000	512	17,964,325	0.91%
40,001 ~ 50,000	395	18,031,394	0.92%
50,001 ~ 100,000	710	50,820,673	2.58%
100,001 ~ 200,000	336	47,737,292	2.43%
200,001 ~ 400,000	206	58,223,125	2.96%
400,001 ~ 600,000	80	39,306,868	2.00%
600,001 ~ 800,000	56	38,988,868	1.98%
800,001 ~ 1,000,000	31	27,500,592	1.40%
1,000,001 or over	199	1,475,676,166	74.99%
Total	81,304	1,967,692,886	100.00%

4.1.4 List of Major Shareholders

Shareholder's Name	Shares	Percentage
PJ Asset Management	194,116,000	9.87%
Jaryuan Investment Co., Ltd.	127,194,000	6.46%
Silchester International Investors International Value Equity Trust	77,896,000	3.96%
WGI Emerging Markets Smaller Companies Fund, LLC	39,676,000	2.02%
Silchester International Investors International Value Equity Group Trust	39,186,000	1.99%
Tong Kuang Investment Co., Ltd.	32,141,364	1.63%
Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	31,599,034	1.61%
Chunghwa Post Co., Ltd.	31,561,000	1.60%
Norges Bank	28,088,193	1.43%
VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	27,144,000	1.38%

4.1.5 Market Price, Net Worth, Earnings, and Dividends per Share

Unit: NT\$

Item	2018	2019	March 31, 2020
Market Price per Share (Note 3)			
Highest Market Price	29.15	27.65	27.90
Lowest Market Price	16.6	16.95	23.00
Average Market Price	22.64	23.21	25.80
Net Worth per Share			
Before Distribution	27.11	28.82	-
After Distribution	26.21	27.83	-
Earnings per Share			
Weighted Average Shares (thousand shares)	1,980,250	1,949,947	-
Earnings Per Share	1.59	1.65	-
Dividends per Share			
Cash Dividends	0.9	0.99	-
Stock Dividends			
• Dividends from Retained Earnings	0	0	-
• Dividends from Capital Surplus	0	0	0
Accumulated Undistributed Dividends	0	0	0
Return on Investment			
Price / Earnings Ratio (Note 4)	14.24	14.07	-
Price / Dividend Ratio (Note 5)	25.16	23.44	-
Cash Dividend Yield Rate (Note 6)	3.98%	4.27%	-

Note 1: List the highest and lowest market price in each year and calculate average market price by total trading volume/total trading shares

Note 2: Price / Earnings Ratio = Average Market Price / Earnings per Share

Note 3: Price / Dividend Ratio = Average Market Price / Cash Dividends per Share

Note 4: Cash Dividend Yield Rate = Cash Dividends per Share / Average Market Price

Note 5: No audited numbers available till the print date of the annual report.

4.1.6 Dividend Policy and Implementation Status

A. Dividend Policy

TECO deals in a line of business characterized by steady growth, but many of its investees have yet to take off. Therefore, its distribution of earnings must take into account the need for further expansion and more reinvestments going forward. After legal and special reserves are set aside. In principle, 80% of the remainder and retained earnings from the previous year will be drawn upon as dividend payments to shareholders. Of all dividend payments, cash generally accounts for 50% but must not run below 5%

B. Proposed Distribution of Dividend

Cash dividend of NT\$0.99 per share.

4.1.7 Impact on Company's business performance, EPS and ROI from the stock grant proposed by Shareholders Meeting:

Not applicable.

4.1.8 Employee and Directors' Remuneration

A. The company should allocate 1%-10% of profit for employee remuneration based upon its profit in a given year; less than 5% for the directors.

B. Estimate of Employee Remuneration and Directors' Remuneration

a. Foundation of estimation

1. Amount of net income
2. Regulations in Article of Corporation
3. Historical record of distribution

b. Foundation of share calculation for stock dividend: Not Applicable

c. No difference between total amount paid and number of estimation

C. Profit Distribution of Year 2019 Approved in Board of Directors Meeting for Employee and Directors' Remuneration

a. Recommended Distribution of Employee and Directors' Remuneration:

	(NT\$ thousand)
Employee Bonus – in Cash	\$ 258,192
Employee Bonus – in Stock	0
Directors' Remuneration	<u>114,752</u>
No difference from the number of estimation	

b. Ratio of Recommended Employee Stock Bonus to Capitalization of Earnings:

Not applicable

c. Recounted EPS after Recommended Distribution of Employee Bonus and Directors' and Supervisors' Remuneration: (NT\$ thousands)

Not applicable

D. Information of 2016 Earnings Set Aside to Employee Bonus and Directors' and Supervisors' Remuneration:

Unit : NT\$ thousand

	Amount recognized in the previous year	Amount recommended by the Board of Directors	Amount resolved by the Shareholders' Meeting
Employee Bonus - Cash	255,103	255,103	255,103
Directors' Remuneration – Cash	113,379	113,379	113,379
Total	368,482	368,482	368,482

The actual distribution of employee bonus and directors' and supervisors' remuneration above is parallel with the recommended resolution of the Board of Directors.

4.1.9 Buyback of Treasury Stock

Batch of Buyback	16 th
Purpose	Maintain the Company's credibility and shareholders' benefit
Period	2019/1/3~2019/2/22
Price Range	19.60-19.75
Type and Quantity bought back	(Common shares) 35,000
Value bought back	675,849
Quantity bought back to expected quantity buyback (%)	100
Quantity written off and transferred	35,000
Cumulative shareholdings	0
Cumulative shareholdings to total issued shares (%)	0%

4.2 Corporate Bonds

4.2.1 Issuance of Corporate Bonds

Type of Corporate Bond	1 st Unsecured Ordinary Corporate Bonds in 2015	1 st Unsecured Ordinary Corporate Bonds in 2017
Issue date	2015/06/18	2015/09/15
Par value	NT\$ 1,000,000	NT\$ 1,000,000
Issue and Trading Place	Domestic	Domestic
Issue Price	According to face amount	According to face amount
Total Amount	NT\$ 3 billion	NT\$ 1 billion
Interest Rate	1.45%	1.02%
Duration	5 years, Expiration Date: 2019/06/18	5 years, Expiration Date: 2021/09/15
Assurance Institution	None	None
Assignee	Hua Nan Commercial Bank Ltd.	Taishin International Bank Ltd.
Underwriting Institution	None	Yuanta Securities
Signed Lawyer	Handsome Attorneys-at-Law Ya-Wen Chiu	Handsome Attorneys-at-Law Ya-Wen Chiu
Signer Accountants	PricewaterhouseCoopers, Taiwan Audrey Tseng Dexter Chang	PricewaterhouseCoopers, Taiwan Wu, Yu-Lung Chou, Chien-Hung
Repayment	Accrual Bond	Accrual Bond
Outstanding Amount	NTD\$ 3 billion	NTD\$ 1 billion
Redemption or Advanced Repayment	N/A	N/A
Restrictive Clauses	N/A	N/A
Credit Rating Institution, Credit Rating Date and the Outcome of the Rating	Taiwan Ratings Rating Date:2015/2/16 Issuer Ratng: twA+ IssueRating: N/A	Taiwan Ratings Rating Date:2017/3/30 Issuer Ratng: twA+ IssueRating: N/A
Others	None	None
	None	None
Shares Dilution & Influence on Stockholders' Equity	None	None
Entrust Institution of Exchange Object	None	None

4.2.2 Information of the Convertible Bond

None

4.2.3 Information of Shelf Registration Corporate Bond

None

4.2.4 Equity warrant bonds

None

4.3 Equity Warrant Preferred Stock

None

4.4 Preferred Shares

None

4.5 Global Depositary Shares

None

4.6 Employee Stock Options

4.6.1 Issuance of Employee Stock Options

None

4.6.2 List of Executives Receiving Employee Stock Options and the Top 10 Employees with Options Valued in Excess of NT\$30 Million

None

4.6.3 Status on Restricted Share Award

None

4.6.4 List of Executives and Top 10 Employees Receiving Restrctied Share Award

None

4.7 Status of New Shares Issuance in Connection with Mergers and Acquisitions

None

4.8 Financing Plans and Implementation

None

V. Operational Highlights

5.1 Business Activities

5.1.1 Business Scope

A. Business Scope

Business Scope	Sales %
Industrial Products	62%
Home Appliances	11%
Construction	7%
Others	20%
Total	100%

B. Products and service nowadays

a. Industrial Products Business

- Medium to large voltage motor (125-60,000 HP)
- Low voltage permanent-magnet motor (5-150HP) & Induction motor (1/4-500HP)
- Motor for electric vehicle(1-270 HP)
- Gear reducer
- Medium to large voltage inverter (200-12,000HP)
- Low voltage inverter (0.25-800HP)
- Ultra high power density general purpose induction motor
- Vessel motor
- Explosion proof motor
- AC SVO
- Motion control and Programmable Logic Controller (PLC)
- Human Machine Interface (HMI)

b. Automation and Intelligent System

- Service robot system integrated products
- Joint system of Cobot
- System integration for robot
- AGV (automated guided vehicle) smart platform and key components
- PCS (Power Conditioning System)
- Motion control system
- MHm Diagnostic system
- Industrial Ethernet
- 5G IOT Controller
- Production line and warehouse handling and receiving robot
- Smart mobile platform transportation tool factory application
- Modularized data integration of logistics transportation

c. Home appliance and air conditioner

- Air-conditioning (air conditioner, chiller, energy saving system solution)
- Air conditioning engineering (provide project management, design, construction and maintenance services)
- Large size home appliance (fridge, washer, TV)
- Small size home appliance (inverter DC fan, air purifier, vacuum, blender, microwave, oven)

d. Energy & Engineering and equipment

- Electrical and mechanical engineering (provide project management, design, procurement, construction and maintenance service), including the construction of IDC, renewable energy (including offshore wind power) and energy storage, comprehensive development projects, civic engineering and traffic engineering, medical biotechnology and factory buildings, etc
- Electric equipment (switchboard, generator set, power distribution equipment, design and construction service for energy distribution system)
- Appliance products (electromagnetic switches, non-fuse circuit breakers, leakage circuit breakers, electronics protection relay, etc.)

e. Other

- Electric vehicle
- Intelligent motor electromechanical monitoring system
- E-House pre-installed electrical room
- Integrated fire pump solution
- Self-service vending machines and smart home delivery cabinets and smart storage cabinets
- Energy saving and intelligent supervisor service for air quality

C. New products development

a. Industrial Products Business:

High Power Density general purpose Induction Motor, Power plant and water resources special vertical circulating water pump high pole number semi-dense large motor, medium voltage Exd explosion-proof motors, offshore wind power technology, steel plate motor for the new generation of wind and hydraulic machines, high torque permanent magnet motor, high speed permanent-magnet motor and drive, synchronous reluctance high efficiency motor products, electronically controlled motors for air conditioning, CNS IE3 Exd explosion-proof motors, digital motor products

b. Home-appliances business:

In line with the core values of "energy conservation, emission reduction, intelligence, and automation" for new product development, the home appliances business division has developed entire-range air conditioners and fully smart home appliances, offer complete solutions for cloud-end applications. Combined with the trend of digital transformation, we launched customized air-conditioning products. Consumers can directly purchase their own customized products such as appearance and compressors on the website, and launch exclusive patented modular air-conditioning plug-in cleaning modules to create wisdom Healthy home. Integrate smart communication architecture and join TaiSEIA technology development to establish smart networking modules to achieve remote monitoring of home appliances. Provide the best ambient air management. In the establishment of the energy information system (EIS), through the combination of distributed processing controllers, graphic control software and the network, the optimal power demand control operation management for energy-consuming equipment is done. Applied to social care, public construction and BEMS, HEMS to achieve the goal of low-carbon society. Other projects underway:

- I. All variable-frequency home appliance attain the government's grade-1 CSPF in air-conditioning seasonal performance factor and employs high-performance energy-saving R32 refrigerant, enhancing performance and lowering carbon emission, to contribute to slowdown of global warming. Production of energy-saving and environment-friendly products via clean manufacturing and the use of green materials for continuing contribution to energy conservation and emission reduction. Using big data analysis and AI intelligence to provide energy management and preventive maintenance diagnosis and other services, provide the best energy saving and early warning and other solutions
- II. In order to meet the new MEPS (minimum energy performance standard) implemented by the government in 2018 and retain their grade level, existing refrigerators with first-grade performance must enhance their performance by 39%. TECO invests in molds for home appliances and develop

energy-conserving refrigerators with performance exceeding the new grade-1 standard, as well as brand new appearance and functions quite different from Japanese brands. One model, a 600 liter/three-door refrigerator, boasting variable temperature, has been eligible for government subsidy after passing screening by Bureau of Energy, the Ministry of Economic Affairs, in Dec. 2017. In 2019, the country's first self-made inverter commercial 1000L refrigerator was launched, and the patented technology for freezing and refrigeration switching of vegetable and fruit rooms was launched, which was widely praised.

- III. R&D on VRF (variable refrigerant flow) system for parallel-connection variable-frequency external unit, with entire series conforming to grade-1 CSPF energy performance, meeting the demands of green buildings and high-class business offices.
 - IV. Research and development of 350RT magnetic levitation centrifugal ice water machine has obtained Keelung Port Authority West Third Warehouse Replacement Bid Case, which is the best example for future promotion. And provide HVAC (heating, ventilation and air conditioning) system solutions, connecting multiple hosts into a centralized control system, the unit controller of the host for single control.
 - V. Developed 15RT and 20RT DC frequency conversion water-cooled box machines, becoming the only model in the industry that achieves CSPF level 1 energy efficiency, and has won the Taiwan Excellence Award. It is the best choice for small and medium-sized central air conditioners such as factories and restaurants.
 - VI. Rollout of IPLV (integrated part load value) chiller, centralized control of main engines via central controller, automatic adjustment and control system capable of integrating efficiency curve of main engines, automatic adjustment of the operating units of main engines according to load of the system, coordination of the launch and stoppage of cooling tower and chiller, materialization of system optimization, and attainment of optimized IPLV operating efficiency of the system. In addition to high energy performance of product, provide check of product health and one-stop integrated service for air conditioning systems via various management and control systems, including visualized power-consumption management and monitoring of indoor air quality.
- d. The Energy & Engineering business division is to integrate the diversified industrial products within the group and maximize the group's overall effectiveness. The project is geared towards the development of niche markets such as renewable energy, energy storage, special cases, etc. that support the Group's strong products. In addition, we continue to invest in the development of offshore wind power, microgrid, internet data center (IDC), smart building, solar power generation and energy storage, deepen and expand domestic and overseas markets. It is expected in the future that there are more projects from large enterprise self-built information computer room case, telecommunication company computer room case and overseas information computer room, etc. Now Teco has participated in projects such as offshore wind farm land substation project, solar photovoltaic power generation system, energy storage micro-grid system, etc. It will continue to accumulate actual results and actively expand the development of this business on this basis. Now TECO strives to promote the expansion of smart switchboards and appliances. In addition to improving industrial energy conservation and intelligence, it also adds growth momentum to TECO Energy & Engineering and actively integrates group resources, focuses on business opportunities in the energy industry, and participates in forward-looking plans to explore new opportunities for energy conservation, energy storage, and energy creation.
- e. The Automation and Intelligent System Division mainly provides forward-looking automation industry application services for the development of TECO automation and intelligent system products. That covers servo drive technology, PLC, HMI human-machine interface, servo motor and robot system integration products, and tension control of the high-end servo market, smart phone glass grinding machine, high-speed lathe spindle industry, assist customers to introduce automation and intelligent solutions to meet the needs of manufacturers' production line flexibility, energy saving, and high efficiency, and increase industrial production capacity and efficiency. The new inverter series has been successfully applied to industrial systems such as industrial air supply and exhaust equipment, factory-run air conditioning systems, metal processing, vertical transportation and so on. New products planned to be developed: the networking function of industrial control products combined with the connection of smart devices, a new generation of

compact AC servo drive series JSDDL2-C (CanOpen) /-E (EtherCAT), the compact DC servo drive of the application field in mobile vehicles / medical equipment / robotic arm etc. In response to the customer's demand for productivity 4.0, AGV (Intelligent Mobile Platform) as well as collaborative robots being the mainstream of factory automation, TECO uses AGV autonomous positioning and navigation as the foundation of mobile robot development, serializes its products and provides customized requirements. In the development strategy of robots, it develops collaborative robotic arm joint modules to integrate the needs of industrial and commercial industries, making the development of smart automatic industry more flexible.

5.1.2 Industry Overview

A. Industrial Product Business

Motors are widely used and are the most common source of power. It has become a stable growth industrial product, and it has gradually formed the top ten leading manufacturers of the big Evergrande. However, according to research, about 50% of global power generation is directly or indirectly consumed by motors. Therefore, under the trend of energy saving and carbon reduction, governments around the world have set specifications for motor efficiency and gradually replaced low-efficiency products with high-efficiency motors. Therefore, since 2015, due to the mandatory demand of regulations, it is expected that there will be a wave of replacements worldwide. Not only the demand for efficiency improvement, but also in response to the demand for networking and manufacturing reforms, in the process of Global Industry 4.0, the key technologies invested by various advanced manufacturing companies such as ABB and Siemens have similarities. From the analysis of big data to the Industrial Internet of Things (IIoT) and artificial intelligence to break through the current manufacturing bottleneck and provide more complete software plus hardware engineering solutions. It mostly expands its product portfolio and services through mergers and acquisitions to increase the added value of key equipment components such as motors. TECO also provides solutions to monitor plant equipment through the Internet of Things in conjunction with its affiliated companies, to achieve machine predictive maintenance, production line mechanical and electrical energy saving and other functions. It can also provide interactive diagnosis and intelligent automatic dispatch. In response to Industry 4.0, we provide customers with one-stop services, including the key components of power systems such as motors, inverters, and reducers that are required by general factories, which can be tailored for customer plants and upgraded to smart factories. In addition, the development of automotive electric motors has also become the target of attention of global motor manufacturers, as countries and automakers around the world have announced the end of production schedules for pure oil vehicles. With the rise of green energy, TECO is not absent. From large generator technology to small yaw motor, TECO actively invests in and ranks among the suppliers of offshore wind turbines through its excellent design and manufacturing technology of rotating electrical machines.

In terms of system automation, due to energy saving and carbon reduction, green environmental protection and other world development trends, and the global industrial development of automated production as the mainstream trend, we will combine the advantages of motor and inverter research and development to provide system integration solutions to supply high-efficiency, energy-saving and the products requiring system control accuracy are the focus of the development of the electric control business. Under the global trend towards industry 4.0 production: the supply of products that increase efficiency, save energy and require control accuracy of mechanical systems is the focus of the electronic control business. The application of electronic control products in industrial automation can reduce manpower and improve power efficiency. In software, we add more high-end inverter function, such as permanent magnet motor vector control, PTC motor overheat protection, SLV vector control, static motor adjustment, intelligent OVP overvoltage suppression, automatic torque compensation, and built-in BACNet communication protocol; in hardware, we add high-speed communication function, remote monitoring function, safe torque off (STO) function in hardware, and improve communication anti-noise capability. Combined with the enhancement of the above-mentioned hardware and software functions, in addition to showing its talents in the application field of factory automation, it has also expanded its excellent control technology to commercial and home use. And its built-in BACNet communication function, in the building air conditioning, energy-saving automation, security monitoring and home automation applications, really provides customers with high value-added

solutions. The new generation of servo products combined with EtherCAT communication products will be promoted in the new application of robot arms. The development of electronic control products in response to the needs of automation, the increase in safety standards, and the new generation of products need to meet the needs of various markets. In addition to the application of AC servo products in factory applications of Industry 4.0 in recent years, DC servos have been actively used in AGV, smart logistics, smart medical care, smart home, elderly care and other life care applications, striding across smart homes and cities of emerging markets.

B. Home-appliances industry

"In deciding to push smart home appliances, TECO Group has defined its role as a home-appliances brand integrating science, technology, and intelligence." Therefore, TECO has forayed into market from IT angle, integrating the group's internal resources, including industrial drive, motor control, communications, and computing technologies, making TECO not only a home-appliances brand but also a home-appliances technological service provider. With firm grip on the development of industrial energy conservation, the company has developed a whole series of energy-saving products meeting government standard for first-tier energy performance and engaged in joint development with other enterprises and government R&D units. Under the auspices of government-sponsored Technology Development Program, the company has applied cutting-edge energy conservation technology in technological innovation, product innovation, and service innovation, thereby enhancing the international competitiveness of Taiwanese brands.

C. Energy & Engineering:

In terms of engineering, due to the different needs of the bidding case, the execution team will adjust to the needs. Sometimes the bidding can be done independently, and sometimes a cooperative team needs to be formed with the strategic alliance of civil construction companies. To adapt to the changing trend of the times, the IoT (Internet of Things) is booming and the demand for IDC equipment rooms is increasing. The requirements for construction timeliness and stability are increasing. By contracting such projects, we will differentiate and cultivate core capabilities to develop the blue ocean of engineering units. In line with the national renewable energy development policy, the island-wide offshore wind power construction operation has been launched one after another to promote the localization of offshore wind power. We participate in the design and construction of offshore wind power shore-based substations, work together with midstream and downstream suppliers, and purchase major power equipment manufactured by local manufacturers to support the goal of offshore wind power localization

In terms of power equipment, the switchboard and generator are mature industries in which TECO products have a certain level of quality. Customers are also long-term cooperative manufacturers. The electronics industry and the steel industry are the main customer groups. The sales market is greatly affected by the economic environment. All the owners are also implementing cost down plan. The original low-price professional manufacturers have also become competitors. Therefore, we are actively creating new energy development, and have completed the development of smart products to meet the needs of the high-quality, smart green energy market.

In terms of appliance products, the development of the heavy electricity industry is related to the most terminal: the "electrical end" control devices. The industrial structure is to provide low-voltage appliance products such as inverters, servo drives and peripheral protection for motors and to meet the safety and automation and energy-saving requirements of industrial electricity consumption. Although TECO appliances have certain reputation and market share in the power component market. However, it still needs to face competition from domestic and imported products. In addition to product excellence, it also needs to keep abreast of the market's pulse of manual adjustments and government policy adjustments.

5.1.3 Research and Development

A. The company spent NT\$1,179,300 thousand on R&D in 2019. R&D expense is booked as NT\$171,980 thousand as of the end of February in 2020.

a. Industrial Motors Category

1. Series development of high Power Density Induction Motor
2. Series development of high Power Density for North America

3. Integration of large steel shell motor products for North America
 4. Series development of medium-voltage explosion proof explosion-proof motor
 5. Development of round type motor for steel plant
 6. Series development of high-efficiency explosion-proof motors
 7. Development of high-speed permanent magnet motor and driver technology
 8. Development of synchronous reluctance motor technology
- b. System Automation Category
1. EtherCAT communication compact servo drive product development
 2. Development of industrial Ethernet high-speed communication cards / modules and other products
 3. IIOT application development controller Bluetooth connection module and APP
 4. Fuzzy control technology development of Maximum torque per ampere (MTPA)
 5. Maximum torque per voltage (MTPV) control technology development
 6. Strengthen the robustness of frequency conversion control applications and develop load disturbance observers
 7. Research on variable frequency on line adjustment control technology (MRAC-Model Reference Adaptive Control)
 8. CANopen communication compact servo driver product development
 9. Servo control line self-adjusting motor parameter technology development
 10. Servo driver control interface software optimization
 11. Product development of compact and universal DC servo drive
 12. Cobot Joint module (CJM) product development
 13. Development of frameless hollow shaft servo motor
 14. Magnetic encoder development
 15. Functional safety certification technology development
 16. Development of integrated DC servo driver
 17. SOC (System On Chip) servo control technology development
 18. AGV unmanned vehicle control platform technology development
 19. Development of the next generation servo drive prototype
 20. Model tracking technology development
 21. Position feedforward technology development
 22. MCU / FPGA integrated technology development
 23. Gantry Simultaneous Technology Development
 24. Energy recovery technology development
 25. Development of automatic power factor correction technology
 26. Development of power phase / frequency automatic detection technology
 27. Multi-axis motion control IC development
 28. Multi-axis motion controller prototype development
 29. Development of electronic cam technology
 30. Development of meal delivery robot prototype
 31. SLAM automatic navigation technology development
 32. AMCL path positioning technology development
 33. Development of differential motion control technology
 34. Development of automatic correction of positioning deviation
 35. FOC on FPGA servo drive technology development
 36. Development of Voltage Feedforward Technology
 37. Development of dynamic current offset compensation technology
 38. Development of encoder offset compensation technology
 39. Position observer technology development
 40. Research on the structure of multi-axis integrated servo drive
 41. Virtual DC link technology development
 42. Development of matrix modulation technology
 43. Miniaturized technology development
 44. SiC module drive technology
 45. Development of meal receiving robot technology
 46. Guided Robot Technology Development

47. IMU technology development
48. Development of image speech recognition technology
- c. Renewable energy- green energy
 1. OEM & ODM for electric vehicle motor
 2. Development of offshore wind turbine technology
- d. Freezing and Air-Conditioning Category
 1. R32 environmentally friendly refrigerant separation type one-to-one frequency conversion large-capacity model development
 2. Development of a full range of R32 window inverter duty type
 3. Diversified TECO Select top air conditioner R & D
 4. Diversified on-demand research and development of exclusive air conditioners
 5. High CSPF inverter air conditioner (1 to 1 ~ 1 to many)
 6. High CSPF frequency conversion multi-unit VRF air conditioner miniaturization / lightening
 7. PM2.5 cleaning module for HS series
 8. R & D of multi-connected commercial air conditioner and smart air conditioner system
 9. High CSPF water-cooled box-type inverter air conditioner
 10. Anti-corrosion / high static pressure box type frequency conversion air conditioner for steel / telecommunications industry
 11. Mobile networked home inverter air conditioner smart diagnosis service APP
 12. Central air-conditioning energy-saving system solution
 13. Research and development of air-cooled oblique side blowing / up blowing chiller
 14. High Efficiency inverter duty centrifugal chiller
 15. AHU (air handling unit)
 16. Inverter duty energy-saving refrigerator with free switching of vegetables, fruits and freezing
 17. Research and development of high efficiency inverter commercial refrigerator
- e. Industrial Internet of Things:
 1. Industrial Internet of Things data transmission methods, including LoRa, NB-IoT, WiFi and other transmission methods.
 2. Establish an Internet of Things platform, including data analysis, data storage, and data visualization.
 3. Establish application cases in application areas:
 - RFID intelligent mold management pilot project
 - If the connection of factory equipment has been applied in various plant areas, such as the Vietnam Plant that was newly built last year, equipment operation status, air compressor management, vanish continuous furnace process monitoring, spray baking furnace process monitoring, air pollution equipment Activated carbon filter pressure difference sensing ... environmental protection processes and automation, linking to smart production lines
 - TEAM digital power meter connection: power relay station digital power meter connection, baking oven electricity monitoring ... etc.
- f. Data analysis
 1. Assist in the establishment of chiller performance analysis and management platform
 2. Maintenance and application efficiency analysis of solar power system
- g. Digitization of inspection equipment records
 1. The production line rotor concentricity and levelness inspection records are automated
 2. Automatic inspection report output

5.1.4 Long-term and Short-term Development

The long-term business development plan aims to be the first in the international motor industry. The short-term business plan is to continue the global production and marketing layout, gradually expand the cultivation in mainland China, Turkey and India, and integrate the production resources of the two geographies in Penang, Malaysia and Dong Nai, Vietnam, and simultaneously develop emerging markets in the Middle East, India, Philippines, Turkey, Africa, Russia, etc. Strengthening manufacturing and cost control, accelerating the strategic alliance with mainland China, Europe, America, Japan and international manufacturers, and gradually increasing

the global market share, especially in service sales is to provide one-stop service, through the establishment of rapid maintenance , provide customers with immediate maintenance, technical transformation, and services. In recent years, countries have strengthened the implementation of energy conservation policies, TECO will seize this business opportunity and use the high-efficiency motors introduced to further increase the overall sales and market share.

In terms of sales, a task force for growth was established to promote new products including permanent magnets, automotive motors, and medium voltage inverters (MVD), etc., and centralized management through global account to deepen relationships and potential business opportunities. In addition, it implements the digitalization of marketing (Digitalization) plan, expands and optimizes various high-performance information platforms on the marketing side, and gradually improves the business intelligence system (BI) to enhance precision marketing and guide growth.

Teco will focus on transmission equipment, food machinery, plastic machinery, rubber manufacturing, air compressor, petroleum/ natural gas, and air conditioning, in addition to foraying into new application fields, such as applications in shipping and rail train. For service-oriented sales, offer integrated service with the establishment of rapid maintenance center, capable of offering customers instant maintenance, technological transformation, and replacement services. Under the global current of industrial automation, provide systematic products featuring high efficiency, energy conservation, and precision system control, so as to meet the demands for industrial power safety, automation, and energy conservation.

Actively develop industrial low-voltage and medium-voltage inverters, and use integrated sales with M + I to create system energy-saving business opportunities. Due to global development trends such as energy saving, carbon reduction, and green environmental protection, under the mainstream trend of global industrial development automation production, providing high efficiency, energy saving and demanding products requiring mechanical system control accuracy is the focus of the electronic control business. Under the management spindle of TECO GO ECO, we launched control components for motors such as inverter servo drives and peripheral protection low-voltage appliances to meet the needs of industrial power safety and automation and energy saving. In response to the Industrial Internet of Things (IIoT) in the system integration to expand the system solution sales (Solution Sales), from the original motor, inverter, appliances and other single product sales, sales and integration of electromechanical products, strategic benefits are maximized, and strengthen customers Mastery, create more potential opportunities in resource integration and achieve the goal of accelerating performance growth

For home appliances, in the long run, the company aspires to become the leading brand in Taiwan and actively penetrate overseas market. In response to the government's energy-conservation policy, TECO has rolled out household refrigerator featuring proprietary variable-frequency strategy, with flexible compartment arrangement, which has been granted 2019 Taiwan Excellent Awards. The company has also rolled out a variable-frequency DC commercial refrigerator, boasting over 60% energy saving, compared with rival brands, plus cloud-end IoT smart management, which can effectively cut foodstuff waste for commercial establishments. Entire series of washing machine meets the double energy- and water-conservation market and models with capacity exceeding 14 kg are furnished with variable-frequency function, to be followed by rollout of variable-frequency washing machines with small 10-12 kg capacity.

TECO will upgrade its existing products in 2020, fully adopt environmentally friendly, energy-saving and efficient R32 refrigerants, and cover a variety of models and capacity bands, which can be adapted to different fields or needs. In the most frequently used VRF full-frequency central air conditioning multi-connected series in commercial spaces, TECO has designed intimately for different workplaces, and the product size is suitable for various installation spaces, achieving One Stop Shopping, Committed to improving the profitability of all products of frequency conversion energy saving, and improving the value of air conditioning projects with energy management systems and high-end high-efficiency energy-saving commercial air conditioners. "Slim, ultra-thin" series, occupying the smallest floor space in the industry, can be assembled according to the needs of the construction site after flexible disassembly and assembly. In order to fully attack public projects and green buildings, TECO Home Appliances has stepped into the market of energy-efficient magnetic levitation centrifuges in recent years and launched IPLV chiller solutions, which have a power saving effect 30% higher than non inverter- duty. TECO's air-conditioning system solution, in addition to high energy efficiency, can also provide product health diagnosis, plus visual power management, indoor air quality monitoring and other various management and control systems, providing one-stop air-conditioning system integration services . The experiment of Dongyuan Guanyin Factory not only obtained TAF certification, but also expanded a large-scale

professional IPLV test station in 2018, which can ensure that the air-conditioning host can achieve the best energy-saving operation under various load conditions.

Another copy of Taiwan's successful experience, and actively expand the Southeast Asian and mainland markets. In terms of LCD products, the current cross-strait supply chain optimization and integration, product breadth, functional specifications, and product quality and supply stability have been greatly improved, and continue to actively attack the 4K market share in Taiwan. Highlight products also include 55-inch 4K OLED LCD AV, 4K series uses a narrow bezel design, the colors are true and rich, and it is expected to be applied into Google TV in Q3 2020. Home appliances continue to expand the product line of small household appliances, Taiwan-made DC fans continue to expand the market, and launch three-in-one wireless wet and dry mopping vacuum cleaners. Because of the improvement of national living standards, the Internet industry, home furnishing industry, the diversification of low-temperature food and the concentration of urbanized population, cold-chain logistics distribution has become an emerging industry. According to the statistics of the Institute of Industrial Research, the output value of low-temperature food in Taiwan is about NT\$280 billion. The output value is about NT\$50 billion, of which low-temperature logistics distribution accounts for more than NT\$8 billion. TECO Group will apply refrigeration and thermal insulation technology combined with IT intelligent monitoring trends to fully develop and meet the needs of various passengers in logistics and home distribution. This new blue ocean of low-temperature logistics industry is worth looking forward to in the future.

Adhering to the concept of "quality and innovation" and backed by abundance engineering experience in electric machinery of buildings, MRT, and high-speed rail, the power division has spared no effort in soliciting engineering businesses in the fields of large commercial buildings, MRT and rail to continue to cooperate with the national renewable energy development policy and actively invest in solar photovoltaic power generation systems, micro-grid systems, energy storage systems and energy management equipment with intelligent automatic control technology . In recent years, the Energy & Engineering division has managed to land businesses for a number of major projects, including construction of IDC central offices and IDC centers for some cloud-end Internet firms, foraying into the booming cloud-end industry. In addition, it aggressively integrate related products in side the group to form smart power supply equipment and installation of energy storagesystem, expanding on-shore substation of offshore wind farm, successfully tapped emerging business opportunities for smart energy conservation and overseas markets.

5.2 Market and Sales Overview

5.2.1 Market Analysis

A. Sales (Service) Region

The company is shipping industrial products to such major regions as America, Europe, Australia, Japan, China and Taiwan, and targets to extend the reach to the Middle East, India and Turkey. Home appliances are shipped mainly to the domestic market, with minor markets including Australia, Southeast Asia, Singapore, and Japan. The main sales area of power equipment products is domestic sales in Taiwan, and it also develops markets in Japan and Southeast Asia. The sales areas of appliance products are mainly domestic sales in Taiwan and mainland China, and are actively expanding the Southeast Asian market.

B. Market Share (%) of Major Product Categories

(1) Industrial Product

The company boasts 50% domestic market share in general purpose sector; regarding overseas market, TECO takes over high market share in North America, South East Asia and Australia. TECO also offers customers custom motor featuring special usage and specifications, with the capacity reaching 30,000 horsepower in induction motors, ranking Top 5 around the world.

(2) Home Appliances and Air Conditioner

The company is one of the top three makers of home appliances and air conditioners in Taiwan, with market share reaching 10% for household air conditioners, 14% for refrigerators, 15% for washing machines, 10% for LCD, and 30% for commercial-use air conditioners.

(3) Control Device

The company is Top 2 producer of circuit breaker, widely used in power distribution and machinery market. Domestic market share is around 17%.

C. Market Trend of Major Product Categories

(1) Industrial Products

TECO originated from motor production, which has remained a core part of the company's operation, offering the dynamism for Taiwan's industrial development. According to the analysis of the International Energy Agency (IEA), industrial machinery with motor as core drive is the industrial equipment with the largest power consumption, such as machine tool, pump, air compressor, and wind turbine, accounting for 46% of the world's total power consumption. In Taiwan, motor accounts for 68% of industrial power consumption. For motor manufacturers, the development of high-efficiency motors is not only out of market consideration but also corporate social responsibility. Therefore, TECO dedicates to the development of energy-conserving products, as evidenced by the rollout of high-efficiency motors conforming to IE3 requirement in July 2014, even before implementation of the standard by the government in 2016. At present, TECO has provided many customers IE4 motors, notably for rubber and plastic industry with the largest power consumption, even though the government has yet to implement the standard.

In addition, TECO successfully developed VHPD (Very High Power Density), which has exceeded the upper limit of 355 frame motor power density in the world. In addition to ultra-high power density, this motor also has the characteristics of high efficiency, light weight and miniaturization, and intelligent health management. It is especially suitable for use with wind turbine industrial equipment with compact requirements. It is used in large plant areas such as oil refineries and power plants. It can also reduce the use of space and simplify the structure.

VHPD motors not only have ultra-high efficiency comparable to IE4, but also have built-in intelligent health management system developed by the companies within the group, providing long-distance and instant maintenance, saving a lot of maintenance costs and energy consumption. The electromechanical technology meets TECO's goal of "energy saving, emission reduction, intelligence, and automation", and

is expected to add momentum to revenue growth and create greater benefits for customers.

Based on the Internet of Things technology, TECO has developed a "smart motor electromechanical monitoring system", which has also achieved significant performance in digital services. "Smart motor electromechanical monitoring system" can provide functions such as remote monitoring, abnormal alarm, online diagnosis, and energy usage statistics. The place where the most value can be exerted is in a place where manpower is difficult to obtain or unsuitable to be in. For example, inaccessible mines, high-temperature dangerous steel plants, cement plants with people far away from the equipment, and textile factories with a dirty environment are clients of TECO digital services. Take the customer of a large steel plant as an example, the TECO "Smart Motor Electromechanical Monitoring System" was introduced to monitor a total of more than 100 motors within 30 square kilometers. According to customer feedback, after using TECO's digital service, the unwarned downtime was eliminated, which reduced the maintenance cost by 40% compared with the previous period.

Looking forward to the future, heavy power products will continue to strengthen marketing and production integration, strengthen product competitiveness, and accelerate cost reduction to increase market share. In terms of marketing, we will continue to challenge high-growth targets and continue to challenge high-growth targets by expanding and integrating the business capabilities of domestic and overseas companies to jointly explore the OEM market, emerging country markets, water resources and power markets, and actively strive for major engineering orders such as public projects and domestic and overseas engineering projects. Grasp opportunities for energy saving and carbon reduction. Leveraging the Internet of Things and integrating with hardware and software, with smart motors, electromechanical equipment and other high-quality products in the group, it will show its technical capabilities to the world and provide intelligent best solutions. TECO Group mainly exhibited the VHPD (Very High Power Density), which has been developed for two years and successfully broke the upper limit of the global 355 frame motor power density. In addition to ultra-high power density, this motor also has the characteristics of high efficiency, light weight and miniaturization, and intelligent health management. It is especially suitable for use with wind turbine industrial equipment with compact requirements. It is used in large plant areas such as oil refineries and power plants. It can also reduce the use of space and simplify the structure. VHPD motors not only have super high efficiency comparable to IE4, combined with the intelligent health management system developed by the group's related company, Tecom and TECO's systemized equipment E-House (pre-installed electrical room). The main concept is to install the equipment needed in the electrical room in a container that is convenient for transportation, suitable for Remote areas, for example, the setting point of indistinct oil pipelines, climate observation stations on high mountains, etc. E-House has been sold in North America since 2018, and its revenue has reached millions of dollars. This successful systematic sales model will be expanded to other countries next year. Another popular product that has sprung up is TECO's explosion-proof motors. The product range is complete and can be used in different fields, especially in the mainland petrochemical industry. Because of the explosions in factories in recent years, the public security inspections have become more rigorous thus demand significantly increased.

(2) Home Appliances

The company produces air conditioning equipment of diverse models in capacity and purpose of use for sale in Taiwan and overseas markets. In particular, the company had offered new chiller models featuring high capacity as well as small dimensions and thickness, with the models able to be dismantled and then assembled to facilitate installation at some places. The company had been developing magnetic bearing centrifugal chillers with high energy efficiency and offered IPLV (integrated part load value) models catering to green buildings and public construction projects. In 2018, the company aimed at 35% on-year growth in shipment for commercial air conditioning equipment and 25% on-year growth in shipment for home-use air conditioner in the Taiwan market. Besides, the company aimed to export large chillers to the Southeast Asia market.

Among local vendors of commercial air conditioning equipment, the company had maintained leading status. In 2019, the company will upgrade existing models of air conditioning product lines to cover a wide range of capacity for use at various places and to meet different purposes. For VRF (variable refrigerant flow) multi-unit central air conditioning equipment commonly used in commercial space, the company offered a series models of varying sizes to suit various types of commercial space. Such models

had been exported to the Southeast Asia market including Malaysia and Singapore.

The company was promoting development of smart home-use electric appliances, including 43- to 65-inch 4K+Smart LCD monitors, high energy-efficiency variable-frequency refrigerators, multi-temperature refrigerators, remotely monitored SAA (Smart Appliance Alliance) air conditioners and air conditioners equipped with HEPA (high-efficiency particulate air) medical-grade filters. The company aimed to increase sales revenues and profitability by product differentiation.

With the development of new technologies and the convenience of the Internet, the combination of information products and household electrical appliances has led to the future of commodity-information household electrical appliances. The company will use decades of experience in the home appliance industry, combined with various cutting-edge information technologies in the group, to develop information appliance products suitable for the market, and create greater profits for shareholders.

Besides domestic market, the company has also made major inroads into the international market, following years of strenuous effort, especially for LCD TV and air conditioner which have enjoyed very good sales to Southeast Asia, Australia, and Europe. In the future, along with increase in national income and the advent of the information age, the company will continue to launch various even more human-friendly new products, so as to meet market demand.

(3) Renewable Energy:

To expand the promotion of renewable energy, the government has set a policy goal of 20% (27GW) of renewable energy power generation in 2025. TECO is actively promoting solar photovoltaic and wind power generation. It is estimated that the capacity of solar photovoltaic installations will reach 20GW in 2025, and the capacity of offshore wind installations will reach 5.7GW. As of the end of January 2020, 3.7GW of solar photovoltaic power generation systems and 0.8GW of wind turbines have been built domestically. There are still 16.3GW of solar photovoltaic power generation systems to be built by 2025, with approximately 815 billion market opportunities. For offshore wind power, the government actively promotes localization and builds a localized supply chain. It is estimated that the output value of offshore wind power will exceed NT\$900 billion.

D. Favorable and Unfavorable Factors in the Long-range Future and Countermeasures

(1) Industrial Product

The company's industrial product has won very good repute, in terms of quality and function, in the industry. It has established a far-reaching operation network on both domestic and overseas fronts, including production and marketing bases in the U.S., China, and Southeast Asia, and marketing offices in Japan, Europe, and Australia. However, rapid change in the business climate and the transformation of economic conditions and industrial structure has posed major challenge to the company's future development. The company will seek sustained development on niche basis cultivated over the past years, to cope with rapid change in the business environment.

Favorable and unfavorable factors for industrial product business, along with countermeasures follow:

A. Strong sales network

The largest sales channel of TECO Motors is the OEM (Original Equipment Manufacturer) and dealer model. Among them, strategic alliances with local OEMs in target markets have become the main way for TECO to expand its market share. The management of key global customers is of great importance. However, the deep cultivation of the brand image, through direct sales to end users (End User) and EPC (Engineering, Procurement, Construction) promotion is also the direction of TECO's efforts. TECO utilizes the strengths of many related companies at home and abroad, and uses cloud big data analysis to manage business opportunities, and can more accurately grasp market information. The business opportunities of various branches have great potential.

B. Solution projects and after service

Providing solution projects for specific industry, product maintenance, efficiency evaluation, complete repair and maintenance can upgrade the add value of motor and ensure the sales of motor. Therefore, the international peers, such as ABB and Siemens, make an effort to integrate system.

C. M&A

Many renowned international brands are actively seeking mergers and acquisitions, for the sake of expanding capacity and sales channels, in addition to extending the magnitude and depth of products and establishing motor-related product lines (such as generator, driver, inverter, and gear reducer, etc.), facilitating provision of more complete engineering solutions, and enhancing market shares of motors and related products. Meanwhile, M&A can pave the way for entry into new market, raising brand visibility and awareness on the market. For some M&A targets, TECO will first seek cooperation to augment market share and sales.

Favorable and unfavorable factors for industrial product business, along with countermeasures follow:

a. Favorable factors

- R&D and self made ability, good in tailor made
- Leading position in production scale and market share
- Reliable in quality and good brand image
- Complete product offering line, getting certification of every motor with special demand
- Complete sales channel globally
- Influenced by the Sino-US trade war, the return of Taiwanese businessmen in Mainland China has increased

b. Unfavorable factors

- Market saturation leading to price competition among machinery firms and increasingly rigorous demand for price and delivery by buyers
- Transplantation of traditional machinery firms to China and other countries
- Tier 1 motor suppliers promote scope by solid capital and M&A
- Due to the low entry barrier of small sized motor, local player in various countries are able to produce. Low price competition results into decreasing market share, and TECO takes stress of dumping from China player.
- Tier 1 motor suppliers sell system or total solution. In fact, more and more customers expect to buy total solution with motor.
- The strategy between motor and set maker would affect order taking.
- Affected by the Sino-US trade war, it is not conducive to the export of products from TECO's Chinese factories.

c. Countermeasures

- Reduce cost, shorten delivery schedule, enhance competitive edge, and boost market share.
- Accelerate new-product development, develop products with high added value, and establish a production system featuring cross-strait division of labor.
- Increase overseas marketing offices and establish an effective service network.
- Strive for emerging business opportunities related to environmental production and energy conservation.
- Join hands with foreign engineering firms in soliciting project orders.
- Relocating some production bases to Vietnam and India factories to reduce the export costs increased due to the Sino-US trade war

(2) Home Appliances and Air-Conditioning Business

a. Favorable factors

- TECO's home-appliances division has constantly rolled out innovative high-performance products, taking advantage of the company's good brand image, synergy resulting from resource sharing of the group, and its variable-frequency drive technology, which was transformed via re-platform from heavy-electricity variable-frequency drive technology. At the juncture of its 60th anniversary, TECO's home appliances have entered a new era.
- Roll out, one step ahead of peers, around-the-clock service and grasp channel, to augment competitive edge. Establish inverter common platform for products, enabling precision variable-frequency drive for various motor compressors and coordinate the control logics of different products, such as air conditioner, refrigerator, and washing machine, creating dynamism for innovation for the creation of new products and new functions. In addition, commit to the satisfaction of consumers in service quality and stock of materials.
- The company adopts environmentally friendly manufacturing processes and materials to produce green products. The company in 2016 took the initiative among fellow makers to adopt R32 refrigerant air conditioner production lines to produce energy-saving air conditioners. In order for energy saving and reduction in carbon dioxide emission, the company is the first Taiwan-based home-use electric appliance maker to promote green factories.
- The company joined the Smart Appliance Alliance to boost development of smart home-use electric appliance models. Among Taiwan-based fellow makers, the company is the first one to integrate IoT with home-use electric appliances. The company took the initiative to offer cloud computing-based air conditioning systems featuring user-oriented functions including schedule control, visualization of power consumption, remote control, reminding for switching off.
- The company has offered models that meet requirements for energy-saving, environmental protection and excellence product awards, MIT (Made in Taiwan) labels as well as first-grade energy-saving standards,
- The company took the initiative to offer cloud computing-based air conditioning systems and has provided HVAC (heating, ventilation and air conditioning) solutions

b. Unfavorable factors

- To over the Japanese myth among Taiwanese people, TECO has no other choice but augment its product technologies and thereby compete with Japan's common models, boosting production cost.
- Home appliances/household air conditioning market has saturated, featuring acute competition and low margin.
- WTO membership entails tariff cuts, bringing in competition from renowned brands of Japan, the U.S., Korea, and China.
- The Taiwanese market is limited in scale and it's difficult to develop the global branding, due to high expense for marketing own brands and insufficient price competitiveness.
- Competition from hypermarkets and chain sales channels impacts the traditional channel of agents.
- The current of bilateral or regional free-trade agreements in recent years has posed major challenge to Taiwan.

c. Countermeasures

- Make transformation in the direction of the Internet, expand online sales, develop high-performance IoT cloud-end fashion home appliances, and dedicate to the pushing of marketing 4.0, so as to appeal to white-collar workers aged under 4.0.
- Expand the professional ability of research and marketing, keep innovation.
- Expand product lineup and cut cost via OEM (original equipment manufacturer) strategic alliance, thereby raising market share.
- Create the edge combining Taiwan's innovation and the large-scale cost advantage of mainland China's hardware, via SKD assembly in China.
- Grasp product development trend in domestic and overseas markets via the operation of product panel and new-product review sessions, thereby introducing innovative products timely.

5.2.2 The Production Procedures of Main Products

Industrial Products:

Products	Use	Production Process
High-efficiency motors, single-phase motors, low- and high-voltage 3-phase motors, synchronous motors, explosion-proof motors, brake motors, variable-pole motors, gear-reducing motors, crane motors, high-temperature exhaust gas fan motors, inverter-duty motors, high-thrust motors, steel-cased motors, aluminum-cased motors, eddy-current motors, wound rotor motors, submersible motors, DC motors, ventilation blowers, wind-powered generators.	Provision of power for industrial production	Casting, Stamping, Electrical Engineering, Mechanical Engineering, Design, Planning, Assembly, Matching
Electric vehicle power motioned permanent magnetic motor, Electric vehicle power motioned induction motor, permanent magnetic motor, AC/permanent magnetic servo motor, IE3/4 high efficient IMD(Integrated Motor Drive)	Industrial and electric vehicle used	Stamping, Electrical Engineering, Mechanical Engineering, Magnet, Design, Planning, Assembly, Matching, Integration

Home Appliances & Air Conditioners:

Products	Use	Production Process
CSPF-first class air conditioner , new environment-friendly coolant inverter duty air conditioner (one to one and VRF type), smart air conditioner, energy-saving inverter duty refrigerator, high EF-value refrigerator, direct-drive inverter duty washing machine, dehumidifier, clothes dryer, small home appliances, home-delivery low-temperature cart, elevator air conditioner, cooling device for machine tool, low-temperature logistics freezer, heat-dissipation module for PC	Household, commercial, industrial use	Design, planning, assembly, and matching
LED Display, small home appliances	Home Entertainment	Design, Planning, Assembly
Chillers for centralized air-conditioning systems, package air conditioners, split-type air conditioners, inverter multi-evaporator VRF air conditioner, train air-conditioning systems, centrifugal chiller, IPLV chiller solution	Commercial, Industrial Applications; Transportation systems	Design, Planning, Assembly, Matching

5.2.3 Main Material

	Main Material	Main Source	Supply
Motor	Silicon Steel	At home and abroad	Centralized Procurement by season
	Aluminum Ingot	At home and abroad	Centralized Procurement by season
	Rod Iron	At home and abroad	Procurement by Contract
	Copper Wire	At home and abroad	Procurement by Contract and Order Placing
	Bearing	At home and abroad	Procurement by Contract
	Engine	Abroad	Procurement by Contract

5.2.4 Major Suppliers and Clients

A. Major Suppliers Information for the Last Two Calendar Years

None

B. Major Clients (each commanding 10%-plus share of annual order volume) Information for the Last Two Calendar Years

None

5.2.4 Production over the Last Two Years

Unit: Units; NT\$thousand

Output Year	2018			2019		
	Capacity	Quantity	Amount	Capacity	Quantity	Amount
Major Products						
Motor	1,328,030	1,078,353	13,373,284	1,458,426	1,014,288	12,369,751
System Automation	12,174,439	7,260,245	4,408,893	12,171,562	6,367,550	4,017,916
Home Appliance	301,613	276,015	3,939,173	293,631	228,189	2,345,431
Others	494,066	494,066	2,097,531	339,084	339,084	1,181,774
Total	14,298,148	9,108,679	23,818,881	14,262,703	7,949,111	19,914,872

5.2.5 Shipments and Sales over the Last Two Years

Unit: Units; NT\$thousand

Shipments & Sales Year	2018				2019			
	Local		Export		Local		Export	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Major Products								
Motor & System Automation	1,659,449	7,156,255	3,715,196	22,528,515	1,510,914	6,231,149	3,642,183	22,826,225
Home Appliance & Air Conditioner	691,003	5,427,693	96,414	513,119	576,106	4,403,114	119,457	661,235
Construction		3,348,998				3,198,620		
Other		8,964,395		2,165,952		8,730,047		1,858,968
Total	2,350,452	24,897,341	3,811,610	25,207,586	2,087,020	22,562,930	3,761,640	25,346,428

5.3 Human Resources

Year		2018		2019		March 31 2020	
		TECO	Global	TECO	Global	TECO	Global
Number of Employees		2,356	14,363	2,252	14,530	2,245	13,935
Average Age		41.8	40.6	42.2	40.4	42.4	40.70
Average Years of Service		14.4	8.76	14.5	9.9	14.6	9.9
Education	Masters above	6.8	14.9	6.5	14.7	6.5	6.1
	Bachelor's Degree	47.1	52.7	48.60	52.9	49.0	45.5
	Senior High School	33.5	27.1	33.1	27	32.8	34.7
	Below Senior High School	12.6	5.3	11.8	5.3	11.7	13.5

Note: Employees mentioned here refer to those people who are hired by the entities under consolidated financial statements.

5.4 Information on Outlays for Environmental Protection

Explain in the recent one year up to the publication of the yearbook, the total amount of the company's loss (including compensation) from pollution and fines, plus possible outlay from countermeasures.

5.4.1 Loss resulted from polluting environment

None

5.4.2 Countermeasures

A. Improvement measures planned

a. Improvement plan for environmental-protection equipment

In order to reduce greenhouse gas emissions and fulfill corporate social responsibilities, TECO has gradually introduced solar power generation systems in each plant; timely introduction of remote monitoring technology can always grasp the environmental indicators around the plant; purchase environmental protection and energy-saving equipment; and use existing TECO control and motor technologies, in addition to the development of energy-saving products, and assist Third party Factories to introduce energy-saving spray production systems; strengthen the maintenance of existing equipment and reduce waste in the process, improve the workplace environment, promote energy conservation, waste water recycling, waste recycling and reuse to prevent pollution and comply with legal standards ;

b. Plan for management improvement

Continue pushing ISO14001 environment management system, pinpoint sections in the operational process (covering the entire product life which includes production, sales, the usage of product, and its disposal) which produce impact on the environment and improve the emission of pollutants, thereby alleviating the environmental impact and augmenting environmental performance.

Continue pushing OHSAS 18001 vocational safety and hygiene management system and the passage of the certification of CNS 15506 by the Council of Labor Affairs; incorporate safety and hygiene management into the corporate management culture; regularly hold environmental-protection and safety/hygiene training, fire-fighting drill and drill emergency response; regularly inspect operating environment and physical examination of employees, so as to lower the hazards of risk of workplace and prevent the occurrence of vocational disaster.

c. Continue pushing the program for checking and reduction greenhouse-gas emission

In response to the trend of global climate change, the company has started to conduct greenhouse gas inventory business since 1994. From 101 to 108, TECO passed the external verification of annual greenhouse gas inventory (ISO 14064-1); the 2015 greenhouse gas emission benchmark was 56,575 tons, and the goal is to reduce it by 20% (45,260 tons) by 2025. The 2019 inventory result is 47,563 metric tons, which has been reduced by 16% to 80%. Since 1995, it has begun to promote energy-saving and carbon-reduction solutions, especially the use of electricity in category two. All the companies and all staff of TECO mobilized to establish an energy-saving project team and hired professional experts to assist in diagnosis and provide feasible solutions. To build a solar power system, in addition to the completed Kuanyin Phase I project, the Kuanyin Phase II project will also be integrated into the grid in January this year; this year will continue to build solar systems in the Chungli plant.

TECO has been dedicating to the materialization of the strategic vision of "energy conservation, emissions reduction, intelligence and automation," which calls for the production of energy-saving and environment-friendly products, via efforts in the fields of R&D, production, materials, process technology, and marketing. We also focus on green energy in business expansion and even organize various sci-tech

and humanistic events via the foundation, in order to substantiate eco value and induce the company to develop in the direction of sustainability.

d. Projected capital outlay for environmental protection in the next three years

(a)Planned procurement of anti-pollution equipment and outlays

i. Plans in next three years

2020	2021	2022
Maintenance, improvement or addition of air pollution prevention equipment	Maintenance, improvement or addition of air pollution prevention equipment	Maintenance, improvement or addition of air pollution prevention equipment
Activated carbon, filter, filter ball, etc. consumables replacement, improve organic solvent process, remote monitoring system	Activated carbon, filter, filter ball, etc. consumables replacement, improve organic solvent process	Activated carbon, filter, filter ball, etc. consumables replacement, improve organic solvent process all
Build a rooftop solar panel power generation system in the factory 1.The first phase of Guanyin Factory in the first season started to be connected to the grid 2.Construction of Chungli Factory in the fourth quarter	Baking oven air door, energy-saving spray booth, other energy-saving cases	Baking oven air door, energy-saving spray booth, other energy-saving cases
Renewal of LPG storage tank, introduction of environmental protection paint and improvement of the environment around the plant and the process	Improvement of the process environment around the plant	Improvement of the process environment around the plant
Replacement of conventional lighting products with energy-saving models and light hoods	Replacement of conventional lighting products with energy-saving models and light hoods	Replacement of conventional lighting products with energy-saving models and light hoods
Pipeline for waste-water	Pipeline for waste-water	Pipeline for waste-water

ii. Projected outlays (Unit: NT\$thousand)

2020	2021	2022
\$ 154,022	\$ 36,469	\$ 35,734

(b) Expected improvements

- i. In addition to reducing greenhouse gas emissions and electricity costs, solar energy can also reduce the potential competitive threat of carbon taxes in the future. With the currently completed system, the power generation capacity is 7MW (seven million watts), which is expected to be generated annually. The electricity cost benefit is 40 million NTD per year.
- ii. Since 2016, environmentally friendly water-based paints have been gradually introduced. By the end of 2019, compared with the 2015 base year, total volatile organic compound (VOC) emissions have been reduced by 85,237 kg, a reduction of 52.4%.
- iii. Establish a remote monitoring mechanism to keep abreast of air pollution discharge status to ensure compliance with relevant laws and regulations, and cooperate with domestic opportunities to seek opportunities for improvement of air pollution and waste water treatment.
- iv. Promote industrial waste reduction, reduce waste output and improve resource waste recycling mechanisms, and seek opportunities for recycling. The amount of waste silicon steel sheets recovered and recycled reaches 27.3% of the amount of iron raw materials used.

- v. Set up an energy-saving and carbon-reduction team to use TECO's existing control system and energy-saving motor technology to implement project improvements for equipment and areas with large energy consumption. To reduce the production of carbon dioxide. A total of 33,949 tons of greenhouse gas emission reductions have been reduced for three years, which is equivalent to the carbon absorption of 89 Daan Forest Parks
- vi. Push to cut emission of greenhouse gas and dedicate to the development of energy-conserving environment-friendly products, to alleviate the impact on the environment and fulfill corporate social responsibility.
- vii. Use appropriate network monitoring system to control the power distribution status at any time f. Expected effect of improvement

(a) Effect on net profits

- i. The introduction of solar energy can reduce the use of electricity and reduce the cost of electricity.
- ii. Improve the improvement of air and water pollution to avoid losses caused by fines
- iii. Avoidance of loss from suspension of operation
- iv. Avoidance of disputes for environmental pollution
- v. Cut production cost via reduction of environmental-protection outlays, thanks to waste abatement and pollution prevention.

(b) Effect on competitiveness status

- i. The introduction of solar power grids can also directly reduce greenhouse gas emissions. In response to international environmental trends, the implementation of carbon taxes in the future can reduce potential trade barriers caused by carbon taxes, increase product sales opportunities, and enhance the competitiveness of company products
- ii. Augment the corporate image and meet the expectation of related parties.

B. Failure to adopt countermeasures

- a. Failure to adopt improvement measures: Nil
- b. State of pollution: Nil
- c. Possible loss and compensation amount: Nil

5.5 Labor Relations

We firmly believe that talent is the cornerstone of the company's sustainable management. The goal of TECO's labor-management relationship is to strengthen talent development, build TECO as an enterprise of happiness, achieve sustainable business operation, and become the best employer brand; we very much hope that employees can achieve self-development and achievements at work, so we have constructed an open career environment, as well as welfare measures that balance life and family, allow employees to work and grow with the company.

A. Career development and self-achievement

In order to cultivate outstanding talents with enthusiasm and innovative ideas, and to assist talents to achieve achievements on the stage of company development, in addition to complete training and adaptation care for new recruits, the opening of career development channels is also guaranteed. Related projects as follows:

- a. Internal recruitment priority: In order to activate and clear the talent development path, the company stipulates that all types of vacancies must give priority to internal recruitment to provide employees with spontaneous and autonomous career development opportunities; the application process is confidential and colleagues need not worry of unfair treatments. After admission, they will also arrange for handover and job conversion through the company system, so that colleagues can seek a stage to display their talents.

- b. High Fly plan: The company's mid-level executives' job requirements also give priority to opening up for colleagues. Employees who have served for more than 1 year and have outstanding performances can all strive for the advance and challenge of career growth through unit recommendation or self-application. If the assessment is passed, the manager's position can be acted for one year, and if the performance is good after one year, it will be removed. If the assessment still needs to be strengthened, you can return to the original position and continue your experience without worrying about future development.
- c. Key Talent System: Key talents are the key cultivated talents below the company manager level. The key talents are discussed and reviewed every year. In addition to the nominations recommended by the unit, colleagues are encouraged to recommend themselves. After the selection, each key talent will be assisted in setting up a personal development plan (IDP), and its development status has even become a department key performance indicator (KPI) project. At the same time, it is matched with the overall reward plan for key talents with market competitiveness, so that colleagues can be systematically cultivated.

B. Protection of employee rights

- a. Job search security and gender equality protection: According to the Personal Data Protection Law, TECO guarantees the personal security of job seekers and does not use it for purposes other than recruitment and selection without the consent of the job seeker. In terms of employee candidates, it fully complies with the Labor Standards Law and does not employ people under the age of 15 to do labor work; for co-op students under the age of 16 to provide cooperative education and life care, and provide suitable employment opportunities. Provide suitable employment to people with disabilities and Aboriginal people, there are currently 40 employees with disabilities and 23 Aboriginal colleagues. In order to balance the gender structure, the company's R & D unit guarantees women's employment through the requirements of key performance indicators, and the proportion of women in research and development colleagues in the past three years has been increased from 8.9% to 11.3%.
- b. Competitive remuneration policy: The company actively observes the salary level in the industry market and regularly reviews the company's remuneration policy to facilitate the recruitment and retention of high-quality talents. In addition, in order to appreciate the hard work of the employees, there are work subsidy according to the particularities of different workstations; to encourage colleagues, bonus categories such as business bonuses, research and development bonuses, patent bonuses, proposal bonuses, and skill test bonuses are also established to encourage colleagues to work hard. In order to retain outstanding talents, we also plan the relevant supporting reward system to retain talents, and provide colleagues with no worries about salary and welfare conditions.
- c. Retirement system and its implementation: In accordance with relevant laws and regulations, the company has formulated the "Labor Retirement Measures" and set aside monthly pension funds to be deposited into the Bank of Taiwan Trust Department to take care of employees' retirement life. If you choose to apply the labor pension regulations after July 1, 1994, the company will pay 6% of the employee's monthly salary to the labor insurance bureau's personal account according to the government's monthly labor retirement salary grading table.
- d. Communication channels and employee satisfaction survey: The company actively established a communication channel with employees, and won the "National Labor Relations Excellent Enterprise Award", "Labor-Management Conference Demonstration Award" of the Labor Commission and Taoyuan County "Excellent Labor Relations Business Unit Award". In addition to employees' unions, labor-management meetings, and regular employee quarterly meetings and factory meetings, colleagues will also conduct an "employee satisfaction survey" every year to respond to colleagues' needs through anonymous questionnaire surveys. In the satisfaction survey at the end of 2019, the average satisfaction score reached 81.6.

C. Work-life balance

- a. comprehensive vacation system: In order to balance the work and life balance of colleagues, and implement leave management, in addition to the leave enjoyed by employees in accordance with relevant laws and regulations, the company also examines the special leave utilization rate of each unit and includes it in the annual performance evaluation index of the supervisor.

- b. charity Leave: To encourage employees to participate in social charity activities and implement the responsibilities of corporate citizens, we also provide three days a year and pay full salary without affecting the performance evaluation of employees.
- c. Physical and mental health promotion: In order to take care of the physical and mental health of employees, in addition to providing a safe and healthy and delicious employee restaurant, the company has set up medical offices and outpatient clinics in each factory area, and has a full-time nurse to work. Professional doctors are stationed weekly to take care of employees' safety and health. At the same time, promotes various health promotion activities, establishes various leisure and sports clubs, provides spiritual growth and relief massage services, etc. In addition, committed to the construction of a "maternal friendly environment". The breastfeeding room received excellent certification in the evaluation of Taipei City in 2019. It also provides maternal health protection consultation to pregnant female employees, so that colleagues can start a family with ease.

D. Guidelines for employee behavior or ethics

- a. To uphold the working order at workplace and clearly define the rights and obligations of labor and management, the company has formulated "employee working rules," which has been approved by the regulator and publicized as the guidance for the company in employee management. The rules set out clear regulations on employees' position, title, employment, leave, service, salary, reward and punishment, evaluation, promotion, welfare, layoff, compensation for vocational injuries, and retirement. The company expects every employee to do his/her best to contribute to the achievement of the company's business goal and enhance his/her ethical standard. It, therefore, has formulated "behavioral guidelines," with major contents including:
 - (a) The staff in the implementation of the company's business, should avoid by means of its position in the company as of to themselves, spouse, parent, child or any other person to obtain improper benefits.
 - (b) The company's internal information (or information related to the company's interest or business), be it in the aspect of technology, finance, or business, is the company's business secret, for which employees have the obligation of confidentiality and cannot leak it to any outside party. In addition, after leaving the company, employees still have to abide by the confidentiality obligation according to the principle of integrity and refrain from leaking the company's secrets or utilize them in engaging in illegal competition.
 - (c) Stake with customers: Employees should obey the law and related regulation of the company to avoid inappropriate present under any other's name or in any way. Trading with customers and suppliers sincerely fairly and transparently with steady, professional attitude.
 - (d) Political donation: Employees should not donate to or sponsor via other means political candidates under the name of the company or its affiliated institutions.
 - (e) Charitable donation: When making any charitable donation or sponsorship, staffers should check the outlet and purpose of such donation and sponsorship to make sure it doesn't become bribery in disguise.
 - (f) Obligation of reporting and informing: The company encourages open communication with staffers and third parties, who can report or inform management or human-resources unit for any question, finding, unfair treatment at worksites, or violation of the guidelines, without vicious fabrication, though. The company will handle such reporting or informing confidentially and protect those who take part in the investigation.

Subjects of the reporting or informing should not revenge or threaten the informants, who can report any revenge, threat, or harassment to human-resources unit upon which the company will act instantly.

E. Status of the company's staffers related to financial-information transparency in securing certificates designated by the regulator.

License	Number of People	
	Financial Accounting	Auditing
CPA	3	0
CIA	0	2
Investment trust and consulting representative	5	0

F. The company had not incurred any loss from labor-management dispute as of the date for the publication of the annual report and expects no such loss in the future.

5.6 Important Contracts

Agreement	Counterparty	Period	Major contents	Restrictions
1. Agency contract	Yu-Shih electric and others, totaling 856 companies	One year after the starting of shipment, should any party fail to notify contrary opinion three months before the ending of the contract, the contract will be extended by one year automatically, an arrangement which will be repeated afterwards.	Rights and obligations for agency for home appliances, electric motor, heavy electric products, power device and and air conditioners.	Nil
2. Project Undertaking	CITYPRO MANAGEMENT LIMITED、Kepirohi Solar Energy Limited	The first phase: 130 days from signing date The second term: 202 days from the start date of the notice, but no later than December 30, 2019	2MWP solar photovoltaic power generation system and 2MW-H battery energy storage system installation project	Nil
3. Project Undertaking	Taoyuan International Airport Co., Ltd.	1. Signing date July 31, 2019 2. Completed in 1213 days from the start date	Taiwan Taoyuan International Airport Terminal 3 Public Facilities Project (1) New Construction	Nil
4. Project Undertaking	CIP Copenhagen Infrastructure Fund	1. Signing date July 31, 2019 2. 4 years from the signing date	Changfang and Xidao Offshore Wind Farm Substation EARLY WORK AGREEMENT, CONDITION OF CONTRACT	Nil
5. Project Undertaking	Exyte Taiwan Co., Ltd.	1. Signing date June 27, 2019 2. Maturity date October 2, 2020	CHG-4 ELECTRICAL WORKS	