

**PARKER
HANNIFIN
ANNUAL
REPORT**

2021



ENGINEERING YOUR SUCCESS.

DRIVERS OF PARKER'S PERFORMANCE

LIVING UP TO OUR PURPOSE

Our purpose, Enabling Engineering Breakthroughs that Lead to a Better Tomorrow, provides inspiration and direction for our team members and highlights how we can have a positive impact on the world. Parker's team members work alongside customers to enable technology breakthroughs that change the world for the better. Every day we have a role to play in helping to improve the lives of people everywhere.

GREAT GENERATORS AND DEPLOYERS OF CASH

Parker has consistently generated strong cash flow through economic cycles and used that cash flow to drive returns for shareholders through acquisitions and investments that have transformed our portfolio and by maintaining our long-standing dividend increase record. In fiscal year 2021, Parker significantly reduced its debt and had record cash flow from operating activities of \$2.58 billion putting Parker in a strong financial position.

TOP QUARTILE PERFORMANCE VS. PROXY PEERS

Since fiscal year 2016, Parker has focused on implementing The Win Strategy™ and transforming our operations. Today, many important metrics such as safety, team member engagement, earnings growth and shareholder returns are among the top quartile when compared with our diversified industrial proxy peers.

LETTER TO SHAREHOLDERS



*Thomas L. Williams, Chairman and Chief Executive Officer (L)
Lee C. Banks, Vice Chairman and President (R)*

As we reflect on our record performance in fiscal year 2021, Parker's ongoing transformation is unmistakable.

The actions we are taking as a global team to strengthen our company are generating remarkable results. With the Win Strategy 3.0 as our guide, we have continued to focus on living up to our purpose, being great generators and deployers of cash and achieving top quartile performance compared with diversified industrial peer companies.

This was never more evident than in fiscal year 2021, when despite extraordinary challenges due to the global COVID-19 pandemic, we achieved record financial performance and continued to deliver strong returns for shareholders. These results clearly demonstrate the resiliency of Parker's business and the benefits of our strengthened technology portfolio. We are in an excellent position to accelerate this progress and continue to improve upon our high level of performance.

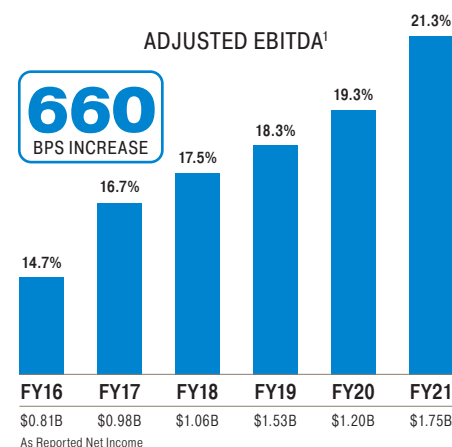
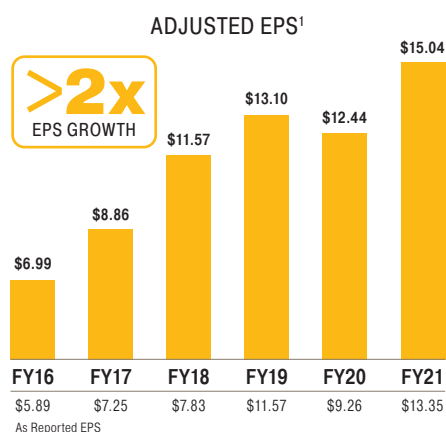
RECORD PERFORMANCE IN THE FACE OF GREAT CHALLENGES

Despite strong economic headwinds brought on by the pandemic, fiscal year 2021 was our best year ever for sales, net income, earnings per share, segment operating margins and cash flow from operations.

We have achieved our fiscal year 2023 targets two years early for adjusted segment operating margin, adjusted EBITDA margin, free cash flow conversion and adjusted EPS growth. This rapid pace of achievement demonstrates our commitment to continuous improvement across our operations and our proficiency in deploying cash to stimulate profitable growth and create shareholder value. In fiscal year 2021:

- Total net sales were a record at \$14.35 billion, an increase of 5% compared with \$13.70 billion in fiscal year 2020.
- Total segment operating margin reached 18.4% as reported, or 21.1% adjusted, a 220-basis point improvement from fiscal year 2020.
- EBITDA margin was 21.6% as reported, and 21.3% on an adjusted basis, a 200-basis point improvement in adjusted EBITDA margin compared with fiscal year 2020.

OUR PEOPLE, PORTFOLIO & STRATEGY TRANSFORM PERFORMANCE



¹ This Annual Report contains non-GAAP financial information. These non-GAAP measures have been reconciled to the comparable GAAP measures within a table immediately following the Form 10-K included in this Annual Report.

- Net income was a record at \$1.75 billion, an increase of 45% compared with \$1.20 billion in fiscal year 2020.
- Earnings per share increased 44% to a record \$13.35. Adjusted earnings per share were \$15.04, a 21% increase compared with \$12.44 in fiscal year 2020.
- Cash flow from operating activities (CFOA) was a record at \$2.58 billion, or 17.9% of sales, compared with \$2.07 billion, or 15.1% of sales in fiscal year 2020. This is the 20th consecutive fiscal year Parker has generated cash flow from operations, before discretionary pension contributions, greater than 10% of sales.

The improving macroeconomic outlook, along with our focus on top quartile financial performance, creates a compelling inflection point which we see as taking Parker's growth and profitability to new heights.

FOCUSED ON THE FUTURE

In the last several years, we have experienced two industrial recessions and a global pandemic. Yet, the focus of our team on the Win Strategy 3.0 has enabled even higher levels of performance and has placed Parker in a position to build on our momentum in the years ahead.

CAPITAL DEPLOYMENT

Parker continues to generate and deploy cash efficiently to fuel growth and create strong returns for shareholders.

In the fourth quarter of fiscal year 2021, we raised our quarterly dividend per share by 17% over the previous quarterly dividend, which results in an annual payout increase of 4.7% and marks 65 consecutive fiscal years of increasing the annual dividend per share paid. This use of cash is aligned with our goal of maintaining a five-year average dividend payout in the range of 30-35% of net income.

We have continued to put our solid balance sheet and cash flow to work. With a strong free cash flow conversion at 135% and CFOA at 17.9% of sales in fiscal year 2021, we have made debt repayments totaling \$3.4 billion over the last 20 months. We have now retired all serviceable debt issued to acquire

LORD Corporation and Exotic Metals Forming Company bringing the multiple of gross debt to EBITDA to 2.1x, down from 3.6x just one year ago.

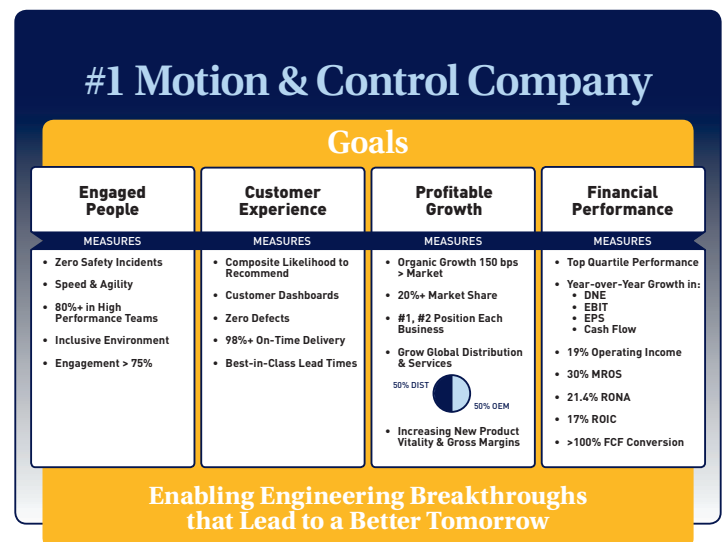
This debt reduction puts us in a position to effectively deploy capital for a stronger future. In August 2021, we reached an agreement on the terms of a recommended cash acquisition of the entire issued and to be issued ordinary share capital of Meggitt PLC, a global leader in aerospace and defense motion and control technologies, with annual revenue of approximately \$2.3 billion* in calendar year 2020. While the acquisition remains subject to the satisfaction of several conditions set out in the announcement, it reflects an exciting opportunity to better serve customers of both companies through innovation, accelerated R&D and complementary technology portfolios.

DIGITAL LEADERSHIP AND ADVANCED MANUFACTURING

The rapid adoption of digital and information technologies continues to reshape how business is conducted. We remain focused on enhancing customer-facing digital solutions, and ongoing initiatives related to cyber security, data analytics and digital collaboration. We also continue to invest in advancing the use of robotics, additive manufacturing and artificial intelligence (AI). To accelerate the use of AI we have implemented a data analytics center of excellence with embedded functional data scientists focused on AI and robotic process automation throughout the company.

GLOBAL DISTRIBUTION

We have a deliberate strategy to grow our global distribution network, which is a key differentiator among our competitors. As a result of this strategy, we have increased our



* 1.39 GBP / USD exchange rate as of July 30, 2021

percentage of sales through international distribution at a rate of approximately 100 basis points per year. These actions will further enhance Parker's margin performance and drive profitable growth. In addition, we established a digital distribution advisory committee to accelerate digital leadership at Parker and with our distributors.

A BETTER TOMORROW

Parker's commitment to responsible operations is deeply ingrained within the Win Strategy 3.0 and illustrates how we are living our purpose. We have made great progress on ESG leadership and we recognize the need to do even more.

HELPING THE WORLD ACHIEVE CARBON NEUTRALITY

Our interconnected motion and control technologies help customers across industrial, mobile and aerospace markets to reduce resource consumption and greenhouse gas emissions. Approximately two-thirds of our global portfolio are solutions that enable electrification, lightweighting, the adoption of cleaner and more efficient energy sources such as batteries, fuel cells and hydrogen, and other innovations with a positive, global environmental impact. Breakthroughs that make the world cleaner, smarter and safer

ACHIEVE

carbon neutral

operations by **2040**

would not be possible without Parker technologies and create substantial growth opportunities for our business.

Regarding our own environmental stewardship, since 2010, we have reduced our energy intensity (MWh/USD) by 42% and greenhouse gas intensity (MT/USD) by 50%. With this solid foundation to build on, this year we announced our commitment to achieve carbon neutral operations by 2040, and established a series of emissions targets to ensure continued progress. These include reducing absolute emissions directly from the company's operations by 50% by 2030, and reducing indirect absolute emissions related to materials sourcing, logistics and services by 15% by 2030, and 25% by 2040. These ambitious new targets reflect our efforts to protect the environment for generations to come.

Hydrogen Council

This year Parker joined the Hydrogen Council, a global CEO-led initiative of companies working to accelerate the clean energy transition.

SAFETY

Safety is our highest priority and a core value that all team members share. In 2021, the total number of recordable incidents was reduced by 29% and the rate per 100 team members was 0.40, ranking within the top quartile among our industry peers. Nearly all of our manufacturing locations have chartered Safety High Performance Teams (HPTs), which are fundamental to our success in driving safety performance, and approximately 90% of our team members participate in at least one HPT. The principles we have adopted to drive safety improvements are being applied to improve quality, cost, delivery and engagement of our people.

DIVERSITY AND INCLUSION

Throughout our history, we have been committed to building a welcoming and inclusive workplace that respects every team member's unique perspective. We have established four global HPTs to help advance diversity and inclusion, focused on talent attraction, talent development, governance and knowledge. Each is led by a senior

executive and tasked with rethinking the way we attract and develop diverse team members, share knowledge and measure our progress.

CORPORATE GOVERNANCE

We are committed to Board diversity and inclusion, ensuring the skills and experiences of our Directors align with our culture and values, support our long-term strategy and drive shareholder value creation. Three new Directors were added in fiscal year 2021, increasing both the racial and gender diversity on our Board. Today, women make up 31% of the Board and 62% of our Directors are diverse based on gender (4), race (2) or ethnicity (2). The average tenure of our Directors is currently 7.7 years.

Parker takes a strategic approach to succession planning, and we recently announced a series of leadership changes that allow our executives to build the experiences and skills necessary to continue the transformation of our company. As Lee Banks takes on a new role as Vice Chairman and President, Jenny Parmentier has been elected Chief Operating Officer. Formerly the President of our Motion Systems Group and Engineered Materials Group, along with various other operational roles, she has a proven record of success across Parker and we are pleased to be working closely with her as a key member of the Office of the Chief Executive.

Our team members are the driving force behind Parker's outstanding fiscal year 2021 results. We thank them for their engagement and dedication to supporting one another, our customers and our communities. They are what makes Parker a truly special company.

With the unique culture we have created, and our purpose guiding our path forward, there is no challenge too great for us to overcome and no limit to what we can achieve together.

Sincerely,



Thomas L. Williams

Chairman and Chief Executive Officer



Lee C. Banks

Vice Chairman and President

August 2021

TECHNOLOGIES ENABLING A CARBON NEUTRAL TOMORROW

With more than a century of experience, we are often called to the table for the collaborations that help to solve the most complex engineering challenges. Breakthroughs that make the world cleaner, smarter and safer would not be possible without Parker technologies.

HYDRAULICS



PNEUMATICS



ELECTROMECHANICAL



FILTRATION



FLUID & GAS HANDLING



PROCESS CONTROL



CLIMATE CONTROL



ENGINEERED MATERIALS

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549
FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended June 30, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from

to

Commission File No. 1-4982

PARKER-HANNIFIN CORPORATION

(Exact name of registrant as specified in its charter)

Ohio

(State or other jurisdiction of
Incorporation or Organization)

34-0451060

(I.R.S. Employer
Identification No.)

6035 Parkland Boulevard, Cleveland, Ohio

(Address of Principal Executive Offices)

44124-4141

(Zip Code)

Registrant's telephone number, including area code (216) 896-3000

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on which Registered
Common Shares, \$.50 par value	PH	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☒ No ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
Emerging Growth Company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the outstanding common stock held by non-affiliates of the Registrant as of December 31, 2020: \$34,984,991,426.

The number of Common Shares outstanding on July 31, 2021 was 129,101,437.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for the Company's 2021 Annual Meeting of Shareholders, to be held on October 27, 2021, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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PARKER-HANNIFIN CORPORATION

FORM 10-K

Fiscal Year Ended June 30, 2021

PART I

ITEM 1. Business. Parker-Hannifin Corporation is a leading worldwide diversified manufacturer of motion and control technologies and systems, providing precision engineered solutions for a wide variety of mobile, industrial and aerospace markets. The Company was incorporated in Ohio in 1938. Our principal executive offices are located at 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141, telephone (216) 896-3000. As used in this Annual Report on Form 10-K, unless the context otherwise requires, the terms "Company", "Parker", "we" or "us" refer to Parker-Hannifin Corporation and its subsidiaries, and the term "year" and references to specific years refer to the applicable fiscal year.

Our investor relations website address is www.phstock.com. We make available free of charge on or through our website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after filing or furnishing those reports electronically with the Securities and Exchange Commission. The information contained on or accessible through our website is not part of this Annual Report on Form 10-K.

The Board of Directors has adopted a written charter for each of its committees. These charters, as well as our Global Code of Business Conduct, Corporate Governance Guidelines and Independence Standards for Directors, are posted and available on our investor relations website under the Corporate Governance page. Shareholders may request copies of these corporate governance documents, free of charge, by writing to Parker-Hannifin Corporation, 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141, Attention: Secretary, or by calling (216) 896-3000.

Our manufacturing, service, sales, distribution and administrative facilities are located in 38 states within the United States and in 44 other countries. We sell our products as original and replacement equipment through sales and distribution centers worldwide. We market our products through direct-sales employees, independent distributors and sales representatives. We supply products to approximately 505,000 customers in virtually every significant manufacturing, transportation and processing industry.

We have two reporting segments: Diversified Industrial and Aerospace Systems. During 2021, our technologies and systems were used in the products of these two reporting segments. For 2021, the Company's net sales were \$14.3 billion. Diversified Industrial Segment products accounted for 83 percent and Aerospace Systems Segment products accounted for 17 percent of those net sales.

Markets

Our technologies and systems are used throughout various industries and in various applications. The approximately 505,000 customers who purchase Parker products are found in almost every significant manufacturing, transportation and processing industry. No single customer accounted for more than three percent of our total net sales for the year ended June 30, 2021.

Diversified Industrial Segment. Our Diversified Industrial Segment sells products to both original equipment manufacturers ("OEMs") and distributors who serve the replacement markets in manufacturing, packaging, processing, transportation, mobile construction, refrigeration and air conditioning, agricultural and military machinery and equipment industries. The major markets served by our Diversified Industrial Segment are listed below by group:

Engineered Materials Group:	<ul style="list-style-type: none"> • Aerospace • Agriculture • Chemical processing • Construction • Defense • Information technology • Life sciences 	<ul style="list-style-type: none"> • Microelectronics • Oil & gas • Power generation • Renewable energy • Telecommunications • Transportation • Truck & bus
Filtration Group:	<ul style="list-style-type: none"> • Aerospace & defense • Agriculture • Construction • Food & beverage • Heating, ventilation & air conditioning (HVAC) • Industrial machinery • Life sciences 	<ul style="list-style-type: none"> • Marine • Mining • Oil & gas • Power generation • Renewable energy • Transportation • Water purification
Fluid Connectors Group:	<ul style="list-style-type: none"> • Aerial lift • Agriculture • Bulk chemical handling • Construction • Food & beverage • Forestry • Industrial machinery 	<ul style="list-style-type: none"> • Life sciences • Material handling • Mining • Oil & gas • Renewable energy • Transportation
Instrumentation Group:	<ul style="list-style-type: none"> • Air conditioning • Alternative fuels • Analytical • Chemical • Food & beverage • Life sciences 	<ul style="list-style-type: none"> • Microelectronics • Oil & gas • Refining • Refrigeration • Transportation
Motion Systems Group:	Mobile: <ul style="list-style-type: none"> • Agriculture • Construction • Marine • Material handling • Military • Transportation • Truck & bus • Turf 	Industrial: <ul style="list-style-type: none"> • Distribution • General machinery • Machine tool • Mining • Oil & gas • Power generation • Semiconductor

Aerospace Systems Segment. Our Aerospace Systems Segment sells products primarily in the commercial and military aerospace markets to both OEMs and to end users for spares, maintenance, repair and overhaul. The major markets for products of the Aerospace Systems Segment are listed below:

- Aftermarket services
- Commercial transport aircraft
- Engines
- General & business aviation
- Helicopters
- Military aircraft
- Missiles
- Power generation (industrial gas turbines)
- Regional transport aircraft
- Unmanned aerial vehicles

Principal Products and Methods of Distribution

We offer hundreds of thousands of individual products, and no single product contributed more than one percent to our total net sales for the year ended June 30, 2021. Listed below are some of our principal products.

Diversified Industrial Segment. Our Diversified Industrial Segment products consist of a broad range of motion-control and fluid systems and components, which are described below by group:

Engineered Materials Group: sealing, shielding, thermal products and systems, adhesives, coatings and noise vibration and harshness solutions, including:

- Active vibration control systems
- Bearings & dampers
- Coatings
- Dynamic seals
- Elastomeric mounts & isolators
- Elastomeric o-rings
- Electromagnetic interference shielding
- Extrusion & fabricated seals
- High-temperature metal seals
- Homogeneous & inserted elastomeric shapes
- Medical products fabrication & assembly
- Metal & plastic composite bonded seals
- Precision-cut seals
- Rubber-to-substrate adhesives
- Specialty chemicals
- Structural adhesives
- Thermal management
- Wireless sensing systems

Filtration Group: filters, systems and diagnostics solutions to monitor and remove contaminants from fuel, air, oil, water and other liquids and gases, including:

- Aerospace filters & systems
- Air pollution control & dust collection systems & filters
- Compressed air & gas treatment solutions
- Engine fuel, oil, air & closed crankcase ventilation filtration systems
- Filtration & purification systems
- Fluid condition monitoring systems
- Gas turbine air inlet filters
- Heating, ventilation & air conditioning filters
- Hydraulic & lubrication filters & systems
- Industrial & analytical gas generators
- Instrumentation filters
- Membrane, fiber, & sintered metal filters
- Natural gas filters
- Process liquid, air & gas filters
- Sterile air filters
- Water purification filters & systems

Fluid Connectors Group: connectors, which control, transmit and contain fluid, including:

- Check valves
- Diagnostic and Internet of Things ("IoT") sensors
- Hose couplings
- Hose crimpers
- Industrial hose
- Low pressure fittings & adapters
- Polytetrafluoroethylene (PTFE) hose & tubing
- Quick couplings
- Rubber & thermoplastic hose
- Tube fittings & adapters
- Tubing & plastic fittings

Instrumentation Group: high quality flow control solutions that are critical to a wide range of applications involving extreme corrosion resistance, temperatures, pressures and precise flow, including:

- Analytical instruments & sample conditioning systems
- Compressed natural gas dispensers
- Cryogenic valves
- Diesel exhaust treatment systems
- Electronic valves
- Emissions
- Filter driers
- Fluid system & control fittings, meters, valves, regulators & manifold valves
- Fluoropolymer chemical delivery fittings, valves & pumps
- High pressure fittings, valves, pumps & systems
- High-purity gas delivery fittings, valves & regulators
- Miniature valves & pumps
- Natural gas on-board fuel systems
- Pressure regulating valves
- Refrigeration & air conditioning electronic controls & monitoring
- Solenoid valves

Motion Systems Group: hydraulic, pneumatic, and electromechanical components and systems for builders and users of mobile and industrial machinery and equipment, including:

Hydraulic Actuation:

- Accumulators
- Coolers
- Cylinders
- Electrohydraulic actuators
- Helical actuators
- Rotary actuators

Hydraulic Pumps & Motors:

- Drive controlled pumps
- Electrohydraulic pumps
- Fan drives
- Gerotor pumps & motors
- Integrated hydrostatic transmissions
- Piston pumps & motors
- Power take-offs
- Screw pumps
- Vane pumps & motors

Hydraulic and Electro Hydraulic Systems:

- Cartridge valves
- Hydraulic valves
- Industrial valves
- Mobile valves

Pneumatics:

- Air preparation (FRL) & dryers
- Grippers
- IO link controllers
- Pneumatic cylinders
- Pneumatic valves

Electronics:

- Clusters
- Controllers & human machine interfaces ("HMI")
- Drives (AC/DC Servo)
- Electric actuators & positioners
- Electric motors & gearheads
- Electronic displays & HMI
- IoT
- Joysticks
- Sensors
- Software

Diversified Industrial Segment products include standard products, as well as custom products which are engineered and produced to OEM specifications for application to particular end products. Standard and custom products are also used in the replacement of original products. We market our Diversified Industrial Segment products primarily through field sales employees and approximately 16,900 independent distributor locations throughout the world.

Aerospace Systems Segment. Our Aerospace Systems Segment products are used in commercial and military airframe and engine programs and include:

- | | |
|--|----------------------------------|
| • Control actuation systems & components | • Fuel tank inerting systems |
| • Engine build-up ducting | • Hydraulic systems & components |
| • Engine exhaust nozzles & assemblies | • Lubrication components |
| • Engine systems & components | • Pilot controls |
| • Fluid conveyance systems & components | • Pneumatic control components |
| • Fluid metering, delivery & atomization devices | • Thermal management |
| • Fuel systems & components | • Wheels & brakes |

We market our Aerospace Systems Segment products through our regional sales organizations, which sell directly to OEMs and end users throughout the world.

Competition

Parker operates in highly competitive markets and industries. We offer our products over numerous, varied markets through our divisions operating in 45 countries. Our global scope means that we have hundreds of competitors across our various markets and product offerings. Our competitors include U.S. and non-U.S. companies. These competitors and the degree of competition vary widely by product lines, end markets, geographic scope and/or geographic locations. Although each of our segments has numerous competitors, given our market and product breadth, no single competitor competes with the Company with respect to all the products we manufacture and sell.

In the Diversified Industrial Segment, Parker competes on the basis of product quality and innovation, customer service, manufacturing and distribution capability, and price competitiveness. We believe that we are one of the market leaders in most of the major markets for our most significant Diversified Industrial Segment products. We have comprehensive motion and control packages for the broadest systems capabilities. While our primary global competitors include Bosch Rexroth AG, Danaher Corporation, Danfoss A/S, Donaldson Company, Inc., Eaton Corporation plc, Emerson Climate Technologies, Inc., Emerson/ASCO, Festo AG & Co., Freudenberg-NOK, Gates Corporation, IMI/Norgren, SMC Corporation, Swagelok Company, and Trelleborg AB, none of these businesses compete with every group or product in our Diversified Industrial Segment.

In the Aerospace Systems Segment, we have developed relationships with key customers based on our advanced technological and engineering capabilities, superior performance in quality, delivery, service, and price competitiveness. This has enabled us to obtain significant original equipment business on new aircraft programs for our systems and components, as well as the follow-on repair and replacement business for these programs. Further, the Aerospace Systems Segment utilizes low-cost manufacturing techniques and best cost region strategies to achieve a lower cost producer status. Although we believe that we are one of the market leaders in most of the major markets for our most significant Aerospace Systems Segment products, primary global competitors for these products include Eaton Corporation plc, Honeywell International, Inc., Moog Inc., Triumph Group, Inc., Senior plc., Raytheon Collins Aerospace, Woodward, Inc. and Safran S.A.

We believe that our platform utilizing eight core technologies, which consist of electromechanical, filtration, fluid handling, hydraulics, pneumatics, process control, refrigeration, and sealing and shielding, is a positive factor in our ability to compete effectively with both large and small competitors. For both of our segments, we believe that the following factors also contribute to our ability to compete effectively:

- decentralized business model;
- technology breadth and interconnectivity;
- engineered products with intellectual property;
- long product life cycles;
- balanced OEM vs. aftermarket;
- low capital investment requirements; and
- great generators and deployers of cash over the cycle.

Patents, Trademarks, Copyrights, Trade Secrets, Licenses

We own a number of patents, trademarks, copyrights, trade secrets and licenses related to our products. We also have exclusive and non-exclusive rights to use patents, trademarks and copyrights owned by others. In addition, patent and trademark applications are pending, although there can be no assurance that further patents and trademarks will be issued. We do not depend on any single patent, trademark, copyright, trade secret or license or group of patents, trademarks, copyrights, trade secrets or licenses to any material extent.

Backlog and Seasonal Nature of Business

Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale. Our backlog by business segment for the past two years is included in Part II, Item 7 of this Annual Report on Form 10-K and is incorporated herein by reference. Our backlog was \$6.5 billion at June 30, 2021 and \$5.1 billion at June 30, 2020. Approximately 84 percent of our backlog at June 30, 2021 is scheduled for delivery in the succeeding twelve months. Because of the breadth and global scope of our business, our overall business is generally not seasonal in nature.

Environmental Regulation

Certain of our operations require the use and handling of hazardous materials and, as a result, the Company is subject to United States federal, state, and local laws and regulations as well as non-U.S. laws and regulations designed to protect the environment and regulate the discharge of materials into the environment. These laws impose penalties, fines and other sanctions for non-compliance and liability for response costs, property damage and personal injury resulting from past and current spills, disposals or other releases of, or exposures to, hazardous materials. Among other environmental laws, we are subject to the United States federal "Superfund" law, under which we have been designated as a "potentially responsible party" and may be liable for cleanup costs associated with various waste sites, some of which are on the United States Environmental Protection Agency's Superfund priority list.

As of June 30, 2021, Parker was involved in environmental remediation at various U.S. and non-U.S. manufacturing facilities presently or formerly operated by us and as a "potentially responsible party," along with other companies, at off-site waste disposal facilities and regional sites.

We believe that our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and the consequent financial liability to the Company. Compliance with environmental laws and regulations requires continuing management efforts and expenditures by the Company. Compliance with environmental laws and regulations has not had in the past, and, we believe, will not have in the future, a material adverse effect on our capital expenditures, earnings, or competitive position.

Our reserve for environmental matters is discussed in Note 17 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K and is incorporated herein by reference.

Energy Matters and Sources and Availability of Raw Materials

Our primary energy source for both of our business segments is electric power. While we cannot predict future costs of electric power, the primary source for production of the required electric power is expected to be coal and natural gas from coal and natural gas reserves available to electric utilities. We are subject to governmental regulations in regard to energy supplies in the United States and elsewhere. To date, we have not experienced any significant disruptions of our operations due to energy curtailments.

We primarily use steel, brass, copper, aluminum, nickel, rubber and thermoplastic materials and chemicals as the principal raw materials in our products. We expect these materials to be available from numerous sources in quantities sufficient to meet our requirements.

Acquisitions

The Company made no acquisitions in 2021. On August 2, 2021, the Company announced that it reached an agreement on the terms of a recommended cash acquisition of the entire issued and to be issued ordinary share capital of Meggitt plc ("Meggitt"). The proposed Meggitt acquisition and prior year acquisitions are discussed in Notes 1 and 3 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference.

Human Capital Management

At Parker, we align employment levels with the global needs of our business and our customers. As of June 30, 2021, we employed approximately 54,640 persons that we refer to as "team members," of whom approximately 28,290 were employed by foreign subsidiaries.

Our talented and passionate team members are the foundation of Parker's enduring growth, bringing new ideas and perspectives to enhance our safety performance, improve productivity and inspire a diverse and inclusive culture. We see a clear path to a brighter future, and it begins with providing our people the resources that enable them to find personal and professional satisfaction in their work, responsibly move our company forward and strengthen our communities, fulfilling our purpose of *Enabling Engineering Breakthroughs that Lead to a Better Tomorrow*.

The Win Strategy™ 3.0, Purpose and Values

The Win Strategy 3.0 is Parker's business system that defines the goals and initiatives that drive growth, transformation and success. It works with our purpose, which is a foundational element of The Win Strategy, to engage team members and create responsible and sustainable growth.

The Win Strategy has four overarching goals: Engaged People, Customer Experience, Profitable Growth and Financial Performance, supported by our shared values of a Winning Culture, Passionate People, Valued Customers and Engaged Leadership. Our shared values shape our culture and our interactions with stakeholders and the communities in which we operate and live.

Safety

The safety and well-being of Parker team members is our highest priority. Our safety goal is simple: to achieve an incident-free workplace. We have reduced our Recordable Incident Rate by 72% from fiscal year 2015 through fiscal year 2020. In fiscal year 2021, the recordable incidents per 100 team members was 0.40, a 29% reduction from fiscal year 2020 (inclusive of recent acquisitions).

Building on the great progress we have made, we recently established new long-term safety goals. We are targeting to be best in our peer group by 2023 and to eliminate serious safety incidents by 2025.

To help support these goals we are adopting eight standards aimed at preventing serious safety incidents or an environmental impact. We also developed a new field safety program that provides guidance for team members working outside our facilities to help them identify or anticipate safety risks.

High Performance Teams ("HPTs") are fundamental to our success in driving safety performance, and nearly all of our manufacturing locations have an active, chartered Safety HPT. Approximately 90% of our team members participate in at least one HPT. We will continue to encourage every team member to take action when needed to fulfill our shared responsibility to workplace safety.

Engaged People

Engagement directly influences business performance. We strongly believe in empowering our team members to think as owners and take action to improve their areas of the business. Engagement is deeply ingrained in our culture, and as an overarching goal of The Win Strategy it is key to achieving top quartile financial performance.

Parker activates engagement through our HPTs, which apply the expertise and perspective of team members who are closest to the product and customer to drive improvement throughout the company. Approximately 90% of our people participate in these teams, and more than 6,500 HPTs have already been established worldwide. We closely track our progress toward support of a high performing work environment through our Global Engagement Survey, and in our most recent engagement survey our engagement scores increased to 75%, ranking within the top quartile among our proxy peers.

Diversity and Inclusion

An inclusive environment is a core tenet of Parker's values and one of our key measures of success within our Win Strategy. Throughout our history, we have been committed to building a welcoming and inclusive workplace that respects every team member's unique perspective. Our team members come from a diverse range of personal and professional backgrounds, and their collective talent and expertise is the driving force behind the growth and success Parker has achieved.

In 2015, we launched Peer W, our first Business Resource Group focused on supporting the recruitment, development and retention of women at Parker. Peer W has grown into a well-developed global network of 24 local chapters and established a Mentoring Circles program in 2020. We are preparing to introduce additional Business Resource Groups that will enable team members with common interests or backgrounds to come together, share their experiences and establish new and lasting relationships.

We have also established four global HPTs focused on Talent Attraction, Talent Development, Governance and Knowledge. Each team is led by a senior executive and tasked with rethinking the way we attract and develop diverse team members, share knowledge and measure our progress in fostering an inclusive culture.

In 2020, Parker appointed its first Vice President of Diversity and Inclusion to lead our continuing journey.

Compensation and Benefits

As a global employer, we are committed to offering competitive compensation and benefits, tailored in form and amount to geography, industry, experience and performance. Our programs are designed to attract team members, motivate and reward performance, drive growth and support retention. We provide benefit programs with the goal of improving physical, mental and financial wellness of our team members throughout their lifetime. Some examples include base and variable pay, health and insurance benefits, paid time off, and retirement saving plans.

ITEM 1A. Risk Factors.

The following "risk factors" identify what we believe to be the risks that could materially adversely affect our financial and/or operational performance. These risk factors should be considered and evaluated together with information incorporated by reference or otherwise included elsewhere in this Annual Report on Form 10-K. Additional risks not currently known to the Company or that the Company currently believes are immaterial also may impair the Company's business, financial condition, results of operations and cash flows.

Business and Operational Risks

The novel coronavirus ("COVID-19") pandemic has disrupted our operations and could have a material adverse effect on our business and financial condition.

The COVID-19 pandemic, along with the response to the pandemic by governmental and other actors, has disrupted our operations and is expected to continue to negatively impact our operations in the future, which impact may be material. We have experienced, and may continue to experience, mandatory and voluntary facility closures in certain jurisdictions in which we operate. Furthermore, several of our customers temporarily suspended their operations and we have experienced less demand for our products. Disruptions to our customers in the aerospace industry, which is facing diminished demand, have been and may continue to be challenging. Additionally, the COVID-19 outbreak has, and could further, disrupt our supply chain. Facility closures or other restrictions, as well as supply chain disruptions, could materially adversely affect our ability to adequately staff, supply or otherwise maintain our operations. Moreover, because certain of our employees continue to work from home, we may be subject to increased vulnerability to cyber and other information technology risks. We have modified, and may further modify, our business practices in response to the risks and negative impacts associated with the COVID-19 pandemic. However, there can be no assurance that these measures will be temporary or successful.

The impact of the COVID-19 pandemic continues to evolve and its ultimate duration, severity and disruption to our business, customers and supply chain, and the related financial impact to us, cannot be accurately forecasted at this time. Should such disruption continue for an extended period, the adverse effect on our business, results of operations and financial condition could be more severe than previously anticipated. Additionally, weak economic conditions generally as a result of the COVID-19 pandemic could result in impairment in value of our tangible or intangible assets. Furthermore, future public health crises are possible and could involve some or all of the risks discussed above.

Risks arising from uncertainty in worldwide and regional economic conditions may harm our business and make it difficult to project long-term performance.

Our business is sensitive to global macro-economic conditions. Future macroeconomic downturns may have an adverse effect on our business, results of operations and financial condition, as well as our distributors, customers and suppliers, and on activity in many of the industries and markets we serve. Among the economic factors which may have such an effect are manufacturing and other end-market activity, global pandemics, currency exchange rates, air travel trends, difficulties entering new markets, tariffs and governmental trade and monetary policies, and general economic conditions such as inflation, deflation, interest rates and credit availability. These factors may, among other things, negatively impact our level of purchases, capital expenditures, and creditworthiness, as well as our distributors, customers and suppliers, and, therefore, the Company's revenues, operating profits, margins, and order rates.

We cannot predict changes in worldwide or regional economic conditions and government policies, as such conditions are highly volatile and beyond our control. If these conditions deteriorate or remain at depressed levels for extended periods, however, our business, results of operations and financial condition could be materially adversely affected.

As a global business, we are exposed to economic, political and other risks in different countries in which we operate, which could materially reduce our sales, profitability or cash flows, or materially increase our liabilities.

Our net sales derived from customers outside the United States were approximately 40 percent in 2021, 37 percent in 2020 and 39 percent in 2019. In addition, many of our manufacturing operations and suppliers are located outside the United States. The Company expects net sales from non-U.S. markets to continue to represent a significant portion of its total net sales. Our non-U.S. operations are subject to risks in addition to those facing our domestic operations, including:

- fluctuations in currency exchange rates and/or changes in monetary policy;
- public health crises, including pandemics;
- limitations on ownership and on repatriation of earnings;
- transportation delays and interruptions;
- political, social and economic instability and disruptions;
- government embargoes or trade restrictions;
- the imposition of duties and tariffs and other trade barriers;
- import and export controls;
- labor unrest and current and changing regulatory environments;
- the potential for nationalization of enterprises;
- difficulties in staffing and managing multi-national operations;
- limitations on our ability to enforce legal rights and remedies;
- potentially adverse tax consequences; and
- difficulties in implementing restructuring actions on a timely basis.

If we are unable to successfully manage the risks associated with expanding our global business or adequately manage operational fluctuations internationally, the risks could have a material adverse effect on our business, results of operations or financial condition.

Increased cybersecurity threats and more sophisticated and targeted computer crime could pose a risk to our information technology systems.

We rely extensively on information technology systems to manage and operate our business, some of which are managed by third parties. The security and functionality of these information technology systems, and the processing of data by these systems, are critical to our business operations. If these systems, or any part of the systems, are damaged, intruded upon, attacked, shutdown or cease to function properly (whether by planned upgrades, force majeure, telecommunications failures, criminal acts, including hardware or software break-ins or extortion attempts, or viruses, or other cybersecurity incidents) and we suffer any resulting interruption in our ability to manage and operate our business or if our products are affected, our results of operations and financial condition could be materially adversely affected. As a result of the COVID-19 pandemic, certain of our employees continue to work from home, which may increase our vulnerability to cyber and other information technology risks. In addition to existing risks, any adoption or deployment of new technologies via acquisitions or internal initiatives may increase our exposure to risks, breaches, or failures, which could materially adversely affect our results of operations or financial condition. Furthermore, the Company may have access to sensitive, confidential, or personal data or information that may be subject to privacy and security laws, regulations, or other contractually-imposed controls. Despite our use of reasonable and appropriate controls, material security breaches, theft, misplaced, lost or corrupted data, programming, or employee errors and/or malfeasance could lead to the compromise or improper use of such sensitive, confidential, or personal data or information, resulting in possible negative consequences, such as fines, ransom demands, penalties, loss of reputation, competitiveness or customers, or other negative consequences resulting in adverse impacts to our results of operations or financial condition.

Changes in the demand for and supply of our products may adversely affect our financial results, financial condition and cash flow.

Demand for and supply of our products has been and may be adversely affected by numerous factors, some of which we cannot predict or control. Such factors include:

- changes in business relationships with and purchases by or from major customers, suppliers or distributors, including delays or cancellations in shipments, disputes regarding contract terms or significant changes in financial condition, and changes in contract cost and revenue estimates for new development programs, including changes as a result of the COVID-19 pandemic;
- changes in product mix;
- changes in the market acceptance of our products;
- increased competition in the markets we serve;
- declines in the general level of industrial production, including as a result of the COVID-19 pandemic;
- weakness in the end-markets we serve, including as a result of the COVID-19 pandemic;
- fluctuations in the availability or the prices of raw materials; and
- fluctuations in currency exchange rates.

If any of these factors occur, the demand for and supply of our products could suffer, which could materially adversely affect the Company's results of operations.

The development of new products and technologies requires substantial investment and is required to remain competitive in the markets we serve. If we are unable to successfully introduce new commercial products, our profitability could be adversely affected.

The markets we serve are characterized by rapidly changing technologies and frequent introductions of new products and services. Our ability to develop new products based on technological innovation can affect our competitive position and often requires the investment of significant resources. If we cannot develop, or have difficulties or delays developing new and enhanced products and services, or if we fail to gain market or regulatory acceptance of new products and technologies, our revenues may be materially reduced and our competitive position could be materially adversely affected. In addition, we may invest in research and development of products and services, or in acquisitions or other investments, that do not lead to significant revenue, which could adversely affect our profitability.

Price and supply fluctuations of the raw materials used in our production processes and by our suppliers of component parts could negatively impact our financial results.

Our supply of raw materials could be interrupted for a variety of reasons, including availability and pricing. Furthermore, changes to United States and other countries' tariff and import/export regulations have in the past and may in the future have a negative impact on the availability and pricing of raw materials. Prices for raw materials necessary for production have fluctuated significantly in the past and significant increases could adversely affect our results of operations and profit margins. Our efforts to manage these fluctuations by, among other things, passing along price increases to our customers, may be subject to a time delay between the increased raw material prices and our ability to increase the price of our products, or we may be unable to increase the prices of our products due to pricing pressure, contract terms or other factors. Any such inability to manage fluctuations could adversely impact our results of operations and cash flows.

Our suppliers of component parts may significantly and quickly increase their prices in response to increases in costs of raw materials that they use to manufacture the component parts. As a result, we may not be able to increase our prices commensurately with our increased costs. Consequently, our results of operations or financial condition could be materially adversely affected.

Changes in the competitive environment in which we operate may eliminate any competitive advantages that we currently have, which could adversely impact our business.

Our operations are subject to competition from a wide variety of global, regional and local competitors, which could adversely affect our results of operations by creating downward pricing pressure and/or a decline in our margins or market shares. To compete successfully, we must excel in terms of product quality and innovation, technological and engineering capability, manufacturing and distribution capability, delivery, price competitiveness, and customer experience.

Strategic Transactions Risks

We are subject to risks relating to the pending acquisition of Meggitt.

On August 2, 2021, we announced our proposed acquisition of Meggitt. Meggitt is a leader in design, manufacturing and aftermarket support of technically differentiated systems and equipment in aerospace, defense and selected energy markets.

The proposed acquisition of Meggitt would expand the size of our Aerospace Systems Segment relative to our other segment, increasing our susceptibility to conditions in the end markets served by our Aerospace Systems Segment. There are numerous risks and uncertainties associated with the proposed acquisition, including:

- completion of the acquisition is subject to a number of conditions, some of which are outside of our control. Among these conditions are the approval by Meggitt's stockholders of the acquisition and the receipt of certain regulatory approvals, including the expiration or termination of any applicable waiting period (and any extension thereof) under the Hart-Scott-Rodino Antitrust Improvement Act of 1976, as amended, and under the antitrust and foreign investment/national security laws of certain other non-U.S. jurisdictions including the United Kingdom and European Union;
- the Company's and Meggitt's existing business relationships with third parties, including customers and service providers, may be disrupted due to uncertainty associated with the acquisition, which could have an adverse effect on our results of operations, cash flows and financial position or those of the combined company;
- failure to complete the acquisition could negatively impact our stock price and our future business and financial results;
- both we and Meggitt will incur significant transaction costs in connection with the acquisition, which costs may exceed those currently anticipated;
- we intend to pay for the acquisition of Meggitt and pay other fees and expenses required to be paid in connection with the acquisition with cash on hand and proceeds of new indebtedness. There can be no assurance that we will be able to execute such financing transactions on acceptable terms, in a timely manner or at all;
- the COVID-19 pandemic may delay or prevent the completion of the acquisition;
- after completion of the acquisition, we may be unable to successfully integrate our and Meggitt's business and, as a result, may fail to realize the anticipated benefits and cost savings of the transaction in the intended timeframe or at all, which could adversely affect the value of our common stock;
- our results after the proposed acquisition of Meggitt may suffer if we do not effectively manage our expanded operations following the acquisition; and
- Meggitt may have difficulty retaining, motivating, and attracting executives and other employees in light of the pending acquisition, and failure to do so could harm the company.

Any of the foregoing risks and uncertainties could have a material adverse effect on our earnings, cash flows and financial condition.

We are subject to risks relating to acquisitions and joint ventures, and risks relating to the integration of acquired companies, including risks related to the integration of Lord Corporation ("Lord") and Exotic Metals Forming Company ("Exotic") and the potential acquisition of Meggitt.

We expect to continue our strategy of identifying and acquiring businesses with complementary products and services, and entering into joint ventures, which we believe will enhance our operations and profitability. However, there can be no assurance that we will be able to continue to find suitable businesses to purchase or joint venture opportunities, or that we will be able to acquire such businesses or enter into such joint ventures on acceptable terms. Furthermore, there are no assurances that we will be able to avoid acquiring or assuming unexpected liabilities. If we are unable to avoid these risks, our results of operations and financial condition could be materially adversely affected.

In addition, we may not be able to integrate successfully any businesses that we purchase into our existing business and it is possible that any acquired businesses or joint ventures may not be profitable. For example, we have devoted significant management attention and resources to integrating the business and operations of Lord and Exotic. We may encounter, or have encountered, the following difficulties during the integration process:

- the consequences of a change in tax treatment, including the cost of integration and compliance and the possibility that the full benefits anticipated to result from the acquisitions may not be realized;
- delays in the integration of management teams, strategies, operations, products, and services;
- differences in business backgrounds, corporate cultures, and management philosophies that may delay successful integration;
- the ability to retain key employees;
- the ability to create and enforce uniform standards, controls, procedures, policies, and information systems;
- challenges of integrating complex systems, technologies, networks, and other assets of the acquired companies in a manner that minimizes any adverse impact or disruptions to customers, suppliers, employees, and other constituencies; and
- unknown liabilities and unforeseen increased expenses or delays associated with the integration beyond current estimates.

The successful integration of new businesses and the success of joint ventures also depend on our ability to manage these new businesses and cut excess costs. If we are unable to avoid these risks, our results of operations and financial condition could be materially adversely affected.

Our results may be adversely affected if expanded operations from the acquisition of Lord and Exotic, and the potential acquisition of Meggitt, are not effectively managed.

Our recent acquisitions have greatly expanded the size and complexity of our business. Our future success depends, in part, on the ability to manage this expanded business, which may pose or has posed substantial challenges for management, including challenges related to the management and monitoring of the expanded global operations and new manufacturing processes and products, and the associated costs and complexity. There can be no assurance of successful management of these matters or that we will realize the expected benefits of the acquisitions.

The Company may be subject to risks relating to organizational changes.

We regularly execute organizational changes such as acquisitions, divestitures and realignments to support our growth and cost management strategies. We also engage in initiatives aimed to increase productivity, efficiencies and cash flow and to reduce costs. The Company commits significant resources to identify, develop and retain key employees to ensure uninterrupted leadership and direction. If we are unable to successfully manage these and other organizational changes, the ability to complete such activities and realize anticipated synergies or cost savings as well as our results of operations and financial condition could be materially adversely affected. We cannot offer assurances that any of these initiatives will be beneficial to the extent anticipated, or that the estimated efficiency improvements, incremental cost savings or cash flow improvements will be realized as anticipated or at all.

Financial Risks

Increasing costs of certain employee and retiree benefits could adversely affect our liability for such benefits.

The funding requirements and the amount of expenses recorded for our defined benefit pension plans are dependent on changes in market interest rates and the value of plan assets, which are dependent on actual plan asset returns. Significant changes in market interest rates and decreases in the fair value of plan assets and investment losses on plan assets would increase funding requirements and expenses and may adversely impact our results of operations.

The Company absorbs a portion of healthcare costs for its employees. If healthcare costs rise significantly and we continue to absorb the majority of these costs, these increasing costs may adversely impact our future results of operations.

Additional liabilities relating to changes in tax rates or exposure to additional income tax liabilities could adversely impact our financial condition and cash flow.

We are subject to income taxes in the U.S. and various non-U.S. jurisdictions. Our domestic and international tax liabilities are dependent upon the location of earnings among these different jurisdictions. Our future results of operation could be adversely affected by changes in effective tax rate as a result of changes in tax laws and judicial or regulatory interpretation thereof, the mix of earnings in countries with differing statutory tax rates, changes in overall profitability, changes in U.S. generally accepted accounting principles ("GAAP"), or changes in the valuation of deferred tax assets. In addition, the amount of income taxes paid by the Company is subject to ongoing audits by U.S. federal, state and local tax authorities and by non-U.S. tax authorities. If these audits result in assessments different from amounts reserved, future financial results may include unfavorable adjustments to the Company's tax liabilities, which could have a material adverse effect on the Company's results of operations.

Our indebtedness and restrictive covenants under our credit facilities could limit our operational and financial flexibility.

We have incurred significant indebtedness, and may, and expect to if the potential acquisition of Meggitt is completed, incur additional debt for acquisitions, operations, research and development and capital expenditures, or for other reasons related to our overall capital deployment strategy. Our ability to make interest and scheduled principal payments and meet restrictive covenants could be adversely impacted by changes in the availability, terms and cost of capital, changes in interest rates or changes in our credit ratings or our outlook. These changes could increase our cost of financing and limit our debt capacity, thereby limiting our ability to pursue acquisition opportunities, react to market conditions and meet operational and capital needs, which may place us at a competitive disadvantage.

We carry goodwill on our balance sheet, which is subject to impairment testing and could subject us to significant non-cash charges to earnings in the future if impairment occurs.

We have goodwill recorded on our balance sheet. Goodwill is not amortized, but is tested for impairment annually in the second quarter or more often if events or changes in circumstances indicate a potential impairment may exist. Factors that could indicate that our goodwill is impaired include a decline in our stock price and market capitalization, lower than projected operating results and cash flows, and slower growth rates in our industry. Declines in our stock price, lower operating results and any decline in industry conditions in the future could increase the risk of impairment. Impairment testing incorporates our estimates of future operating results and cash flows, estimates of allocations of certain assets and cash flows among reporting units, estimates of future growth rates, and our judgment regarding the applicable discount rates used on estimated operating results and cash flows. If we determine at a future time that further impairment exists, it may result in a significant non-cash charge to earnings and lower stockholders' equity.

Legal and Regulatory Risks

As a provider of products to the U.S. government, we are subject to additional risks related to future government spending as well as unusual performance conditions and enhanced compliance risks.

In addition to the risks identified herein, doing business with the U.S. government subjects us to unusual risks, including dependence on the level of government spending and compliance with and changes in governmental acquisition regulations. Agreements relating to the sale of products to government entities may be subject to termination, reduction or modification, either at the convenience of the government or for our failure to perform, or other unsatisfactory performance under the applicable contract. We are subject to government investigations of our business practices and compliance with government acquisition regulations. If the Company were charged with wrongdoing as a result of any such investigation, it could be suspended from bidding on or receiving awards of new government contracts, and we could be subject to fines or penalties associated with contract non-compliance or resulting from such investigations, which could have a material adverse effect on our results of operations.

Litigation and legal and regulatory proceedings against the Company could decrease our liquidity, impair our financial condition and adversely affect our results of operations.

From time to time, we are subject to litigation or other commercial disputes and other legal and regulatory proceedings relating to our business. Due to the inherent uncertainties of any litigation, commercial disputes or other legal or regulatory proceedings, we cannot accurately predict their ultimate outcome, including the outcome of any related appeals. An unfavorable outcome could materially adversely impact our business, financial condition and results of operations. Furthermore, as required by U.S. GAAP, we establish reserves based on our assessment of contingencies, including contingencies related to legal claims asserted against us. Subsequent developments in legal proceedings may affect our assessment and estimates of the loss contingency recorded as a reserve and require us to make payments in excess of our reserves, which could have an adverse effect on our results of operations.

We are subject to national and international laws and regulations, such as the anti-corruption laws of the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, relating to our business and our employees. Despite our policies, procedures and compliance programs, our internal controls and compliance systems may not be able to protect the Company from prohibited acts willfully committed by our employees, agents or business partners that would violate such applicable laws and regulations. Any such improper acts could damage the Company's reputation, subject us to civil or criminal judgments, fines or penalties, and could otherwise disrupt the Company's business, and as a result, could materially adversely impact our business, financial condition and results of operations.

Further, our operations are subject to certain antitrust and competition laws in the jurisdictions in which we conduct our business, in particular the United States and Europe. These laws prohibit, among other things, anticompetitive agreements and practices. If any of our commercial agreements or practices are found to violate or infringe such laws, we may be subject to civil and other penalties. We may also be subject to third-party claims for damages. Further, agreements that infringe antitrust and competition laws may be void and unenforceable, in whole or in part, or require modification in order to be lawful and enforceable. Accordingly, any violation of these laws could harm our reputation and could have a material adverse effect on our earnings, cash flows and financial condition.

Due to the nature of our business and products, we may be liable for damages based on product liability claims.

Our businesses expose us to potential product liability risks that are inherent in the design, manufacture and sale of our products and the products of third-party vendors that we use or resell. Significant product liability claims could have a material adverse effect on the Company's financial condition, liquidity and results of operations. Although we currently maintain what we believe to be suitable and adequate product liability insurance, there can be no assurance that we will be able to maintain our insurance on acceptable terms or that our insurance will provide adequate protection against all potential significant liabilities.

Failure to protect our intellectual property and know-how could reduce or eliminate any competitive advantage and reduce our sales and profitability, and the cost of protecting our intellectual property may be significant.

Protecting our intellectual property is critical to our innovation efforts. We own a number of patents, trade secrets, copyrights, trademarks, trade names and other forms of intellectual property related to our products and services throughout the world and the operation of our business. We also have exclusive and non-exclusive rights to intellectual property owned by others. Our intellectual property may be challenged, stolen or otherwise infringed upon by third parties or we may be unable to maintain, renew or enter into new license agreements with third-party owners of intellectual property on reasonable terms. In addition, the global nature of our business increases the risk that our intellectual property may be subject to infringement, theft or other unauthorized use or disclosure by others. In some cases, our ability to protect our intellectual property rights by legal recourse or otherwise may be limited, particularly in countries where laws or enforcement practices are inadequate or undeveloped. Unauthorized use or disclosure of our intellectual property rights or our inability to protect intellectual property and preserve associated intellectual property rights could lead to reputational harm and/or adversely impact our competitive position and results of operations.

We may be required to make material expenditures in order to comply with environmental laws and climate change regulations, or incur additional liabilities under these laws and regulations.

Our operations necessitate the use and handling of hazardous materials and, as a result, subject us to various U.S. federal, state and local laws and regulations, as well as non-U.S. laws, designed to protect the environment and to regulate the discharge of materials into the environment. These laws impose penalties, fines and other sanctions for non-compliance and liability for response costs, property damages and personal injury resulting from past and current spills, disposals or other releases of, or the exposure to, hazardous materials. Among other laws, we are subject to the U.S. federal "Superfund" law, under which we have been designated as a "potentially responsible party" and may be liable for clean-up costs associated with various waste sites, some of which are on the United States Environmental Protection Agency's Superfund priority list. We could incur substantial costs as a result of non-compliance with or liability for cleanup or other costs or damages under environmental laws, including the "Superfund" law.

In addition, increased worldwide focus on climate change issues has led to legislative and regulatory efforts to limit greenhouse gas emissions, including regulation of such emissions through a "cap-and-trade" system globally. Increased regulation of greenhouse gas emissions and other climate change concerns could subject us to additional costs and restrictions, including increased energy and raw material costs. Until definitive regulations are adopted, we are not able to predict how such regulations would affect our business, operations or financial results.

We may be subject to other more stringent environmental laws in the future. If more stringent environmental laws are enacted in the future, these laws could have a material adverse effect on our business, results of operations and financial condition.

ITEM 1B. Unresolved Staff Comments. None.

ITEM 1C. Information about our Executive Officers.

Our executive officers as of August 15, 2021, were as follows:

Name	Position	Officer Since ⁽¹⁾	Age as of 8/15/2021
Thomas L. Williams	Chairman of the Board, Chief Executive Officer and Director	2005	62
Lee C. Banks	Vice Chairman and President and Director	2001	58
Jennifer A. Parmentier	Chief Operating Officer	2015	54
Todd M. Leombruno	Executive Vice President and Chief Financial Officer	2017	51
Mark J. Hart	Executive Vice President – Human Resources & External Affairs	2016	56
William R. "Skip" Bowman	Vice President and President - Instrumentation Group	2016	63
Berend Bracht	Vice President and President – Motion Systems Group	2021	55
Mark T. Czaja	Vice President - Chief Technology and Innovation Officer	2021	59
Angela R. Ives	Vice President and Controller	2021	48
Thomas C. Gentile	Vice President – Global Supply Chain	2017	49
Joseph R. Leonti	Vice President, General Counsel and Secretary	2014	49
Robert W. Malone	Vice President and President – Filtration Group	2014	57
Dinu J. Parel	Vice President and Chief Digital and Information Officer	2018	40
Andrew D. Ross	Vice President and President – Fluid Connectors Group	2012	54
Roger S. Sherrard	Vice President and President – Aerospace Group	2003	55
Andrew M. Weeks	Vice President and President – Engineered Materials Group	2015	58

⁽¹⁾Executive officers are elected by the Board of Directors to serve for a term of one year or until their respective successors are elected, except in the case of death, resignation or removal. Messrs. Williams, Banks, Hart, Leonti, Malone, Ross and Sherrard have served in the executive capacities indicated above during each of the past five years.

Mr. Williams has been a Director since January 2015; Chief Executive Officer since February 2015; and Chairman of the Board since January 2016. He was an Executive Vice President from August 2008 to February 2015 and an Operating Officer from November 2006 to February 2015. He is also a Director of The Goodyear Tire & Rubber Company.

Mr. Banks has been a Director since January 2015 and Vice Chairman and President since August 2021. He was President and Chief Operating Officer from February 2015 to August 2021. He was an Executive Vice President from August 2008 to February 2015 and an Operating Officer from November 2006 to February 2015. He is also a Director of Wabtec Corporation.

Ms. Parmentier has been Chief Operating Officer since August 2021. She was Vice President and President of the Motion Systems Group from February 2019 to August 2021. She was Vice President and President of the Engineered Materials Group from September 2015 to February 2019. She was General Manager of the Hose Products Division from May 2014 to September 2015; and General Manager of the Sporlan Division from May 2012 to May 2014. She is also a Director of Nordson Corporation.

Mr. Hart has been Executive Vice President - Human Resources & External Affairs since January 2016. He was Vice President - Total Rewards from August 2013 to January 2016.

Mr. Leombruno has been Executive Vice President and Chief Financial Officer since January 2021. He was Vice President and Controller from July 2017 to January 2021. He was Vice President and Controller - Engineered Materials Group from January 2015 to June 2017; and Director of Investor Relations from June 2012 to December 2014.

Mr. Bowman has been Vice President and President - Instrumentation Group since September 2016. He was Vice President, Operations - Filtration Group from March 2015 to August 2016; and Vice President, Operations - Fluid Connectors Group from November 2007 to February 2015.

Mr. Bracht has been Vice President and President of the Motion Systems Group since August 2021. He was Vice President of Operations of the Engineered Materials Group since joining the Company in July 2018. He was President and Chief Executive Officer of Bendix Commercial Vehicle Systems LLC from 2015 to 2018. Bendix designs, develops and supplies products under the Bendix brand name for medium- and heavy-duty trucks, tractors, trailers, buses, and other commercial vehicles throughout North America. Prior to Bendix, he held several executive leadership positions during his 24-year career at Bosch Rexroth, including President and Chief Executive Officer of Bosch Rexroth Americas.

Mr. Czaja has been Vice President - Chief Technology and Innovation Officer since January 2021. He was Vice President of Technology and Innovation - Motion Systems Group from August 2019 to December 2020; Vice President of Technology and Innovation - Aerospace Group from August 2004 to July 2019; and Division Engineering Director from October 2000 to July 2004.

Mr. Gentile has been Vice President - Global Supply Chain since July 2017. He was General Manager of the Company's Process Filtration Division from December 2013 to July 2017 and was Vice President of Supply Chain - Filtration Group from July 2008 to November 2013.

Ms. Ives has been Vice President and Controller since January 2021. She was Vice President, Assistant Controller from September 2020 to December 2020; Group VP Controller for the Instrumentation Group from November 2019 to August 2020; and was Division Controller for the Electromechanical and Drives Division from August 2010 to October 2019.

Mr. Leonti has been Vice President, General Counsel and Secretary since July 2014. He was Assistant Secretary from April 2011 to July 2014; and Associate General Counsel from January 2008 to July 2014.

Mr. Malone has been Vice President and President of the Filtration Group since December 2014. He was Vice President - Operations of the Filtration Group from January 2013 to December 2014.

Mr. Parel has been Vice President and Chief Digital and Information Officer since October 2020. He was Vice President and Chief Information Officer from October 2018 to October 2020. He was Vice President and Chief Information Officer at Dover Corporation from May 2016 through October 2018. Prior to Dover, he held several IT leadership roles at Baker Hughes from March 2010 to May 2016, including IT Integration Leader and Senior Director, IT North America.

Mr. Ross has been Vice President and President - Fluid Connectors Group since September 2015. He was Vice President and President of the Engineered Materials Group from July 2012 to September 2015.

Mr. Sherrard has been Vice President and President of the Aerospace Group since July 2012. He was President of the Automation Group from March 2005 to July 2012. Prior to that he was President of the Instrumentation Group and has been a Corporate Vice President since November 2003.

Mr. Weeks has been Vice President and President of the Engineered Materials Group since February 2019. He was Vice President and President of the Motion Systems Group from September 2015 to February 2019. He was Vice President - Operations of the Aerospace Group from April 2013 to September 2015.

ITEM 2. Properties. Our corporate headquarters is located in Cleveland, Ohio, and, at June 30, 2021, the Company maintained approximately 315 manufacturing plants. We also maintain various sales and administrative offices and distribution centers throughout the world. None of these manufacturing plants, administrative offices or distribution centers are individually material to our operations. The facilities are situated in 38 states within the United States and in 44 other countries. We own the majority of our manufacturing plants, and our leased properties primarily consist of sales and administrative offices and distribution centers.

We believe that our properties have been adequately maintained, are in good condition generally and are suitable and adequate for our business as presently conducted. The extent to which we utilize our properties varies by property and from time to time. We believe that our restructuring efforts have brought capacity levels closer to present and anticipated needs. Most of our manufacturing facilities remain capable of handling volume increases.

ITEM 3. Legal Proceedings. None. From time to time we are involved in matters that involve governmental authorities as a party under federal, state and local laws that have been enacted or adopted regulating the discharge of materials into the environment or primarily for the purpose of protecting the environment. We will report such matters that exceed, or that we reasonably believe may exceed, \$1.0 million or more in monetary sanctions.

ITEM 4. Mine Safety Disclosures. Not applicable.

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

- (a) **Market for the Registrant's Common Equity.** The Company's common stock is listed for trading on the New York Stock Exchange ("NYSE") under the symbol "PH". As of July 31, 2021, the number of shareholders of record of the Company was 3,292.
- (b) **Use of Proceeds.** Not Applicable.
- (c) **Purchases of Equity Securities by the Issuer and Affiliated Purchasers.**

ISSUER PURCHASES OF EQUITY SECURITIES

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
April 1, 2021 through April 30, 2021	52,600	\$ 317.78	52,600	9,805,825
May 1, 2021 through May 31, 2021	50,500	\$ 311.38	50,500	9,755,325
June 1, 2021 through June 30, 2021	58,345	\$ 300.92	58,345	9,696,980
Total	<u>161,445</u>		<u>161,445</u>	

⁽¹⁾ On October 22, 2014, the Company publicly announced that the Board of Directors increased the overall maximum number of shares authorized for repurchase under the Company's share repurchase program, first announced on August 16, 1990, so that, beginning on October 22, 2014, the maximum aggregate number of shares authorized for repurchase was 35 million shares. There is no limitation on the amount of shares that can be repurchased in a fiscal year. There is no expiration date for this program. In March 2020, the Company suspended the share repurchase program in response to business uncertainty resulting from the COVID-19 pandemic. During 2021, the Company reinitiated the share repurchase program and began repurchasing shares under the program in February 2021.

ITEM 6. [Reserved]

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward-Looking Statements

Forward-looking statements contained in this and other written and oral reports are made based on known events and circumstances at the time of release, and as such, are subject in the future to unforeseen uncertainties and risks. Often but not always, these statements may be identified from the use of forward-looking terminology such as "anticipates," "believes," "may," "should," "could," "potential," "continues," "plans," "forecasts," "estimates," "projects," "predicts," "would," "intends," "expects," "targets," "is likely," "will," or the negative of these terms and similar expressions, and include all statements regarding future performance, earnings projections, events or developments. Neither the Company nor any of its respective associates or directors, officers or advisers, provides any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statements in this document will actually occur. The Company cautions readers not to place undue reliance on these statements. It is possible that the future performance and earnings projections of the Company, including its individual segments, may differ materially from past performance or current expectations, depending on economic conditions within its mobile, industrial and aerospace markets, and the Company's ability to maintain and achieve anticipated benefits associated with announced realignment activities, strategic initiatives to improve operating margins, actions taken to combat the effects of the current economic environment, and growth, innovation and global diversification initiatives. Additionally, the actual impact of changes in tax laws in the United States and foreign jurisdictions and any judicial or regulatory interpretation thereof on future performance and earnings projections may impact the Company's tax calculations. A change in the economic conditions in individual markets may have a particularly volatile effect on segment performance.

Among other factors which may affect future performance are:

- the impact of the global outbreak of COVID-19 and governmental and other actions taken in response;
- changes in business relationships with and purchases by or from major customers, suppliers or distributors, including delays or cancellations in shipments;
- disputes regarding contract terms or significant changes in financial condition, changes in contract cost and revenue estimates for new development programs and changes in product mix;
- ability to identify acceptable strategic acquisition targets; uncertainties surrounding timing, successful completion or integration of acquisitions and similar transactions, including the integration of Lord and Exotic and the proposed acquisition of Meggitt; and our ability to effectively manage expanded operations from the acquisitions of Lord and Exotic and the proposed acquisition of Meggitt;
- the ability to successfully divest businesses planned for divestiture and realize the anticipated benefits of such divestitures;
- the determination to undertake business realignment activities and the expected costs thereof and, if undertaken, the ability to complete such activities and realize the anticipated cost savings from such activities;
- ability to implement successfully capital allocation initiatives, including timing, price and execution of share repurchases;
- availability, limitations or cost increases of raw materials, component products and/or commodities that cannot be recovered in product pricing;
- ability to manage costs related to insurance and employee retirement and health care benefits;
- legal and regulatory developments and changes;
- additional liabilities relating to changes in tax rates or exposure to additional income tax liabilities;
- ability to enter into, own, renew, protect and maintain intellectual property and know-how;
- leverage and future debt service obligations;
- potential impairment of goodwill;
- compliance costs associated with environmental laws and regulations;
- potential labor disruptions;
- uncertainties surrounding the ultimate resolution of outstanding legal proceedings, including the outcome of any appeals;
- global competitive market conditions, including U.S. trade policies and resulting effects on sales and pricing;
- global economic factors, including manufacturing activity, air travel trends, currency exchange rates, difficulties entering new markets and general economic conditions such as inflation, deflation, interest rates, credit availability and changes in consumer habits and preferences;
- local and global political and economic conditions;

- inability to obtain, or meet conditions imposed for, required governmental and regulatory approvals;
- government actions and natural phenomena such as floods, earthquakes, hurricanes and pandemics;
- increased cyber security threats and sophisticated computer crime; and
- success of business and operating initiatives.

The Company makes these statements as of the date of the filing of its Annual Report on Form 10-K for the year ended June 30, 2021, and undertakes no obligation to update them unless otherwise required by law.

Overview

The Company is a global leader in motion and control technologies. For more than a century, the Company has engineered the success of its customers in a wide range of diversified industrial and aerospace markets.

By aligning around our purpose, Enabling Engineering Breakthroughs that Lead to a Better Tomorrow, Parker is better positioned for the challenges and opportunities of tomorrow.

The Win Strategy 3.0 is Parker's business system that defines the goals and initiatives that drive growth, transformation and success. It works with our purpose, which is a foundational element of The Win Strategy, to engage team members and create responsible and sustainable growth. Our shared values shape our culture and our interactions with stakeholders and the communities in which we operate and live.

We believe many opportunities for profitable growth are available. The Company intends to focus primarily on business opportunities in the areas of energy, water, food, environment, defense, life sciences, infrastructure and transportation. We believe we can meet our strategic objectives by:

- Serving the customer and continuously enhancing its experience with the Company;
- Successfully executing The Win Strategy initiatives relating to engaged people, premier customer experience, profitable growth and financial performance;
- Maintaining a decentralized division and sales company structure;
- Fostering a safety-first and entrepreneurial culture;
- Engineering innovative systems and products to provide superior customer value through improved service, efficiency and productivity;
- Delivering products, systems and services that have demonstrable savings to customers and are priced by the value they deliver;
- Enabling a sustainable future by providing innovative technology solutions that offer a positive, global environmental impact and operating responsibly by reducing our energy use and emissions;
- Acquiring strategic businesses;
- Organizing around targeted regions, technologies and markets;
- Driving efficiency by implementing lean enterprise principles; and
- Creating a culture of empowerment through our values, inclusion and diversity, accountability and teamwork.

Our order rates provide a near-term perspective of the Company's outlook particularly when viewed in the context of prior and future order rates. The Company publishes its order rates on a quarterly basis. The lead time between the time an order is received and revenue is realized generally ranges from one day to 12 weeks for mobile and industrial orders and from one day to 18 months for aerospace orders.

In March 2020, the World Health Organization declared the outbreak of COVID-19 a pandemic. We continue to monitor the impact of the COVID-19 pandemic, which has negatively impacted demand and continues to create economic uncertainty. Disruption within the aerospace industry, which is facing the consequences of travel restrictions and considerably lower demand, was significant and is expected to continue. The extent to which our business and results of operations will be impacted by the pandemic over the long term will depend on future developments that cannot be accurately predicted at this time. These developments include the availability, acceptance, distribution and effectiveness of vaccines; new information concerning the severity and spread of COVID-19 and its variants; and actions by government authorities to contain the pandemic or mitigate its economic, public health and other impacts.

We continue to prioritize the safety of our team members. To minimize the spread of COVID-19 in our workplaces, we implemented rigorous prevention, screening and hygiene protocols. Additionally, we are strategically managing costs through reductions in discretionary spending. We continue to prioritize capital expenditures related to safety and strategic investments.

At the same time, we are appropriately addressing the ongoing needs of our business so that we may continue to serve our customers.

The discussion below is structured to separately discuss the financial statements presented in Part II, Item 8 of this Annual Report on Form 10-K. The term "year" and references to specific years refer to the applicable fiscal year. Discussion of the 2019 financial statements is included in Part II, Item 7 of the Company's 2020 Annual Report on Form 10-K.

CONSOLIDATED STATEMENT OF INCOME

The Consolidated Statement of Income summarizes the Company's operating performance. The discussion below compares the operating performance in 2021 and 2020.

(dollars in millions)	2021	2020*
Net sales	\$ 14,348	\$ 13,696
Gross profit margin	27.2 %	24.8 %
Selling, general and administrative expenses	\$ 1,527	\$ 1,657
Selling, general and administrative expenses, as a percent of sales	10.6 %	12.1 %
Interest expense	\$ 250	\$ 308
Other (income), net	(17)	(67)
Gain on disposal of assets	(109)	(1)
Effective tax rate	22.3 %	20.2 %
Net income attributable to common shareholders	\$ 1,746	\$ 1,202

*Year ended June 30, 2020 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

Net sales in 2021 increased from the 2020 amount due to higher volume in both the Diversified Industrial International and Diversified Industrial North American businesses, partially offset by lower volume in the Aerospace Systems Segment. The effect of currency rate changes increased net sales in 2021 by approximately \$257 million, of which \$244 million was attributable to the Diversified Industrial International operations. Prior-year acquisitions contributed approximately \$394 million in net sales during 2021.

Gross profit margin (calculated as net sales less cost of sales, divided by net sales) increased in 2021 primarily due to higher margins in all businesses. Gross profit margin in 2021 included net foreign currency transaction gains of \$11 million and \$10 million in 2021 and 2020, respectively. Gross profit margin also benefited from the absence of acquisition-related expenses, which were included in cost of sales in 2020, of \$69 million. Cost of sales included business realignment and acquisition integration charges of \$35 million in 2021 compared to \$60 million in 2020.

Selling, general and administrative expenses ("SG&A") decreased eight percent in 2021 primarily due to benefits from lower discretionary spending and wage and salary expense resulting from actions taken in response to business conditions resulting from the COVID-19 pandemic. During 2021, SG&A also benefited from the absence of acquisition-related expenses of \$119 million, which were incurred in 2020. These benefits were partially offset by higher intangible asset amortization expense related to prior-year acquisitions and higher stock compensation expense. SG&A also included business realignment and acquisition integration charges of \$23 million and \$38 million in 2021 and 2020, respectively.

Interest expense in 2021 decreased due to both lower interest rates and lower average debt outstanding.

Other (income), net included the following:

(dollars in millions)	2021	2020
Expense (income)		
Income related to equity method investments	\$ (41)	\$ (75)
Non-service components of retirement benefit cost	49	49
Interest income	(7)	(31)
Other items, net	(18)	(10)
	<u>\$ (17)</u>	<u>\$ (67)</u>

Gain on disposal of assets in 2021 primarily consists of a gain of \$101 million on the sale of land. In 2020, it includes gains of \$12 million on the sale of real estate, partially offset by net losses on divestitures and asset sales and writedowns.

Effective tax rate in 2021 was higher than 2020 primarily due to an overall decrease in discrete tax benefits.

BUSINESS SEGMENT INFORMATION

The Business Segment information presents sales and operating income on a basis that is consistent with the manner in which the Company's various businesses are managed for internal review and decision-making.

Diversified Industrial Segment

(dollars in millions)	2021	2020
Net Sales		
North America	\$ 6,676	\$ 6,456
International	5,284	4,505
Operating income		
North America	1,247	986
International	988	675
Operating income as a percent of sales		
North America	18.7 %	15.3 %
International	18.7 %	15.0 %
Backlog	\$ 3,239	\$ 2,117

The Diversified Industrial Segment operations experienced the following percentage changes in net sales:

	2021
Diversified Industrial North America – as reported	3.4 %
Acquisitions	2.9 %
Currency	0.1 %
Diversified Industrial North America – without acquisitions and currency	0.4 %
Diversified Industrial International – as reported	17.3 %
Acquisitions	3.0 %
Currency	5.4 %
Diversified Industrial International – without acquisitions and currency	8.9 %
Total Diversified Industrial Segment – as reported	9.1 %
Acquisitions	2.9 %
Currency	2.3 %
Total Diversified Industrial Segment – without acquisitions and currency	3.9 %

The above presentation reconciles the percentage changes in net sales of the Diversified Industrial Segment reported in accordance with U.S. GAAP to percentage changes in net sales adjusted to remove the effects of acquisitions made within the prior four fiscal quarters as well as the effects of currency exchange rates (a non-GAAP measure). The effects of acquisitions and currency exchange rates are removed to allow investors and the Company to meaningfully evaluate the percentage changes in net sales on a comparable basis from period to period.

Sales in 2021 for the Diversified Industrial North American operations increased 3.4 percent from 2020. Acquisitions increased sales by \$188 million, and the effect of currency exchange rates increased sales by approximately \$8 million. Excluding acquisitions and the effect of currency rate changes, sales in 2021 for the Diversified Industrial North American operations increased 0.4 percent from prior-year levels reflecting higher demand from distributors and end users in the refrigeration, cars and light truck, farm and agriculture and life sciences markets, partially offset by a decrease in end-user demand in the oil and gas and general industrial machinery markets.

Sales in the Diversified Industrial International operations increased 17.3 percent in 2021. Acquisitions increased sales by approximately \$136 million in 2021. The effect of currency rate changes increased sales by \$244 million, reflecting the weakening of the U.S. dollar primarily against currencies in the Eurozone countries, China and the United Kingdom. Excluding acquisitions and the effect of currency rate changes, sales in 2021 for the Diversified Industrial International operations increased 8.9 percent from 2020 levels primarily due to higher demand from distributors and end users in both the mobile and industrial markets. During 2021, the Asia Pacific region, Europe, and Latin America accounted for approximately 60 percent, 26 percent, and 14 percent, respectively, of the increase in sales.

Within the Asia Pacific region, the increase in sales was primarily due to higher demand from distributors and end users in the construction equipment, semiconductor, cars and light truck, general industrial machinery, engine and life sciences markets, partially offset by a decrease in end-user demand in the oil and gas market.

Within Europe, the increase in sales was primarily due to higher demand from distributors and end users in the construction equipment, heavy-duty truck and power generation markets, partially offset by a decrease in end-user demand in the general industrial machinery, oil and gas and marine markets.

Within Latin America, the increase in sales was primarily due to higher demand from distributors and end users in the farm and agriculture, construction equipment, cars and light truck and heavy-duty truck markets, partially offset by a decrease in end-user demand in the oil and gas market.

Operating margins in 2021 increased in both the Diversified Industrial North American and International operations primarily due to higher sales volume and benefits from overall cost reductions, including lower discretionary spending, wage and salary reductions, current and prior-year restructuring actions in response to business conditions resulting from the COVID-19 pandemic, the absence of acquisition-related expenses, and productivity improvements.

The following business realignment and acquisition integration charges are included in Diversified Industrial North America and Diversified Industrial International operating income:

(dollars in millions)	2021		2020	
Diversified Industrial North America	\$	14	\$	41
Diversified Industrial International		36		32

During 2021, business realignment charges primarily include actions taken to address the impact of COVID-19 on our business, but also include charges related to the Company's simplification initiative. The simplification initiative is aimed at reducing organizational and process complexity and is being implemented by operating units around the world. During 2020, business realignment charges primarily include charges related to the Company's simplification initiative, but also include permanent workforce reductions to address the impact of COVID-19 on our business. Acquisition integration charges relate to the 2020 acquisition of Lord.

The majority of the Diversified Industrial International business realignment and acquisition integration charges were incurred in Europe. We anticipate that cost savings realized from the workforce reduction measures taken during 2021 will increase operating income for 2022 by approximately one percent in both the Diversified Industrial North American and International operations. In 2022, we expect to continue to take actions necessary to structure appropriately the operations of the Diversified Industrial Segment. These actions are expected to result in approximately \$40 million in business realignment and acquisition integration charges in 2022. However, continually changing business conditions could impact the ultimate costs we incur.

The increase in Diversified Industrial Segment backlog in 2021 was primarily due to orders exceeding shipments in both the North American and International businesses, with each business accounting for approximately 50 percent of the change. Within the International business, this increase in backlog was primarily related to orders exceeding shipments in both Europe and the Asia Pacific region. Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale.

Aerospace Systems Segment

(dollars in millions)	2021	2020
Sales	\$ 2,388	\$ 2,735
Operating income	403	477
Operating income as a percent of sales	16.9 %	17.4 %
Backlog	\$ 3,264	\$ 3,021

Sales in 2021 were lower than the 2020 level primarily due to lower volume in the commercial OEM and aftermarket businesses due to the market conditions as a result of COVID-19. This decrease was partially offset by higher volume in the military OEM and aftermarket businesses as well as a \$71 million increase in sales from prior-year acquisitions.

Operating margin decreased in 2021 primarily due to lower sales volume in the commercial OEM and aftermarket businesses and lower aftermarket profitability. Lower sales volume and aftermarket profitability were partially offset by lower engineering development expenses, overall cost reductions, lower business realignment and acquisition integration charges and the benefits from such actions.

The disruption in the aerospace industry due to the COVID-19 pandemic has been significant and we have taken actions necessary to structure appropriately the operations of the Aerospace Systems Segment. We do not currently intend to incur significant additional business realignment and acquisition integration charges in 2022. However, continually changing business conditions could impact the ultimate costs we incur. We anticipate that cost savings realized from the workforce reduction measures taken during 2021 will increase segment operating income for 2022 by approximately two percent.

The increase in backlog in 2021 was primarily due to orders exceeding shipments in the military OEM business, partially offset by shipments exceeding orders in the military aftermarket and commercial OEM and aftermarket businesses. Backlog consists of written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release date has been agreed to with the customer. The dollar value of backlog is equal to the amount that is expected to be billed to the customer and reported as a sale.

Corporate general & administrative expenses

(dollars in millions)	2021	2020
Expense (income)		
Corporate general and administrative expense	\$ 178	\$ 171
Corporate general and administrative expense, as a percent of sales	1.2 %	1.2 %

Corporate general and administrative expenses increased slightly in 2021 primarily due to increases in stock compensation expense, deferred compensation expense and charitable contributions. These increases were partially offset by benefits from lower discretionary spending and wage and salary expense as a result of actions taken in response to business conditions resulting from the COVID-19 pandemic.

Other (income) expense (in the Business Segment Information)

(dollars in millions)	2021	2020*
Expense (income)		
Foreign currency transaction	\$ (11)	\$ (10)
Stock-based compensation	61	52
Pensions	22	30
Acquisition expenses	5	119
Gain on disposal of assets	(109)	(1)
Interest income	(7)	(31)
Other items, net	2	(7)
	<u>\$ (37)</u>	<u>\$ 152</u>

*Year ended June 30, 2020 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

Foreign currency transaction primarily relates to the impact of changes in foreign exchange rates on cash, marketable securities and other investments and intercompany transactions. Prior-year acquisition expenses primarily relate to the acquisitions of Lord and Exotic. Gain on disposal of assets in 2021 primarily consists of a gain of \$101 million on the sale of land. In 2020, it includes gains of \$12 million on the sale of real estate, partially offset by net losses on divestitures and asset sales and writedowns.

CONSOLIDATED BALANCE SHEET

The Consolidated Balance Sheet shows the Company's financial position at year end, compared with the previous year end. This discussion provides information to assist in assessing factors such as the Company's liquidity and financial resources.

(dollars in millions)	2021	2020*
Cash	\$ 772	\$ 756
Trade accounts receivable, net	2,184	1,854
Inventories	2,091	1,964
Notes payable and long-term debt payable within one year	3	810
Long-term debt	6,582	7,652
Shareholders' equity	8,398	6,227
Working capital	\$ 2,520	\$ 1,886
Current ratio	1.8	1.6

*Year ended June 30, 2020 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

Cash (comprised of cash and cash equivalents and marketable securities and other investments) includes \$467 million and \$726 million held by the Company's foreign subsidiaries at June 30, 2021 and 2020, respectively. The Company does not permanently reinvest certain foreign earnings. The distribution of these earnings could result in non-federal U.S. or foreign taxes. All other undistributed foreign earnings remain permanently reinvested. Refer to Note 5 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Trade accounts receivable, net are receivables due from customers for sales of product. Days sales outstanding relating to trade receivables for the Company was 50 days in 2021 and 54 days in 2020. We believe that our receivables are collectible and appropriate allowances for credit losses have been recorded.

Inventories as of June 30, 2021 increased by \$127 million (which includes an increase of \$41 million from the effect of foreign currency translation). After consideration of the effect of foreign currency translation, inventories increased primarily due to an increase in the Diversified Industrial Segment, partially offset by a decrease in the Aerospace Systems Segment. Days supply of inventory on hand was 75 days in 2021 and 89 days in 2020.

Notes payable and long-term debt payable within one year decreased from 2020 primarily due to the repayment of commercial paper notes outstanding. Refer to Note 9 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Long-term debt decreased from 2020 primarily due to the repayment of term loans. Refer to Note 10 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Shareholders' equity activity during 2021 included a decrease of \$100 million related to share repurchases, an increase of \$664 million related to pensions and postretirement benefits resulting from investment gains on plan assets and an increase of \$328 million related to foreign currency translation adjustments.

CONSOLIDATED STATEMENT OF CASH FLOWS

The Consolidated Statement of Cash Flows reflects cash inflows and outflows from the Company's operating, investing and financing activities.

A summary of cash flows follows:

(dollars in millions)	2021	2020
Cash provided by (used in):		
Operating activities	\$ 2,575	\$ 2,071
Investing activities	—	(5,024)
Financing activities	(2,623)	449
Effect of exchange rates	96	(30)
Net increase (decrease) in cash and cash equivalents	\$ 48	\$ (2,534)

Cash flows from operating activities in 2021 reflects an increase in net income of \$545 million and an increase of \$12 million from cash provided by working capital items. We remain focused on managing our inventory and other working capital requirements.

Cash flows from investing activities in 2021 includes net proceeds from the sale of land of approximately \$111 million. Cash flows from investing activities in 2020 includes \$5,076 million of acquisition-related activity. It also includes \$121 million of proceeds from the redemption of company-owned life insurance investments associated with the Company's deferred compensation programs as well as proceeds of \$44 million related to the settlement of a cross-currency swap.

Cash flows from financing activities in 2021 includes net commercial paper repayments of \$723 million and term loan repayments of \$1,210 million. Cash flows from financing activities in 2020 includes proceeds from the issuance of the \$925 million and \$800 million term loans and the repayment of approximately \$740 million of long-term debt. Refer to Note 10 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion. The Company repurchased 0.3 million common shares for \$100 million during 2021 compared to the repurchase of 0.8 million common shares for \$147 million in 2020.

Dividends have been paid for 284 consecutive quarters, including a yearly increase in dividends for the last 65 years. The current annual dividend rate is \$4.12 per common share.

Our goal is to maintain an investment-grade credit profile. The rating agencies periodically update our credit ratings as events occur. At June 30, 2021, the long-term credit ratings assigned to the Company's senior debt securities by the credit rating agencies engaged by the Company were as follows:

Fitch Ratings	BBB+
Moody's Investor Services, Inc.	Baa1
Standard & Poor's	BBB+

We continue to actively monitor our liquidity position and working capital needs and prioritize capital expenditures related to safety and strategic investments. The Company remains in a stable overall capital resources and liquidity position that is adequate to meet its projected needs. In March 2020, the Company suspended the share repurchase program in response to business uncertainty resulting from the COVID-19 pandemic. During February 2021, the Company reinitiated the share repurchase program and repurchased shares totaling \$100 million during the remainder of the fiscal year.

The Company has a line of credit totaling \$2,500 million through a multi-currency revolving credit agreement with a group of banks, all of which was available as of June 30, 2021. The credit agreement expires in September 2024; however, the Company has the right to request a one-year extension of the expiration date on an annual basis, which request may result in changes to the current terms and conditions of the credit agreement. Advances from the credit agreement can be used for general corporate purposes, including acquisitions, and for the refinancing of existing indebtedness. The credit agreement requires the payment of an annual facility fee, the amount of which is dependent upon the Company's credit ratings. Although a lowering of the Company's credit ratings would increase the cost of future debt, it would not limit the Company's ability to use the credit agreement nor would it accelerate the repayment of any outstanding borrowings. Refer to Note 9 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

The Company is currently authorized to sell up to \$2,500 million of short-term commercial paper notes. There were no outstanding commercial paper notes as of June 30, 2021, and the largest amount of commercial paper notes outstanding during the last quarter of 2021 was \$203 million.

The Company's credit agreements and indentures governing certain debt securities contain various covenants, the violation of which would limit or preclude the use of the credit agreements for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the indentures. Based on the Company's rating level at June 30, 2021, the most restrictive financial covenant provides that the ratio of debt to debt-shareholders' equity cannot exceed 0.65 to 1.0. At June 30, 2021, the Company's debt to debt-shareholders' equity ratio was 0.44 to 1.0. We are in compliance and expect to remain in compliance with all covenants set forth in the credit agreement and indentures.

On August 2, 2021, the Company announced that it reached an agreement on the terms of a recommended cash acquisition of the entire issued and to be issued ordinary share capital of Meggitt for 800 pence per share, or approximately £6,308 million. We intend to fund the proposed acquisition with cash and new debt. The proposed acquisition remains subject to customary closing conditions, including regulatory clearances and approval by Meggitt's shareholders.

In connection with the proposed acquisition, the Company entered into a bridge credit agreement (the "Bridge Credit Agreement") on August 2, 2021. Under the Bridge Credit Agreement, lenders are committed to provide senior, unsecured financing in the aggregate principal amount of £6,524 million. Any borrowings made under the Bridge Credit Agreement would mature 364 days from the initial funding date. The commitments are intended to be drawn to finance the proposed acquisition of Meggitt only to the extent that we do not arrange for alternative financing prior to closing.

Contractual Obligations - The total amount of gross unrecognized tax benefits, including interest, for uncertain tax positions was \$119 million at June 30, 2021. Payment of these obligations would result from settlements with worldwide taxing authorities. Due to the difficulty in determining the timing of the settlements, these obligations are not included in the following summary of the Company's fixed contractual obligations. References to Notes are to the Notes to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

(dollars in millions)	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Contractual obligations					
Transition tax payments related to U.S. Tax Cuts and Jobs Act ("TCJ Act") (Note 5)	\$ 187	\$ —	\$ 59	\$ 128	\$ —
Long-term debt (Note 10)	6,646	3	879	1,331	4,433
Interest on long-term debt	3,207	227	436	363	2,181
Operating leases (Note 11)	142	42	49	26	25
Retirement benefits (Note 12)	146	108	10	9	19
Total	<u>\$ 10,328</u>	<u>\$ 380</u>	<u>\$ 1,433</u>	<u>\$ 1,857</u>	<u>\$ 6,658</u>

OFF-BALANCE SHEET ARRANGEMENTS

The Company does not have off-balance sheet arrangements.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The policies discussed below are considered by management to be more critical than other policies because their application places the most significant demands on management's judgment.

Revenue Recognition - Revenues are recognized when control of performance obligations, which are distinct goods or services within the contract, is transferred to the customer. Control is transferred when the customer has the ability to direct the use of and obtain the benefits from the goods or services. A majority of our revenues are recognized at a point in time when control is transferred to the customer, which is generally at the time of shipment. However, a portion of our revenues are recognized over time if the customer simultaneously receives control as we perform work under a contract, if the customer controls the asset as it is being produced, or if the product has no alternative use and we have a contractual right to payment.

For contracts where revenue is recognized over time, we use the cost-to-cost, efforts expended or units of delivery method depending on the nature of the contract, including length of production time. The estimation of costs and efforts expended requires judgment on the part of management due to the duration of the contractual agreements as well as the technical nature of the products involved. Adjustments to these estimates are made on a consistent basis and a contract reserve is established when the estimated costs to complete a contract exceed the expected contract revenues.

When there are multiple performance obligations within a contract, the transaction price is allocated to each performance obligation based on its standalone selling price. The primary method used to estimate a standalone selling price is the price observed in standalone sales to customers for the same product or service. Revenue is recognized when control of the individual performance obligations is transferred to the customer.

We consider the contractual consideration payable by the customer and assesses variable consideration that may affect the total transaction price. Variable consideration is included in the estimated transaction price when there is a basis to reasonably estimate the amount, including whether the estimate should be constrained in order to avoid a significant reversal of revenue in a future period. These estimates are based on historical experience, anticipated performance under the terms of the contract and our best judgment at the time.

Impairment of Goodwill and Long-Lived Assets - We test goodwill for impairment at the reporting unit level on an annual basis and between annual tests whenever events or circumstances indicate the carrying value of a reporting unit may exceed its fair value. Our six reporting units are equivalent to our operating segments. As quoted market prices are not available for our reporting units, determining whether an impairment occurred requires the valuation of the respective reporting unit, which is estimated using both income-based and market-based valuation methods. The income-based valuation method utilizes a discounted cash flow model which requires several assumptions, including future sales growth and operating margin levels as well as assumptions regarding future industry-specific market conditions. Each reporting unit regularly prepares discrete operating forecasts and uses these forecasts as the basis for the assumptions in the discounted cash flow analysis. Within the discounted cash flow models, the Company uses a discount rate, commensurate with its cost of capital but adjusted for inherent business risks, and an appropriate terminal growth factor. The market-based valuation performed for each reporting unit includes an analysis consisting of market-adjusted multiples based on key data points for guideline public companies. We also reconcile the estimated aggregate fair value of our reporting units resulting from these procedures to our overall market capitalization.

At December 31, 2020, the Company performed its annual goodwill impairment test for each of its six reporting units. The results of this test indicated the fair value substantially exceeded carrying value for all reporting units. We continually monitor our reporting units for impairment indicators and update assumptions used in the most recent calculation of a reporting unit's fair value as appropriate. We did not identify any events or circumstances during 2021 that required performance of an interim impairment test.

Long-lived assets held for use, which primarily includes finite-lived intangible assets and property, plant and equipment, are evaluated for impairment whenever events or circumstances indicate that the undiscounted net cash flows to be generated by their use over their expected useful lives and eventual disposition are less than their carrying value. The long-term nature of these assets requires the estimation of their cash inflows and outflows several years into the future and only takes into consideration technological advances known at the time of the impairment test. During 2021, the Company did not record any material impairment related to long-lived assets.

Pensions - The annual net periodic expense and benefit obligations related to the Company's defined benefit plans are determined on an actuarial basis. This determination requires critical assumptions regarding the discount rate, long-term rate of return on plan assets, increases in compensation levels and amortization periods for actuarial gains and losses. Assumptions are determined based on Company data and appropriate market indicators and are evaluated each year as of the plans' measurement date. Changes in the assumptions to reflect actual experience as well as the amortization of actuarial gains and losses could result in a material change in the annual net periodic expense and benefit obligations reported in the financial statements.

For the Company's domestic qualified defined benefit plan, a 50 basis point change in the assumed long-term rate of return on plan assets is estimated to have an \$18 million increase in annual pension expense and a 50 basis point decrease in the discount rate is estimated to increase annual pension expense by \$27 million. As of June 30, 2021, \$707 million of past years' net actuarial losses related to the Company's domestic qualified defined benefit plan are subject to amortization in the future. These losses will generally be amortized over approximately seven years and will negatively affect earnings in the future. Any actuarial gains experienced in future years will help reduce the effect of the net actuarial loss amortization. Further information on pensions is provided in Note 12 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Income Taxes - Significant judgment is required in determining the Company's income tax expense and in evaluating tax positions. Deferred income tax assets and liabilities have been recorded for the differences between the financial accounting and income tax basis of assets and liabilities. Factors considered by the Company in determining the probability of realizing deferred income tax assets include forecasted operating earnings, available tax planning strategies and the time period over which the temporary differences will reverse. The Company reviews its tax positions on a regular basis and adjusts the balances as new information becomes available. For those tax positions where it is more likely than not that a tax benefit will be sustained, the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon examination by a taxing authority that has full knowledge of all relevant information will be recorded. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit has been recognized in the Consolidated Financial Statements. Further information on income taxes is provided in Note 5 to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Loss Contingencies - The Company has a number of loss exposures incurred in the ordinary course of business such as environmental claims, product liability and litigation reserves. Establishing loss accruals for these matters requires management's estimate and judgment with regards to risk exposure and ultimate liability or realization. We review these loss accruals periodically and make adjustments to reflect the most recent facts and circumstances.

RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

Recently issued accounting pronouncements are described in Note 1 to the Consolidated Financial Statements, included in Part II, Item 8 of this Annual Report on Form 10-K.

In November 2020, the SEC issued Final Rule Release No. 33-10890, Management's Discussion and Analysis, Selected Financial Data, and Supplementary Financial Information. This rule, which became effective on February 10, 2021, amended certain SEC disclosure requirements in order to modernize, simplify and enhance certain financial disclosure requirements in Regulation S-K. Specifically, the amendments eliminate the requirement for Selected Financial Data, streamline the requirement to disclose Supplementary Financial Information, and amend Management's Discussion and Analysis. The final rule is applicable for fiscal years ending on or after August 9, 2021, however, early adoption on an Item-by-Item basis is permitted after February 10, 2021. We early adopted the amendments to two items resulting in the elimination of Item 301, Selected Financial Data, from Part II, Item 6 of this report and the omission of Regulation S-K Item 302(a), Supplementary Financial Information, from the notes to our consolidated financial statements in Part II, Item 8 of this report.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk.

The Company manages foreign currency transaction and translation risk by utilizing derivative and non-derivative financial instruments, including forward exchange contracts, costless collar contracts, cross-currency swap contracts and certain foreign denominated debt designated as net investment hedges. The derivative financial instrument contracts are with major investment grade financial institutions and we do not anticipate any material non-performance by any of the counterparties. The Company does not hold or issue derivative financial instruments for trading purposes.

Derivative financial instruments are recognized on the Consolidated Balance Sheet as either assets or liabilities and are measured at fair value. Further information on the fair value of these contracts is provided in Part II, Item 8 of this Annual Report on Form 10-K. Derivatives that are not designated as hedges are adjusted to fair value by recording gains and losses through the Consolidated Statement of Income. Derivatives that are designated as hedges are adjusted to fair value by recording gains and losses through accumulated other comprehensive income (loss) in the Consolidated Balance Sheet until the hedged item is recognized in earnings. For cross-currency swaps measured using the spot method, the periodic interest settlements are recognized directly in earnings through interest expense. The translation of the foreign denominated debt that has been designated as a net investment hedge is recorded in accumulated other comprehensive income (loss) and remains there until the underlying net investment is sold or substantially liquidated.

The Company's debt portfolio contains variable rate debt, inherently exposing the Company to interest rate risk. The Company's objective is to maintain a 60/40 mix between fixed rate and variable rate debt thereby limiting its exposure to changes in near-term interest rates. At June 30, 2021, our debt portfolio did not include any variable rate debt. However, a 100 basis point increase in near-term interest rates would increase annual interest expense on weighted average commercial paper balances during 2021 by approximately \$5 million.

As discussed elsewhere in this report, the COVID-19 pandemic is having, and likely will continue to have, an adverse effect on our business, and its future impacts remain unpredictable. As we cannot anticipate the ultimate duration or scope of the COVID-19 pandemic, the ultimate financial impact to our results cannot be reasonably estimated, but could be material.

ITEM 8. Financial Statements and Supplementary Data.

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<u>Financial Statements</u>	
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Parker-Hannifin Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Parker-Hannifin Corporation and subsidiaries (the "Company") as of June 30, 2021 and 2020, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended June 30, 2021, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of June 30, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 30, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 2021, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

Change in Accounting Principle

As discussed in Notes 1 and 7 to the consolidated financial statements, the Company elected to change its method of accounting for certain inventories from the last-in, first-out ("LIFO") cost method to the first-in, first-out ("FIFO") cost method which has been retrospectively applied to the consolidated financial statements as of June 30, 2020 and 2019.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue — Refer to Notes 1 and 2 to the financial statements

Critical Audit Matter Description

The Company is a highly diversified business with revenue derived from the sales of products in a variety of industrial and aerospace markets. The Company's business activities are carried out by numerous individual business units, which offer unique technology and product platforms within specific geographic areas.

We identified revenue as a critical audit matter given the geographical dispersion of the Company's operations and business units generating revenue. This required extensive audit effort due to the volume of the underlying transactions and distinctiveness of each individual business unit. High levels of auditor judgement were necessary to determine the nature, timing, and extent of audit procedures performed within the Company.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's revenue transactions included the following, among others:

- We tested the design and effectiveness of internal controls within the revenue business processes, including controls over revenue recognition and controls over the review of operating results.
- For a sample of revenue transactions, we performed detail transaction testing by agreeing the amounts recorded as revenue to source documents and determined that revenue was recognized appropriately.
- For the revenue populations subject to detail testing, we tested the completeness of revenue by making selections from a reciprocal population (e.g. sales order listing) and determined whether the sales order was recorded as a sale in the general ledger.
- For revenue transactions not subject to detail transaction testing, we performed substantive analytical procedures. We developed independent expectations of revenue based on data derived from published industry indices, market and customer trends, and the results of our detail revenue testing and compared these expectations to the revenue recorded by management.

/s/ **DELOITTE & TOUCHE, LLP**

Cleveland, Ohio

August 25, 2021

We have served as the Company's auditor since 2008.

CONSOLIDATED STATEMENT OF INCOME

(Dollars in thousands, except per share amounts)	For the years ended June 30,		
	2021	2020*	2019*
Net Sales	\$ 14,347,640	\$ 13,695,520	\$ 14,320,324
Cost of sales	10,449,680	10,292,291	10,688,970
Selling, general and administrative expenses	1,527,302	1,656,553	1,543,939
Interest expense	250,036	308,161	190,138
Other income, net	(17,003)	(67,112)	(61,247)
(Gain) loss on disposal of assets	(109,332)	(1,227)	9,049
Income before income taxes	2,246,957	1,506,854	1,949,475
Income taxes	500,096	304,522	424,392
Net Income	1,746,861	1,202,332	1,525,083
Less: Noncontrolling interest in subsidiaries' earnings	761	362	567
Net Income Attributable to Common Shareholders	\$ 1,746,100	\$ 1,201,970	\$ 1,524,516
Earnings per Share Attributable to Common Shareholders			
Basic earnings per share	<u>\$ 13.54</u>	<u>\$ 9.36</u>	<u>\$ 11.73</u>
Diluted earnings per share	<u>\$ 13.35</u>	<u>\$ 9.26</u>	<u>\$ 11.57</u>

*Years ended June 30, 2020 and 2019 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(Dollars in thousands)	For the years ended June 30,		
	2021	2020*	2019*
Net Income	\$ 1,746,861	\$ 1,202,332	\$ 1,525,083
Less: Noncontrolling interests in subsidiaries' earnings	761	362	567
Net income attributable to common shareholders	1,746,100	1,201,970	1,524,516
Other comprehensive income (loss), net of tax			
Foreign currency translation adjustment and other (net of tax of \$(3,664), \$4,820 and \$709 in 2021, 2020 and 2019)	328,792	(182,957)	(66,392)
Retirement benefits plan activity (net of tax of \$(205,845), \$97,477 and \$71,821 in 2021, 2020 and 2019)	664,076	(317,546)	(227,783)
Other comprehensive income (loss)	992,868	(500,503)	(294,175)
Less: Other comprehensive income (loss) for noncontrolling interests	720	(676)	53
Other comprehensive income (loss) attributable to common shareholders	992,148	(499,827)	(294,228)
Total Comprehensive Income Attributable to Common Shareholders	\$ 2,738,248	\$ 702,143	\$ 1,230,288

*Years ended June 30, 2020 and 2019 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

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

BUSINESS SEGMENT INFORMATION

(Dollars in thousands)	2021	2020*	2019*
Net Sales:			
Diversified Industrial:			
North America	\$ 6,676,449	\$ 6,456,298	\$ 6,808,948
International	5,283,710	4,504,587	5,000,599
Aerospace Systems	2,387,481	2,734,635	2,510,777
	<u>\$ 14,347,640</u>	<u>\$ 13,695,520</u>	<u>\$ 14,320,324</u>
Segment Operating Income:			
Diversified Industrial:			
North America	\$ 1,247,419	\$ 985,944	\$ 1,138,586
International	988,054	674,763	804,890
Aerospace Systems	402,895	476,900	487,757
Total segment operating income	2,638,368	2,137,607	2,431,233
Corporate administration	178,427	170,903	194,994
Income before interest expense and other expense	2,459,941	1,966,704	2,236,239
Interest expense	250,036	308,161	190,138
Other (income) expense	(37,052)	151,689	96,626
Income before income taxes	<u>\$ 2,246,957</u>	<u>\$ 1,506,854</u>	<u>\$ 1,949,475</u>
Assets:			
Diversified Industrial	\$ 16,518,688	\$ 15,973,576	\$ 13,189,204
Aerospace Systems ^(a)	3,077,395	3,251,522	1,546,053
Corporate	745,117	662,655	2,996,771
	<u>\$ 20,341,200</u>	<u>\$ 19,887,753</u>	<u>\$ 17,732,028</u>
Property Additions:			
Diversified Industrial	\$ 186,233	\$ 183,981	\$ 172,348
Aerospace Systems	20,705	44,546	20,748
Corporate	3,019	4,064	1,993
	<u>\$ 209,957</u>	<u>\$ 232,591</u>	<u>\$ 195,089</u>
Depreciation:			
Diversified Industrial	\$ 229,891	\$ 218,092	\$ 203,144
Aerospace Systems	32,151	27,749	16,268
Corporate	7,901	7,058	6,263
	<u>\$ 269,943</u>	<u>\$ 252,899</u>	<u>\$ 225,675</u>
Amortization:			
Diversified Industrial	\$ 274,368	\$ 243,714	\$ 196,680
Aerospace Systems	51,079	40,918	3,072
	<u>\$ 325,447</u>	<u>\$ 284,632</u>	<u>\$ 199,752</u>

(Dollars in thousands)	2021	2020	2019
By Geographic Area^(b)			
Net Sales:			
North America	\$ 9,046,162	\$ 9,166,773	\$ 9,318,195
International	5,301,478	4,528,747	5,002,129
	<u>\$ 14,347,640</u>	<u>\$ 13,695,520</u>	<u>\$ 14,320,324</u>
Long-Lived Assets:			
North America	\$ 1,448,109	\$ 1,494,858	\$ 1,052,263
International	818,367	797,877	716,024
	<u>\$ 2,266,476</u>	<u>\$ 2,292,735</u>	<u>\$ 1,768,287</u>

The accounting policies of the business segments are the same as those described in the Significant Accounting Policies footnote except that the business segment results are prepared on a basis that is consistent with the manner in which the Company's management disaggregates financial information for internal review and decision-making.

^(a) Includes an investment in a joint venture in which ownership is 50 percent or less and in which the Company does not have operating control (2021 - \$219,081; 2020 - \$237,911; 2019 - \$234,703).

^(b) Net sales are attributed to countries based on the location of the selling unit. North America includes the United States, Canada and Mexico. No country other than the United States represents greater than 10 percent of consolidated sales. Long-lived assets are comprised of property, plant and equipment based on physical location.

*Years ended June 30, 2020 and 2019 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEET

(Dollars in thousands)

June 30,	2021	2020*
Assets		
Current Assets		
Cash and cash equivalents	\$ 733,117	\$ 685,514
Marketable securities and other investments	39,116	70,805
Trade accounts receivable, net	2,183,594	1,854,398
Non-trade and notes receivable	326,315	244,870
Inventories	2,090,642	1,964,195
Prepaid expenses and other	243,966	214,986
Total Current Assets	5,616,750	5,034,768
Property, plant and equipment	6,040,220	5,810,681
Less: Accumulated depreciation	3,773,744	3,517,946
Property, plant and equipment, net	2,266,476	2,292,735
Deferred income taxes	104,251	126,839
Investments and other assets	774,239	764,563
Intangible assets, net	3,519,797	3,798,913
Goodwill	8,059,687	7,869,935
Total Assets	\$ 20,341,200	\$ 19,887,753
Liabilities and Equity		
Current Liabilities		
Notes payable and long-term debt payable within one year	\$ 2,824	\$ 809,529
Accounts payable, trade	1,667,878	1,111,759
Accrued payrolls and other compensation	507,027	424,231
Accrued domestic and foreign taxes	236,384	195,314
Other accrued liabilities	682,390	607,540
Total Current Liabilities	3,096,503	3,148,373
Long-term debt	6,582,053	7,652,256
Pensions and other postretirement benefits	1,055,638	1,887,414
Deferred income taxes	553,981	418,851
Other liabilities	639,355	539,089
Total Liabilities	11,927,530	13,645,983
Equity		
Shareholders' Equity		
Serial preferred stock, \$.50 par value, authorized 3,000,000 shares; none issued	—	—
Common stock, \$.50 par value, authorized 600,000,000 shares; issued 181,046,128 shares in 2021 and 2020	90,523	90,523
Additional capital	329,619	416,585
Retained earnings	14,915,497	13,643,907
Accumulated other comprehensive (loss)	(1,566,727)	(2,558,875)
Treasury shares at cost: 51,900,460 in 2021 and 52,490,165 in 2020	(5,370,605)	(5,364,916)
Total Shareholders' Equity	8,398,307	6,227,224
Noncontrolling interests	15,363	14,546
Total Equity	8,413,670	6,241,770
Total Liabilities and Equity	\$ 20,341,200	\$ 19,887,753

*Year ended June 30, 2020 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

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

CONSOLIDATED STATEMENT OF CASH FLOWS

(Dollars in thousands)	For the years ended June 30,		
	2021	2020*	2019*
Cash Flows From Operating Activities			
Net income	\$ 1,746,861	\$ 1,202,332	\$ 1,525,083
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	269,943	252,899	225,675
Amortization	325,447	284,632	210,514
Stock incentive plan compensation	121,483	111,375	104,078
Deferred income taxes	(51,500)	12,290	36,435
Foreign currency transaction (gain) loss	(10,948)	(10,018)	5,888
(Gain) loss on sale of property, plant and equipment	(109,332)	(1,850)	5,091
Loss on sale of businesses	—	—	5,854
Gain on sale and impairment of investments	(12,616)	(2,084)	(16,749)
(Gain) loss on marketable securities	(11,570)	(587)	7,563
Other	14,424	17,984	—
Changes in assets and liabilities, net of effects from acquisitions:			
Accounts receivable	(298,511)	578,853	2,452
Inventories	(85,597)	206,937	(67,867)
Prepaid expenses and other	(25,508)	(9,312)	(33,335)
Other assets	(8,779)	(23,547)	2,677
Accounts payable, trade	526,781	(370,765)	(12,397)
Accrued payrolls and other compensation	72,412	(62,715)	2,088
Accrued domestic and foreign taxes	36,552	30,918	(30,593)
Other accrued liabilities	11,397	(148,531)	16,698
Pensions and other postretirement benefits	17,875	55,522	(168,368)
Other liabilities	46,187	(53,384)	(90,647)
Net cash provided by operating activities	2,575,001	2,070,949	1,730,140
Cash Flows From Investing Activities			
Acquisitions (net of cash acquired of \$82,192 in 2020 and \$690 in 2019)	—	(5,076,064)	(2,042)
Capital expenditures	(209,957)	(232,591)	(195,089)
Proceeds from sale of property, plant and equipment	140,590	26,345	46,592
Proceeds from sale of businesses	—	—	19,678
Purchase of marketable securities and other investments	(34,809)	(194,742)	(181,780)
Maturities and sales of marketable securities and other investments	79,419	275,483	74,908
Other	24,744	177,576	19,223
Net cash used in investing activities	(13)	(5,023,993)	(218,510)
Cash Flows From Financing Activities			
Proceeds from exercise of stock options	4,684	2,623	2,475
Payments for common shares	(218,818)	(216,049)	(860,052)
Acquisition of noncontrolling interests	—	(1,200)	—
(Payments of) proceeds from notes payable, net	(723,496)	136,744	48,828
Proceeds from long-term borrowings	1,213	1,721,211	2,336,749
Payments for long-term borrowings	(1,211,748)	(740,181)	(213,226)
Dividends paid	(475,174)	(453,838)	(412,468)
Net cash (used in) provided by financing activities	(2,623,339)	449,310	902,306
Effect of exchange rate changes on cash	95,954	(30,519)	(16,306)
Net increase (decrease) in cash and cash equivalents	47,603	(2,534,253)	2,397,630
Cash and cash equivalents at beginning of year	685,514	3,219,767	822,137
Cash and cash equivalents at end of year	\$ 733,117	\$ 685,514	\$ 3,219,767
Supplemental Data:			
Cash paid during the year for:			
Interest	\$ 236,979	\$ 308,199	\$ 169,378
Income taxes	485,885	307,959	454,699

*Years ended June 30, 2020 and 2019 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

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

CONSOLIDATED STATEMENT OF EQUITY

(Dollars in thousands)	Common Stock	Additional Capital	Retained Earnings*	Accumulated Other Comprehensive (Loss)	Treasury Shares	Noncontrolling Interests	Total*
Balance July 1, 2018 (As reported)	\$ 90,523	\$ 496,592	\$ 11,625,975	\$ (1,763,086)	\$ (4,590,138)	\$ 5,627	\$ 5,865,493
Inventory accounting method change			105,460				105,460
Balance July 1, 2018*	\$ 90,523	\$ 496,592	\$ 11,731,435	\$ (1,763,086)	\$ (4,590,138)	\$ 5,627	\$ 5,970,953
Impact of adoption of accounting standards			51,603	(1,734)			49,869
Net income*			1,524,516			567	1,525,083
Other comprehensive income (loss)				(294,228)		53	(294,175)
Dividends paid (\$3.16 per share)			(412,404)			(64)	(412,468)
Stock incentive plan activity		(34,506)			81,007		46,501
Shares purchased at cost					(799,999)		(799,999)
Balance June 30, 2019*	\$ 90,523	\$ 462,086	\$ 12,895,150	\$ (2,059,048)	\$ (5,309,130)	\$ 6,183	\$ 6,085,764
Net income*			1,201,970			362	1,202,332
Other comprehensive (loss)				(499,827)		(676)	(500,503)
Dividends paid (\$3.52 per share)			(453,213)			(625)	(453,838)
Stock incentive plan activity		(46,265)			90,981		44,716
Acquisition activity		764				9,302	10,066
Shares purchased at cost					(146,767)		(146,767)
Balance June 30, 2020*	\$ 90,523	\$ 416,585	\$ 13,643,907	\$ (2,558,875)	\$ (5,364,916)	\$ 14,546	\$ 6,241,770
Net income			1,746,100			761	1,746,861
Other comprehensive income				992,148		720	992,868
Dividends paid (\$3.67 per share)			(474,510)			(664)	(475,174)
Stock incentive plan activity		(86,966)			94,311		7,345
Shares purchased at cost					(100,000)		(100,000)
Balance June 30, 2021	\$ 90,523	\$ 329,619	\$ 14,915,497	\$ (1,566,727)	\$ (5,370,605)	\$ 15,363	\$ 8,413,670

*The balances at June 30, 2018 and the year ended June 30, 2020 and 2019 amounts have been revised to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the consolidated financial statements.

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands, except per share amounts or as otherwise noted)

The term "year" and references to specific years refer to the applicable fiscal years.

1. Significant Accounting Policies

The significant accounting policies followed in the preparation of the accompanying consolidated financial statements are summarized below.

Nature of Operations - The Company is a leading worldwide diversified manufacturer of motion and control technologies and systems, providing precision engineered solutions for a wide variety of mobile, industrial and aerospace markets. We evaluate performance based on segment operating income before corporate administrative expenses, interest expense and income taxes.

The Diversified Industrial Segment is an aggregation of several business units, which manufacture motion-control and fluid power system components for builders and users of various types of manufacturing, packaging, processing, transportation, agricultural, construction, and military vehicles and equipment. Diversified Industrial Segment products are marketed primarily through field sales employees and independent distributors. The Diversified Industrial North American operations have manufacturing plants and distribution networks throughout the United States, Canada and Mexico and primarily service North America. The Diversified Industrial International operations provide Parker products and services to 42 countries throughout Europe, Asia Pacific, Latin America, the Middle East and Africa.

The Aerospace Systems Segment produces hydraulic, fuel, pneumatic and electro-mechanical systems and components, which are utilized on virtually every domestic commercial, military and general aviation aircraft and also performs a vital role in naval vessels and land-based weapons systems. This segment serves original equipment and maintenance, repair and overhaul customers worldwide. Aerospace Systems Segment products are marketed by field sales employees and are sold directly to manufacturers and end users.

There are no individual customers to whom sales are more than three percent of the Company's consolidated sales. Due to our diverse group of customers throughout the world, we do not consider ourselves exposed to any concentration of credit risks.

The Company manufactures and markets its products throughout the world. Although certain risks and uncertainties exist, the diversity and breadth of our products and geographic operations mitigate the risk that adverse changes with respect to any particular product and geographic operation would materially affect our operating results.

Use of Estimates - The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Change in Accounting Principle - During the fourth quarter of 2021, the Company changed its method of accounting for certain domestic inventory previously valued by the last-in, first-out ("LIFO") method to the first-in, first-out ("FIFO") method. All prior periods presented have been retrospectively adjusted to apply the new method of accounting. Refer to Note 7 for more information on the change in inventory accounting method.

Basis of Consolidation - The consolidated financial statements include the accounts of all majority-owned domestic and foreign subsidiaries. All intercompany transactions and profits have been eliminated in the consolidated financial statements. The Company does not have off-balance sheet arrangements. Within the Business Segment Information, intersegment and interarea sales have been eliminated.

Revenue Recognition - Revenues are recognized when control of performance obligations, which are distinct goods or services within the contract, is transferred to the customer. Control is transferred when the customer has the ability to direct the use of and obtain the benefits from the goods or services. When revenue is recognized at a point in time, control generally transfers at time of shipment. Revenues are recognized over time if the customer simultaneously receives control as the Company performs work under a contract, if the customer controls the asset as it is being produced, or if the product produced for the customer has no alternative use and the Company has a contractual right to payment.

For contracts where revenue is recognized over time, we use the cost-to-cost, efforts expended or units of delivery method depending on the nature of the contract, including length of production time. The estimation of these costs and efforts expended requires judgment on the part of management due to the duration of the contractual agreements as well as the technical nature of the products involved. We make adjustments to these estimates on a consistent basis and establish a contract reserve when the estimated costs to complete a contract exceed the expected contract revenues.

A contract's transaction price is allocated to each distinct performance obligation. When there are multiple performance obligations within a contract, the transaction price is allocated to each performance obligation based on its standalone selling price. The primary method used to estimate a standalone selling price is the price observed in standalone sales to customers of the same product or service. Revenue is recognized when control of the individual performance obligations is transferred to the customer.

We consider the contractual consideration payable by the customer and assesses variable consideration that may affect the total transaction price. Variable consideration primarily includes prompt pay discounts, rebates and volume discounts and is included in the estimated transaction price when there is a basis to reasonably estimate the amount, including whether the estimate should be constrained in order to avoid a significant reversal of revenue in a future period. These estimates are based on historical experience, anticipated performance under the terms of the contract and our best judgment at the time.

Payment terms vary by customer and the geographic location of the customer. The time between when revenue is recognized and payment is due is not significant. Our contracts with customers generally do not include significant financing components or noncash consideration.

Taxes collected from customers and remitted to governmental authorities are excluded from revenue. Shipping and handling costs are treated as fulfillment costs and are included in cost of sales. The costs to obtain a contract where the amortization period for the related asset is one year or less are expensed as incurred.

There is generally no unilateral right to return products. The Company primarily offers an assurance-type standard warranty that the product will conform to certain specifications for a defined period of time or usage after delivery. This type of warranty does not represent a separate performance obligation.

Cash - Cash equivalents consist of short-term, highly liquid investments with a maturity of three months or less. These investments are carried at cost plus accrued interest and are readily convertible into cash.

Marketable Securities and Other Investments - Consist of short-term, highly liquid investments with stated maturities of greater than three months from the date of purchase, which are carried at cost plus accrued interest. Marketable securities and other investments also include investments in equity securities which are carried at fair value. Changes in fair value related to equity securities are recorded in net income. We have the ability to liquidate these investments after giving appropriate notice to the issuer.

Trade Accounts Receivable, Net - Trade accounts receivable are initially recorded at their net collectible amount and are generally recorded at the time the revenue from the sales transaction is recorded. We evaluate the collectibility of our receivables based on historical experience and current and forecasted economic conditions based on management's judgment. Additionally, receivables are written off to bad debt when management makes a final determination of uncollectibility. Allowance for credit losses was \$12,078 and \$11,644 at June 30, 2021 and 2020, respectively.

Non-Trade and Notes Receivable - The non-trade and notes receivable caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	2021	2020
Notes receivable	\$ 144,441	\$ 97,370
Accounts receivable, other	181,874	147,500
Total	<u>\$ 326,315</u>	<u>\$ 244,870</u>

Plant, Equipment and Depreciation - Plant and equipment are recorded at cost and are depreciated principally using the straight-line method for financial reporting purposes. Depreciation rates are based on estimated useful lives of the assets, generally 40 years for buildings, 15 years for land improvements and building equipment, seven to 10 years for machinery and equipment, and three to eight years for vehicles and office equipment. Improvements, which extend the useful life of property, are capitalized, and maintenance and repairs are expensed. We review plant and equipment for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable. When plant and equipment are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the appropriate accounts and any gain or loss is included in current income.

The plant and equipment caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	2021	2020
Land and land improvements	\$ 342,950	\$ 345,746
Buildings and building equipment	1,848,141	1,773,041
Machinery and equipment	3,653,566	3,515,842
Construction in progress	195,563	176,052
Total	<u>\$ 6,040,220</u>	<u>\$ 5,810,681</u>

Investments and Other Assets - Investments in joint-venture companies in which ownership is 50 percent or less and in which the Company does not have operating control are stated at cost plus the Company's equity in undistributed earnings and amounted to \$292,217 and \$317,975 at June 30, 2021 and 2020, respectively. A significant portion of the underlying net assets of the joint ventures are related to goodwill. The Company's share of earnings from investments in joint-venture companies were \$41,048, \$74,517 and \$93,239 in 2021, 2020 and 2019, respectively.

Intangible Assets - Intangible assets primarily include patents and technology, trademarks and customer lists and contracts and are recorded at cost and amortized on a straight-line method. Patents and technology are amortized over the shorter of their remaining useful or legal life. Trademarks and customer contracts are amortized over the estimated time period over which an economic benefit is expected to be received. Customer lists are amortized over a period based on anticipated customer attrition rates. The Company reviews intangible assets for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable.

Goodwill - The Company conducts a formal impairment test of goodwill on an annual basis and between annual tests if an event occurs or circumstances change that would, more likely than not, reduce the fair value of a reporting unit below its carrying value.

Income Taxes - Income taxes are provided based upon income for financial reporting purposes. Tax credits and similar tax incentives are applied to reduce the provision for income taxes in the year in which the credits arise. We recognize accrued interest related to unrecognized tax benefits in income tax expense. Penalties, if incurred, are recognized in income tax expense. Deferred income taxes arise from temporary differences in the recognition of income and expense for tax purposes. Income tax effects resulting from adjusting temporary differences recorded in accumulated other comprehensive (loss) are released when the circumstances on which they are based cease to exist.

Foreign Currency Translation - Assets and liabilities of foreign subsidiaries are translated at current exchange rates, and income and expenses are translated using weighted-average exchange rates. The effects of these translation adjustments, as well as gains and losses from certain intercompany transactions, are reported in accumulated other comprehensive (loss). Such adjustments will affect net income only upon sale or liquidation of the underlying foreign investments. Exchange (gains) losses from transactions in a currency other than the local currency of the entity involved are included within the cost of sales caption in the Consolidated Statement of Income and were \$(10,948), \$(10,018) and \$5,888, in 2021, 2020 and 2019, respectively.

Subsequent Events - We evaluated subsequent events that have occurred through the date of filing of this Annual Report on Form 10-K for the year ended June 30, 2021. On August 2, 2021, the Company announced that it reached an agreement on the terms of a recommended cash acquisition of the entire issued and to be issued ordinary share capital of Meggitt plc ("Meggitt") for 800 pence per share (the "Acquisition"), or approximately £6,308 million. We intend to fund the proposed Acquisition with cash and new debt. The proposed Acquisition remains subject to customary closing conditions, including regulatory clearances and approval by Meggitt's shareholders.

In connection with the proposed Acquisition, the Company entered into a bridge credit agreement (the "Bridge Credit Agreement") on August 2, 2021. Under the Bridge Credit Agreement, lenders are committed to provide senior, unsecured financing in the aggregate principal amount of £6,524 million. Any borrowings made under the Bridge Credit Agreement would mature 364 days from the initial funding date. The commitments are intended to be drawn to finance the proposed Acquisition only to the extent that we do not arrange for alternative financing prior to closing.

Recent Accounting Pronouncements - In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-13, "Measurement of Credit Losses on Financial Instruments." ASU 2016-13 requires a financial asset (or a group of financial assets) measured at amortized cost to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. ASU 2016-13 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. We adopted ASU 2016-13 on July 1, 2020. The adoption of this guidance, using the modified retrospective method, did not result in a cumulative-effect adjustment to retained earnings and did not have a material impact on the consolidated financial statements or related disclosures.

2. Revenue recognition

Revenue is derived primarily from the sale of products in a variety of mobile, industrial and aerospace markets. A majority of the Company's revenues are recognized at a point in time. However, a portion of the Company's revenues are recognized over time.

Disaggregation of revenue

Revenue from contracts with customers is disaggregated by technology platforms for the Diversified Industrial Segment, by product platforms for the Aerospace Systems Segment and by geographic location for the total Company.

The Diversified Industrial Segment is an aggregation of several business units, which manufacture motion-control and fluid power system components for builders and users of various types of manufacturing, packaging, processing, transportation, agricultural, construction, and military vehicles and equipment. Contracts consist of individual purchase orders for standard product, blanket purchase orders and production contracts. Blanket purchase orders are often associated with individual purchase orders and have terms and conditions which are subject to a master supply or distributor agreement. Individual production contracts, some of which may include multiple performance obligations, are typically for products manufactured to the customer's specifications. Revenue in the Diversified Industrial Segment is typically recognized at the time of product shipment, but a portion of revenue may be recognized over time for installation services or in situations where the product has no alternative use and we have an enforceable right to payment.

Diversified Industrial Segment revenues by technology platform:

	2021	2020
Motion Systems	\$ 3,081,366	\$ 2,996,645
Flow and Process Control	4,108,080	3,795,952
Filtration and Engineered Materials	4,770,713	4,168,288
Total	<u>\$ 11,960,159</u>	<u>\$ 10,960,885</u>

The Aerospace Systems Segment produces hydraulic, fuel, pneumatic and electro-mechanical systems and components, which are utilized on virtually every domestic commercial, military and general aviation aircraft. Aerospace Systems Segment products also perform a vital role in naval vessels and land-based weapon systems. Contracts generally consist of blanket purchase orders and individual long-term production contracts. Blanket purchase orders, which have terms and conditions subject to long-term supply agreements, are typically associated with individual purchase orders. Revenue in the Aerospace Systems Segment is typically recognized at the time of product shipment, but a portion of revenue may be recognized over time in situations where the customer controls the asset as it is produced or the product has no alternative use and we have an enforceable right to payment.

Aerospace Systems Segment revenues by product platform:

	2021	2020
Flight Control Actuation	\$ 698,877	\$ 711,017
Fuel and Inerting	509,687	592,543
Hydraulics	308,835	411,823
Engines	575,804	616,747
Fluid Conveyance	196,348	304,769
Other	97,930	97,736
Total	<u>\$ 2,387,481</u>	<u>\$ 2,734,635</u>

Total revenues by geographic region based on the Company's selling operation's location:

	2021	2020
North America	\$ 9,046,162	\$ 9,166,773
Europe	2,919,025	2,596,125
Asia Pacific	2,215,686	1,790,032
Latin America	166,767	142,590
Total	<u>\$ 14,347,640</u>	<u>\$ 13,695,520</u>

The majority of revenues from the Aerospace Systems Segment is generated from sales to customers within North America.

Contract balances

Contract assets and contract liabilities are reported on a contract-by-contract basis. Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. Payments from customers are received based on the terms established in the contract with the customer.

Total contract assets and contract liabilities are as follows:

	2021	2020
Contract assets, current (included within Prepaid expenses and other)	\$ 34,190	\$ 30,827
Contract assets, noncurrent (included within Investments and other assets)	1,884	1,497
Total contract assets	<u>36,074</u>	<u>32,324</u>
Contract liabilities, current (included within Other accrued liabilities)	(51,211)	(51,278)
Contract liabilities, noncurrent (included within Other liabilities)	(3,080)	(3,232)
Total contract liabilities	<u>(54,291)</u>	<u>(54,510)</u>
Net contract liabilities	<u>\$ (18,217)</u>	<u>\$ (22,186)</u>

At June 30, 2021, the change in net contract liabilities was primarily due to timing differences between when revenue was recognized and the receipt of advance payments. During 2021, approximately \$33 million of revenue was recognized that was included in the contract liabilities at June 30, 2020.

Remaining performance obligations

Our backlog represents written firm orders from a customer to deliver products and, in the case of blanket purchase orders, only includes the portion of the order for which a schedule or release has been agreed to with the customer. We believe our backlog represents our unsatisfied or partially unsatisfied performance obligations. Backlog at June 30, 2021 was \$6,503 million, of which approximately 84 percent is expected to be recognized as revenue within the next 12 months and the balance thereafter.

3. Acquisitions

Acquisitions - On October 29, 2019, we completed the acquisition of a 100 percent equity interest in LORD Corporation ("Lord") for approximately \$3,455 million in cash, including the assumption of debt. On September 16, 2019, we completed the acquisition of a 100 percent equity interest in EMFCO Holdings Incorporated, parent company of Exotic Metals Forming Company LLC ("Exotic") for approximately \$1,706 million in cash.

Lord is a diversified technology and manufacturing company developing highly reliable adhesives and coatings, as well as vibration and motion control technologies, that significantly reduce risk and improve product performance. Lord's products are used in mission-critical applications in the aerospace, automotive and industrial markets. Lord had annual sales of approximately \$1,025 million for its fiscal 2018. For segment reporting purposes, approximately 95 percent of Lord's sales are included in the Diversified Industrial Segment, while the remaining five percent are included in the Aerospace Systems Segment. Lord's unique and proprietary products, solutions and technologies for mission-critical applications are expected to increase the Company's overall engineered materials product and solutions offerings to enable a stronger value proposition for customers.

Exotic designs and manufactures innovative and technically demanding, high temperature, high pressure air and exhaust management solutions for aircraft and engines. Exotic had annual sales of approximately \$409 million for its fiscal 2019. For segment reporting purposes, Exotic is included in the Aerospace Systems Segment. We believe Exotic's products and proprietary manufacturing capabilities are complementary to our portfolio of flight control, fuel and inerting, hydraulics, fluid conveyance and engine components.

Assets acquired and liabilities assumed are recognized at their respective fair values as of the acquisition date. The process of estimating the fair values of certain tangible assets, identifiable intangible assets and assumed liabilities requires the use of judgment in determining the appropriate assumptions and estimates. The following presents the estimated fair values of Lord's and Exotic's assets acquired and liabilities assumed on the respective acquisition dates. These estimates are based on available information and are revised during the measurement period, not to exceed 12 months from the acquisition date, as third-party valuations are finalized, additional information becomes available and as additional analysis is performed. All measurement period adjustments were completed within a year from the acquisition date, and such adjustments did not have a material impact on the Company's results of operations and financial position.

The final purchase price allocations for acquisitions in 2020 is as follows:

	Lord	Exotic
	October 29, 2019	September 16, 2019
Assets:		
Cash and cash equivalents	\$ 74,013	\$ 8,179
Accounts receivable	153,765	81,336
Inventories	248,600	114,661
Prepaid expenses	24,230	1,343
Property, plant and equipment	409,163	178,393
Deferred income taxes	—	2,057
Other assets	41,335	1,226
Intangible assets	1,446,660	874,470
Goodwill	1,970,603	503,725
Total assets acquired	4,368,369	1,765,390
Liabilities:		
Notes payable and long-term debt payable within one year	156	—
Accounts payable, trade	56,186	23,176
Accrued payrolls and other compensation	57,571	8,863
Accrued domestic and foreign taxes	2,898	2,123
Other accrued liabilities	88,394	25,662
Long-term debt	221,161	—
Pensions and other postretirement benefits	115,017	—
Deferred income taxes	304,445	—
Other liabilities	55,832	—
Noncontrolling interests	11,266	—
Total liabilities and noncontrolling interests assumed	912,926	59,824
Net assets acquired	<u>\$ 3,455,443</u>	<u>\$ 1,705,566</u>

Goodwill is calculated as the excess of the purchase price over the net assets acquired. With respect to the Lord and Exotic acquisitions, goodwill represents cost synergies and enhancements to our existing technologies. For tax purposes, Lord's goodwill is not deductible, and Exotic's goodwill is deductible. Based upon an acquisition valuation, intangibles acquired as part of the Exotic acquisition include \$502,470 of customer-related intangible assets, \$281,400 of patents and technology and \$90,600 of trademarks, with weighted average estimated useful lives of 18, 20 and 20 years, respectively. Similarly, the Lord acquisition includes \$869,190 of customer-related intangible assets, \$458,030 of patents and technology and \$119,440 of trademarks, with weighted average estimated useful lives of 13, 21 and 20 years, respectively. These intangible assets were valued using the income approach, which includes significant assumptions around future revenue growth and discount rates. Such assumptions are classified as level 3 inputs within the fair value hierarchy.

Our consolidated financial statements for 2020 include the results of operations of Lord and Exotic from their respective acquisition dates through June 30, 2020. Net sales and segment operating income attributable to these acquisitions during this period and included in our consolidated financial statements totaled \$949,066 and \$22,330, respectively.

Acquisition-related transaction and integration costs totaled \$119,214 in 2020. These costs are included in selling, general, and administrative expenses in the Consolidated Statement of Income.

4. Business Realignment and Acquisition Integration Charges

The Company incurred business realignment and acquisition integration charges in 2021, 2020 and 2019. During 2021, business realignment charges primarily consisted of actions taken to address the impact of COVID-19 on our business. Such charges were also incurred in 2020, especially within the Aerospace Systems Segment. In 2021, 2020, and 2019 business realignment charges included severance costs related to actions taken under the Company's simplification initiative aimed at reducing organizational and process complexity as well as plant closures. The 2019 acquisition integration charges relate to the 2017 acquisition of CLARCOR, Inc. ("Clarcor") and primarily consist of severance costs and expenses related to plant closures and relocations. A majority of the business realignment charges were incurred in North America and Europe. We believe the realignment actions will positively impact future results of operations but will not have a material effect on liquidity and sources and uses of capital.

Business realignment and acquisition integration charges presented in the Business Segment Information are as follows:

	2021	2020	2019
Diversified Industrial	\$ 38,557	\$ 52,288	\$ 27,830
Aerospace Systems	6,680	22,101	—
Corporate administration	1,399	1,175	—
Other expense	1,226	50	305

Workforce reductions in connection with such business realignment and acquisition integration charges in the Business Segment Information are as follows:

	2021	2020	2019
Diversified Industrial	820	2,394	598
Aerospace Systems	327	1,254	—
Corporate administration	20	31	—

The business realignment and acquisition integration charges are presented in the Consolidated Statement of Income as follows:

	2021	2020	2019
Cost of sales	\$ 33,746	\$ 58,791	\$ 14,650
Selling, general and administrative expenses	12,890	16,773	13,180
(Gain) loss on disposal of assets	1,226	50	305

As of June 30, 2021, approximately \$56 million in severance payments were made relating to business realignment charges. Remaining payments related to current-year and prior-year business realignment actions of approximately \$15 million, a majority of which are expected to be paid by June 30, 2022, are primarily reflected within the other accrued liabilities caption in

the Consolidated Balance Sheet. Additional charges may be recognized in future periods related to the business realignment and acquisition integration actions described above, the timing and amount of which are not known at this time.

We also incurred the following acquisition integration charges related to the Lord and Exotic acquisitions:

	2021	2020
Diversified Industrial	\$ 11,222	\$ 20,669
Aerospace Systems	719	1,908

These charges are primarily included in selling, general and administrative expenses within the Consolidated Statement of Income.

5. Income Taxes

Certain amounts below have been adjusted to reflect the retrospective application of our change in inventory accounting method as described in Notes 1 and 7.

Income before income taxes was derived from the following sources:

	2021	2020	2019
United States	\$ 1,273,037	\$ 828,160	\$ 1,140,983
Foreign	973,920	678,694	808,492
	<u>\$ 2,246,957</u>	<u>\$ 1,506,854</u>	<u>\$ 1,949,475</u>

Income taxes include the following:

	2021	2020	2019
Federal			
Current	\$ 247,094	\$ 105,796	\$ 160,858
Deferred	(52,960)	24,905	18,133
Foreign			
Current	269,607	167,680	206,167
Deferred	8,851	(14,247)	3,202
State and local			
Current	34,895	18,756	20,932
Deferred	(7,391)	1,632	15,100
	<u>\$ 500,096</u>	<u>\$ 304,522</u>	<u>\$ 424,392</u>

A reconciliation of the effective income tax rate to the statutory federal rate follows:

	2021	2020	2019
Statutory federal income tax rate	21.0 %	21.0 %	21.0 %
State and local income taxes	1.0	1.4	1.7
Tax related to international activities	3.6	1.8	2.9
Transition tax related to the TCJ Act	—	(0.7)	0.8
Remeasurement of deferred tax assets and liabilities related to the TCJ Act	—	—	(0.9)
Cash surrender value of life insurance	(0.6)	(0.3)	(0.1)
Federal manufacturing deduction	—	—	0.1
Foreign derived intangible income deduction	(1.0)	(1.5)	(1.0)
Research tax credit	(0.4)	(0.6)	(0.5)
Share-based compensation	(1.6)	(1.5)	(1.7)
Other	0.3	0.6	(0.5)
Effective income tax rate	<u>22.3 %</u>	<u>20.2 %</u>	<u>21.8 %</u>

We made the accounting policy election to treat taxes related to Global Intangible Low-Taxed Income ("GILTI") as a current period expense when incurred. The tax rate impact of GILTI is included with tax related to international activities in the table above.

On March 27, 2020, the President of the United States signed into law the Coronavirus Aid, Relief, and Economic Security ("CARES") Act, a significant tax-and-spending package intended to provide economic stimulus to address the impact of the COVID-19 pandemic. The CARES Act did not result in a material impact on our effective tax rate.

On December 27, 2020, the Consolidated Appropriations Act, 2021, was signed into law. In addition to providing funding for the government, this law provides further COVID-19 economic relief, and extends certain expiring tax provisions. This act did not result in a material impact on our effective tax rate.

Deferred income taxes are provided for the temporary differences between the financial reporting basis and the tax basis of assets and liabilities. The differences comprising the net deferred taxes shown on the Consolidated Balance Sheet at June 30 were as follows:

	2021	2020
Retirement benefits	\$ 322,931	\$ 504,747
Other liabilities and reserves	136,710	139,872
Long-term contracts	5,562	7,392
Stock-based compensation	30,165	35,483
Loss carryforwards	861,013	754,655
Unrealized currency exchange gains and losses	18,841	39,256
Inventory	(11,753)	(31,081)
Tax credit carryforwards	19,709	33,176
Undistributed foreign earnings	(21,722)	(15,196)
Depreciation and amortization	(945,422)	(988,886)
Valuation allowance	(865,764)	(771,430)
Net deferred tax (liability)	<u>\$ (449,730)</u>	<u>\$ (292,012)</u>
Change in net deferred tax (liability):		
Provision for deferred tax	\$ 51,500	\$ (12,290)
Items of other comprehensive (loss) income	(209,509)	102,297
Acquisitions and other	291	(301,690)
Total change in net deferred tax	<u>\$ (157,718)</u>	<u>\$ (211,683)</u>

As of June 30, 2021, we recorded deferred tax assets of \$861,013 resulting from \$3,473 million in loss carryforwards. A valuation allowance of \$841,789 related to the loss carryforwards has been established due to the uncertainty of their realization. Of this valuation allowance, \$816,388 relates to non-operating entities whose loss carryforward utilization is considered to be remote. Some of the loss carryforwards can be carried forward indefinitely; others can be carried forward from three years to 20 years. In addition, a valuation allowance of \$23,975 related to other future deductible items has been established due to the uncertainty of their realization.

Although future distributions of foreign earnings to the United States should not be subject to U.S. federal income taxes, other U.S. or foreign taxes may be imposed on such earnings. We have analyzed existing factors and determined we will no longer permanently reinvest certain foreign earnings. On these undistributed foreign earnings of approximately \$712 million that are no longer permanently reinvested outside of the United States, we have recorded a deferred tax liability of \$16 million. The remaining undistributed foreign earnings of approximately \$1,609 million remain permanently reinvested outside the United States at June 30, 2021. Of these undistributed earnings, we have recorded a deferred tax liability of \$6 million where certain foreign holding companies are not permanently reinvested in their subsidiaries. It is not practicable to estimate the additional taxes, including applicable foreign withholding taxes, that might be payable on the potential distribution of such permanently reinvested foreign earnings.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2021	2020	2019
Balance July 1	\$ 86,277	\$ 140,662	\$ 153,091
Additions for tax positions related to current year	10,145	4,955	2,272
Additions for tax positions of prior years	10,320	798	45
Additions for acquisitions	2,376	43,532	—
Reductions for tax positions of prior years	(1,996)	(41,726)	(927)
Reductions for settlements	(7,165)	(53,520)	(832)
Reductions for expiration of statute of limitations	(2,252)	(3,820)	(9,388)
Effect of foreign currency translation	3,054	(4,604)	(3,599)
Balance June 30	<u>\$ 100,759</u>	<u>\$ 86,277</u>	<u>\$ 140,662</u>

The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate was \$100,759, \$86,277 and \$140,662 as of June 30, 2021, 2020 and 2019, respectively. The accrued interest related to the gross unrecognized tax benefits, excluded from the amounts above, was \$17,862, \$14,247 and \$25,214 as of June 30, 2021, 2020 and 2019, respectively.

It is reasonably possible that, within the next 12 months, the amount of gross unrecognized tax benefits could be reduced by up to approximately \$40,000 as a result of the revaluation of existing uncertain tax positions arising from developments in the examination process or the closure of tax statutes. Any increase in the amount of unrecognized tax benefits within the next 12 months is expected to be insignificant.

We file income tax returns in the United States and in various foreign jurisdictions. In the normal course of business, we are subject to examination by taxing authorities throughout the world. We are open to assessment of our U.S. federal income tax returns by the Internal Revenue Service for years after 2013, and our state and local income tax returns for years after 2013. We are open to assessment for significant foreign jurisdictions for years after 2011.

6. Earnings Per Share

Basic earnings per share are computed using the weighted-average number of common shares outstanding during the year. Diluted earnings per share are computed using the weighted-average number of common shares and common share equivalents outstanding during the year. Common share equivalents represent the dilutive effect of outstanding equity-based awards. The reconciliation of the numerator and denominator of basic and diluted earnings per share was as follows:

	2021	2020*	2019*
<u>Numerator:</u>			
Net income attributable to common shareholders	\$ 1,746,100	\$ 1,201,970	\$ 1,524,516
<u>Denominator:</u>			
Basic - weighted-average common shares	128,999,879	128,418,495	129,997,640
Increase in weighted-average common shares from dilutive effect of equity-based awards	1,834,599	1,386,539	1,783,977
Diluted - weighted-average common shares, assuming exercise of equity-based awards	<u>130,834,478</u>	<u>129,805,034</u>	<u>131,781,617</u>
Basic earnings per share	\$ 13.54	\$ 9.36	\$ 11.73
Diluted earnings per share	\$ 13.35	\$ 9.26	\$ 11.57

*Years ended June 30, 2020 and 2019 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 7 to the Consolidated Financial Statements.

For 2021, 2020 and 2019, 0.4 million, 0.6 million and 0.9 million common shares, respectively, subject to equity-based awards were excluded from the computation of diluted earnings per share because the effect of their exercise would be anti-dilutive.

7. Inventories

Inventories are stated at the lower of cost or net realizable value. During the fourth quarter of 2021, the Company voluntarily changed its method of accounting for certain domestic inventory previously valued by the LIFO method to the FIFO method. The cumulative effect of this change on periods presented prior to 2019 resulted in an increase in Retained earnings of \$105,460 at July 1, 2018. The FIFO method of accounting for inventory is preferable because it conforms the Company's entire inventory to a single method of accounting, it aligns the inventory cost flow assumption with the physical flow of goods, and improves comparability within the industry.

The inventories caption in the Consolidated Balance Sheet is comprised of the following components:

June 30,	2021	2020*
Finished products	\$ 733,744	\$ 703,630
Work in process	1,089,976	988,564
Raw materials	266,922	272,001
Total	<u>\$ 2,090,642</u>	<u>\$ 1,964,195</u>

*Year ended June 30, 2020 amounts have been revised to reflect the change in inventory accounting method, as described above and in Note 1 to the consolidated financial statements.

As a result of the retrospective application of this change in accounting method, the following financial statement line items within the accompanying financial statements were adjusted, as follows:

Dollars in thousands, except per share amounts	2021			2020			2019		
	As Computed Under LIFO	As Reported Under FIFO	Effect of Change	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change
Consolidated Statements of Income									
Cost of sales	\$10,464,495	\$10,449,680	\$(14,815)	\$10,286,518	\$10,292,291	\$ 5,773	\$10,703,484	\$10,688,970	\$(14,514)
Income before income taxes	2,232,142	2,246,957	14,815	1,512,627	1,506,854	(5,773)	1,933,425	1,949,475	16,050
Income tax expense	499,269	500,096	827	305,924	304,522	(1,402)	420,494	424,392	3,898
Net income	1,732,873	1,746,861	13,988	1,206,703	1,202,332	(4,371)	1,512,931	1,525,083	12,152
Net income attributable to common shareholders	1,732,112	1,746,100	13,988	1,206,341	1,201,970	(4,371)	1,512,364	1,524,516	12,152
Earnings per share attributable to common shareholders:									
Basic	\$ 13.43	\$ 13.54	\$ 0.11	\$ 9.39	\$ 9.36	\$ (0.03)	\$ 11.63	\$ 11.73	\$ 0.10
Diluted	\$ 13.24	\$ 13.35	\$ 0.11	\$ 9.29	\$ 9.26	\$ (0.03)	\$ 11.48	\$ 11.57	\$ 0.09
Consolidated Statements of Comprehensive Income									
Net income	\$1,732,873	\$1,746,861	\$ 13,988	\$1,206,703	\$1,202,332	\$(4,371)	\$1,512,931	\$1,525,083	\$ 12,152
Net income attributable to common shareholders	1,732,112	1,746,100	13,988	1,206,341	1,201,970	(4,371)	1,512,364	1,524,516	12,152
Total comprehensive income attributable to common shareholders	2,724,260	2,738,248	13,988	706,514	702,143	(4,371)	1,218,136	1,230,288	12,152

Dollars in thousands, except per share amounts	2021			2020			2019		
	As Computed Under LIFO	As Reported Under FIFO	Effect of Change	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change
Consolidated Balance Sheets									
Inventories	\$1,926,263	\$2,090,642	\$164,379	\$1,814,631	\$1,964,195	\$149,564			
Deferred income taxes - noncurrent liability	516,831	553,981	37,150	382,528	418,851	36,323			
Retained earnings	14,788,268	14,915,497	127,229	13,530,666	13,643,907	113,241			
Consolidated Statements of Cash Flows									
Net income	\$1,732,873	\$1,746,861	\$ 13,988	\$1,206,703	\$1,202,332	\$ (4,371)	\$1,512,931	\$1,525,083	\$12,152
Deferred income taxes	(52,327)	(51,500)	827	13,692	12,290	(1,402)	32,537	36,435	3,898
Inventories	(70,782)	(85,597)	(14,815)	201,164	206,937	5,773	(51,817)	(67,867)	(16,050)

The effect of change in inventory in 2020 represents the excess of gross FIFO inventories over the cost of such inventories valued on a LIFO basis of \$219,854 less the related excess and obsolete reserve of \$70,290.

As a result of the retrospective application of this change in accounting principle, the following financial statement line items within the unaudited interim 2021 and 2020 quarterly condensed consolidated financial statements were adjusted, as follows:

(Unaudited)	Three Months Ended								
	September 30, 2020			December 31, 2020			March 31, 2021		
Dollars in thousands, except per share amounts	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change
Consolidated Statements of Income									
Cost of sales	\$2,384,328	\$2,386,449	\$ 2,121	\$2,519,545	\$2,518,165	\$ (1,380)	\$2,714,773	\$2,712,785	\$ (1,988)
Income before income taxes	415,295	413,174	(2,121)	576,512	577,892	1,380	597,352	599,340	1,988
Income tax expense	93,578	93,063	(515)	129,015	129,350	335	125,619	126,101	482
Net income	321,717	320,111	(1,606)	447,497	448,542	1,045	471,733	473,239	1,506
Net income attributable to common shareholders	321,409	319,803	(1,606)	447,306	448,351	1,045	471,647	473,153	1,506
Earnings per share attributable to common shareholders:									
Basic	\$ 2.50	\$ 2.48	\$ (0.02)	\$ 3.47	\$ 3.48	\$ 0.01	\$ 3.65	\$ 3.67	\$ 0.02
Diluted	\$ 2.47	\$ 2.45	\$ (0.02)	\$ 3.41	\$ 3.42	\$ 0.01	\$ 3.59	\$ 3.60	\$ 0.01

(Unaudited)	Three Months Ended								
	September 30, 2019			December 31, 2019			March 31, 2020		
	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change	As Reported	Adjusted	Effect of Change
Consolidated Statements of Income									
Cost of sales	\$2,479,741	\$2,480,992	\$ 1,251	\$2,682,765	\$2,686,131	\$ 3,366	\$2,766,693	\$2,759,637	\$(7,056)
Income before income taxes	433,156	431,905	(1,251)	254,746	251,380	(3,366)	454,157	461,213	7,056
Income tax expense	94,115	93,811	(304)	50,148	49,331	(817)	86,788	88,501	1,713
Net income	339,041	338,094	(947)	204,598	202,049	(2,549)	367,369	372,712	5,343
Net income attributable to common shareholders	338,898	337,951	(947)	204,474	201,925	(2,549)	367,253	372,596	5,343
Earnings per share attributable to common shareholders:									
Basic	\$ 2.64	\$ 2.63	\$ (0.01)	\$ 1.59	\$ 1.57	\$ (0.02)	\$ 2.86	\$ 2.90	\$ 0.04
Diluted	\$ 2.60	\$ 2.60	\$ —	\$ 1.57	\$ 1.55	\$ (0.02)	\$ 2.83	\$ 2.87	\$ 0.04

8. Goodwill and Intangible Assets

The changes in the carrying amount of goodwill are as follows:

	Diversified Industrial Segment	Aerospace Systems Segment	Total
Balance June 30, 2019	\$ 5,355,165	\$ 98,640	\$ 5,453,805
Acquisitions	1,966,865	503,725	2,470,590
Foreign currency translation and other	(54,457)	(3)	(54,460)
Balance June 30, 2020	\$ 7,267,573	\$ 602,362	\$ 7,869,935
Acquisitions	3,738	—	3,738
Foreign currency translation and other	185,998	16	186,014
Balance June 30, 2021	\$ 7,457,309	\$ 602,378	\$ 8,059,687

Acquisitions represent the goodwill allocation during the measurement period subsequent to the applicable acquisition dates. Refer to Note 3 for further discussion.

We test goodwill for impairment at the reporting unit level on an annual basis and between annual tests whenever events or circumstances indicate that the carrying value of a reporting unit may exceed its fair value. Our annual impairment tests performed in 2021, 2020 and 2019 resulted in no impairment loss being recognized. We did not identify any events or circumstances during 2021 that required performance of an interim impairment test.

Intangible assets are amortized on a straight-line method over their legal or estimated useful lives. The gross carrying value and accumulated amortization for each major category of intangible asset at June 30 are as follows:

	2021		2020	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents and technology	\$ 999,952	\$ 216,314	\$ 991,596	\$ 162,528
Trademarks	762,130	331,905	748,326	285,197
Customer lists and other	3,869,772	1,563,838	3,791,505	1,284,789
Total	<u>\$ 5,631,854</u>	<u>\$ 2,112,057</u>	<u>\$ 5,531,427</u>	<u>\$ 1,732,514</u>

Total intangible asset amortization expense in 2021, 2020 and 2019 was \$325,447, \$284,632 and \$205,164, respectively. Estimated intangible asset amortization expense for the five years ending June 30, 2022 through 2026 is \$319,900, \$304,906, \$297,945, \$287,617 and \$282,431, respectively.

Intangible assets are evaluated for impairment whenever events or circumstances indicate that the undiscounted net cash flows to be generated by their use over their expected useful lives and eventual disposition may be less than their net carrying value. No material intangible asset impairments occurred in 2021, 2020 or 2019.

9. Financing Arrangements

The Company has a line of credit totaling \$2,500 million through a multi-currency revolving credit agreement with a group of banks, of which \$2,500 million was available as of June 30, 2021. The credit agreement expires in September 2024; however, the Company has the right to request a one-year extension of the expiration date on an annual basis, which request may result in changes to the current terms and conditions of the credit agreement. Advances from the credit agreement can be used for general corporate purposes, including acquisitions, and for the refinancing of existing indebtedness. The credit agreement requires the payment of an annual facility fee, the amount of which may increase in the event our credit ratings are lowered. Although a lowering of our credit ratings would likely increase the cost of future debt, it would not limit our ability to use the credit agreement nor would it accelerate the repayment of any outstanding borrowings.

The Company is currently authorized to sell up to \$2,500 million of short-term commercial paper notes. There were no commercial paper notes outstanding at June 30, 2021 and \$723,500 outstanding at June 30, 2020. The Company had no outstanding borrowings from foreign banks at June 30, 2021 and 2020. The weighted-average interest rate on notes payable during 2021 and 2020 was 0.2 percent and 2.2 percent, respectively.

In the ordinary course of business, some of our locations may enter into financial guarantees through financial institutions which enable customers to be reimbursed in the event of nonperformance by the Company.

The Company's credit agreements and indentures governing certain debt agreements contain various covenants, the violation of which would limit or preclude the use of the applicable agreements for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the applicable agreements. Based on our rating level at June 30, 2021, the most restrictive financial covenant provides that the ratio of debt to debt-shareholders' equity cannot exceed 0.65 to 1.0. As of June 30, 2021, our debt to debt-shareholders' equity ratio was 0.44 to 1.0. We are in compliance with all covenants.

10. Debt

June 30,	2021	2020
Domestic:		
Fixed rate medium-term notes, 3.30% to 6.25%, due 2023 - 2045	\$ 2,125,000	\$ 2,125,000
Senior Notes, 2.70% to 4.10%, due 2024 - 2049	3,675,000	3,675,000
Term loans, Libor plus 112.5 bps, due 2023 - 2024	—	1,210,313
Foreign:		
Euro Senior Notes, 1.125%, due 2025	830,060	786,520
Other long-term debt	15,968	12,708
Deferred debt issuance costs	(61,156)	(71,256)
Total long-term debt	6,584,872	7,738,285
Less: Long-term debt payable within one year	2,819	86,029
Long-term debt, net	\$ 6,582,053	\$ 7,652,256

During 2021, we repaid the remaining \$890 million and \$320 million balances related to the \$925 million and \$800 million term loans, respectively.

Principal amounts of long-term debt payable in the five years ending June 30, 2022 through 2026 are \$2,819, \$302,396, \$576,224, \$1,330,535 and \$439, respectively. The principal amounts of long-term debt payable exclude the amortization of debt issuance costs.

11. Leases

We primarily enter into lease agreements for office space, distribution centers, certain manufacturing facilities and equipment. The majority of our leases are operating leases. Finance leases are immaterial to our financial statements. In addition, leases with an initial term of 12 months or less are not recorded on the Consolidated Balance Sheet. Certain leases contain options that provide us with the ability to extend the lease term. Such options are included in the lease term when it is reasonably certain that the option will be exercised. When accounting for leases, we combine payments for leased assets, related services and other components of a lease. Payments within certain lease agreements are adjusted periodically for changes in an index or rate.

The discount rate implicit within our leases is generally not determinable and therefore we determine the discount rate based on our incremental borrowing rate. The incremental borrowing rate for our leases is determined based on lease term and the currency in which lease payments are made.

The components of lease expense are as follows:

	2021	2020
Operating lease expense	\$ 48,171	\$ 50,267
Short-term lease cost	7,674	8,566
Variable lease cost	5,835	5,108
Total lease cost	<u>\$ 61,680</u>	<u>\$ 63,941</u>

Supplemental cash flow information related to operating leases are as follows:

	2021	2020
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 47,080	\$ 48,562
Right-of-use assets obtained in exchange for operating lease obligations	41,637	41,069

Supplemental balance sheet information related to operating leases is as follows:

	2021	2020
Operating lease right-of-use assets (included within Investments and other assets)	\$ 131,880	\$ 138,601
Current operating lease liabilities (included within Other accrued liabilities)	\$ 40,193	\$ 43,327
Long-term operating lease liabilities (included within Other liabilities)	93,904	96,446
Total operating lease liabilities	<u>\$ 134,097</u>	<u>\$ 139,773</u>
Weighted average remaining lease term	5.5 years	5.2 years
Weighted average discount rate	1.8 %	2.1 %

Maturities of lease liabilities at June 30, 2021 are as follows:

	Operating Leases
2022	\$ 42,101
2023	29,349
2024	19,633
2025	15,068
2026	10,700
Thereafter	24,715
Total operating lease payments	<u>\$ 141,566</u>
Less imputed interest	7,469
Total operating lease liabilities	<u>\$ 134,097</u>

Rental expense in 2019 was \$126,752.

12. Retirement Benefits

Pensions - The Company has noncontributory defined benefit pension plans covering eligible employees, including certain employees in foreign countries. Plans for most salaried employees provide pay-related benefits based on years of service. Plans for hourly employees generally provide benefits based on flat-dollar amounts and years of service. We also have arrangements for certain key employees, which provide for supplemental retirement benefits. In general, the Company's policy is to fund these plans based on legal requirements, tax considerations, local practices and investment opportunities. We also sponsor defined contribution plans and participate in government-sponsored programs in certain foreign countries.

A summary of the Company's defined benefit pension plans follows:

	2021	2020	2019
Benefit cost			
Service cost	\$ 84,188	\$ 82,743	\$ 76,647
Interest cost	102,475	142,479	160,542
Expected return on plan assets	(267,579)	(266,674)	(251,072)
Amortization of prior service cost	5,325	5,633	6,655
Amortization of unrecognized actuarial loss	207,897	165,815	121,823
Amortization of transition obligation	18	18	18
Net periodic benefit cost	<u>\$ 132,324</u>	<u>\$ 130,014</u>	<u>\$ 114,613</u>

Components of net pension benefit cost, other than service cost, are included in other (income), net in the Consolidated Statement of Income.

	2021	2020
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 6,405,623	\$ 5,487,574
Service cost	84,188	82,743
Interest cost	102,475	142,479
Acquisition	—	380,237
Plan amendments	2,311	3,286
Actuarial (gain) loss	(91,719)	569,306
Benefits paid	(264,062)	(232,048)
Foreign currency translation and other	84,187	(27,954)
Benefit obligation at end of year	<u>\$ 6,323,003</u>	<u>\$ 6,405,623</u>
Change in plan assets		
Fair value of plan assets at beginning of year	\$ 4,594,106	\$ 4,244,969
Actual gain on plan assets	831,762	253,684
Acquisition	—	280,103
Employer contributions	76,936	72,753
Benefits paid	(264,062)	(232,048)
Foreign currency translation and other	66,835	(25,355)
Fair value of plan assets at end of year	<u>\$ 5,305,577</u>	<u>\$ 4,594,106</u>
Funded status	<u>\$ (1,017,426)</u>	<u>\$ (1,811,517)</u>
Amounts recognized on the Consolidated Balance Sheet		
Other accrued liabilities	\$ (4,944)	\$ (1,423)
Pensions and other postretirement benefits	(1,012,482)	(1,810,094)
Net amount recognized	<u>\$ (1,017,426)</u>	<u>\$ (1,811,517)</u>
Amounts recognized in Accumulated Other Comprehensive (Loss)		
Net actuarial loss	\$ 1,090,343	\$ 1,921,389
Prior service cost	15,006	17,184
Transition obligation	8	26
Net amount recognized	<u>\$ 1,105,357</u>	<u>\$ 1,938,599</u>

The presentation of the amounts recognized on the Consolidated Balance Sheet and in accumulated other comprehensive (loss) is on a debit (credit) basis and excludes the effect of income taxes.

At June 30, 2021, the benefit obligation decreased primarily due to slightly higher discount rates, partially offset by updated census data and assumptions.

The benefit obligation increased in 2020 upon acquisition of the Lord pension plans. Significant reductions in the discount rates also contributed to the increase in the benefit obligation, which was partially offset by a reduced salary scale and updated mortality assumptions for the domestic qualified defined benefit plan.

Investment gains are the primary contributing factor for the increase in plan assets' fair value during 2021. The increase in the plan assets' fair value in 2020 is attributable to the acquisition of the Lord pension plans and investment gains.

The accumulated benefit obligation for all defined benefit plans was \$6,069 million and \$6,102 million at June 30, 2021 and 2020, respectively.

Information for pension plans with accumulated benefit obligations in excess of plan assets:

	2021	2020
Accumulated benefit obligation	\$ 5,358,817	\$ 6,028,952
Fair value of plan assets	4,546,301	4,503,316

Information for pension plans with projected benefit obligations in excess of plan assets:

	2021	2020
Projected benefit obligation	\$ 5,620,693	\$ 6,348,500
Fair value of plan assets	4,568,113	4,523,545

We expect to make cash contributions of approximately \$102 million to our defined benefit pension plans in 2022, the majority of which relates to our non-U.S. plans. Estimated future benefit payments in the five years ending June 30, 2022 through 2026 are \$303,856, \$283,530, \$327,149, \$302,877 and \$305,135, respectively, and \$1,644,821 in the aggregate for the five years ending June 30, 2027 through June 30, 2031.

The assumptions used to measure net periodic benefit cost for the Company's significant defined benefit plans are:

	2021	2020	2019
U.S. defined benefit plan			
Discount rate	2.36 %	3.28 %	4.01 %
Average increase in compensation	2.98 %	3.60 %	3.65 %
Expected return on plan assets	6.75 %	7.00 %	7.00 %
Non-U.S. defined benefit plans			
Discount rate	0.2 to 3.03%	0.2 to 2.96%	0.3 to 3.37%
Average increase in compensation	1.75 to 4.50%	1.75 to 3.90%	1.75 to 5.50%
Expected return on plan assets	1.0 to 5.40%	1.0 to 5.75%	1.0 to 5.75%

The assumptions used to measure the benefit obligation for the Company's significant defined benefit plans are:

	2021	2020
U.S. defined benefit plan		
Discount rate	2.55 %	2.36 %
Average increase in compensation	3.05 %	2.98 %
Non-U.S. defined benefit plans		
Discount rate	0.25 to 2.95%	0.2 to 3.03%
Average increase in compensation	1.75 to 4.50%	1.75 to 4.50%

The discount rate assumption is based on current rates of high-quality, long-term corporate bonds over the same estimated time period that benefit payments will be required to be made. The expected return on plan assets assumption is based on the weighted-average expected return of the various asset classes in the plans' portfolio. The asset class return is developed using historical asset return performance as well as current market conditions such as inflation, interest rates and equity market performance.

The weighted-average allocation of the majority of the assets related to defined benefit plans is as follows:

	2021	2020
Equity securities	38 %	41 %
Debt securities	41 %	49 %
Other investments	21 %	10 %
	100 %	100 %

The weighted-average target asset allocation as of June 30, 2021 is 40 percent equity securities, 43 percent debt securities and 17 percent other investments. The investment strategy for the Company's worldwide defined benefit pension plan assets focuses on achieving prudent actuarial funding ratios while maintaining acceptable levels of risk in order to provide adequate liquidity to meet immediate and future benefit requirements. This strategy requires investment portfolios that are broadly diversified across various asset classes and external investment managers. Assets held in the U.S. defined benefit plan account for approximately 75 percent of our total defined benefit plan assets. The overall investment strategy with respect to our U.S. defined benefit plan is to use a funding strategy more heavily weighted toward liability-hedging assets as the funded status improves. Over time, we will continue to add long duration fixed income investments to the portfolio. These securities are highly correlated with our pension liabilities and will be managed in a liability framework.

The fair values of pension plan assets at June 30, 2021 and at June 30, 2020, by asset class, are as follows:

	June 30, 2021	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	\$ 248,525	\$ 241,421	\$ 7,104	\$ —
Equity securities				
U.S. based companies	408,301	408,301	—	—
Non-U.S. based companies	12,834	12,834	—	—
Fixed income securities				
Corporate debt securities	531,497	1,440	530,057	—
Government issued securities	151,458	105,167	46,291	—
Mutual funds				
Equity funds	6,768	6,768	—	—
Fixed income funds	6,506	6,506	—	—
Mutual funds measured at net asset value	368,340			
Common/Collective trusts measured at net asset value	3,161,683			
Limited Partnerships measured at net asset value	126,606			
Miscellaneous	283,059	—	283,059	—
Total at June 30, 2021	\$ 5,305,577	\$ 782,437	\$ 866,511	\$ —

	June 30, 2020	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	\$ 97,112	\$ 96,004	\$ 1,108	\$ —
Equity securities				
U.S. based companies	243,656	243,656	—	—
Non-U.S. based companies	9,152	9,152	—	—
Fixed income securities				
Corporate debt securities	616,582	1,477	615,105	—
Government issued securities	471,059	379,128	91,931	—
Mutual funds				
Equity funds	111,466	111,466	—	—
Fixed income funds	12,912	12,912	—	—
Mutual funds measured at net asset value	259,776			
Common/Collective trusts				
Common/Collective trusts measured at net asset value	2,711,736			
Limited Partnerships measured at net asset value	104,760			
Miscellaneous	(44,105)	—	(44,105)	—
Total at June 30, 2020	<u>\$ 4,594,106</u>	<u>\$ 853,795</u>	<u>\$ 664,039</u>	<u>\$ —</u>

Cash and cash equivalents are valued at cost, which approximates fair value. During 2021, the U.S. defined benefit plan implemented a new liability-hedging initiative that requires the plan to maintain a certain cash balance. At June 30, 2021, this required cash balance totaled approximately \$162 million.

Equity securities are valued at the closing price reported on the active market on which the individual securities are traded. U.S. based companies include Parker stock with a fair value of \$408,301 and \$243,656 as of June 30, 2021 and 2020, respectively.

Fixed income securities are valued using both market observable inputs for similar assets that are traded on an active market and the closing price on the active market on which the individual securities are traded.

Mutual funds are valued using the closing market price reported on the active market on which the fund is traded or at net asset value per share and primarily consist of equity and fixed income funds. The equity funds primarily provide exposure to U.S. and international equities, real estate and commodities. The fixed income funds primarily provide exposure to high-yield securities and emerging market fixed income instruments. Mutual funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are presented in the tables above to permit reconciliation of the fair value hierarchy to total pension plan assets. Redemption of a certain mutual fund is subject to a lock-up period, lasting throughout its duration, scheduled to terminate July 2026. However, this mutual fund may extend its duration up to an additional two years under certain conditions.

Common/Collective trusts primarily consist of equity, fixed income and real estate funds and are valued using the closing market price reported on the active market on which the fund is traded or at net asset value per share. Common/Collective trust investments can be redeemed without restriction after giving appropriate notice to the issuer. Generally, redemption of the entire investment balance of all common/collective trusts requires no more than a 90-day notice period. The equity funds provide exposure to large, mid and small cap U.S. equities, international large and small cap equities and emerging market equities. The fixed income funds provide exposure to U.S., international and emerging market debt securities. Common/Collective trusts measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are presented in the tables above to permit reconciliation of the fair value hierarchy to total pension plan assets.

Limited Partnerships' interest in venture capital investments are measured at fair value based on net asset value as determined by the respective fund investment. A certain limited partnership investment, subject to a one year lock-up period expiring June 30, 2022, is restricted to a maximum redemption of 20 percent of its account balance every six months upon a 90-day notification period. Limited Partnerships measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are presented in the tables above to permit reconciliation of the fair value hierarchy to total pension plan assets.

Miscellaneous primarily includes insurance contracts held in the asset portfolio of the Company's non-U.S. defined benefit pension plans and net payables for securities purchased but not settled in the asset portfolio of the Company's U.S. defined benefit pension plan. Insurance contracts are valued at the present value of future cash flows promised under the terms of the insurance contracts.

The primary investment objective of equity securities and equity funds, within both the mutual fund and common/collective trust asset class, is to obtain capital appreciation in an amount that at least equals various market-based benchmarks. The primary investment objective of fixed income securities and fixed income funds, within both the mutual fund and common/collective trust asset class, is to provide for a constant stream of income while preserving capital. The primary investment objective of limited partnerships is to achieve capital appreciation through an investment program focused on specialized investment strategies. The primary investment objective of the investments in the miscellaneous category is to provide a stable rate of return over a specified period of time.

Employee Savings Plan - We sponsor an employee stock ownership plan ("ESOP") as part of our legacy savings and investment 401(k) plan. The ESOP is available to eligible domestic employees. Company matching contributions, up to a maximum of four percent of an employee's annual compensation, are recorded as compensation expense. Participants may direct company matching contributions to any investment option within the savings and investment 401(k) plan.

	2021	2020	2019
Shares held by ESOP	4,497,902	5,306,643	6,134,280
Company matching contributions	\$ 66,249	\$ 69,434	\$ 72,032

In addition to shares within the ESOP, as of June 30, 2021, employees have elected to invest in 1,258,763 shares of common stock within a company stock fund of the savings and investment 401(k) plan.

The Company has a retirement income account ("RIA") within our legacy savings and investment 401(k) plan. We make a cash contribution to the participant's RIA each year and participants do not contribute to the RIA. Prior to January 1, 2021, the amount of the annual contribution was based on the participant's age and years of service. Beginning January 1, 2021, we amended the RIA ensuring most participants receive a flat three percent annual contribution of eligible compensation with some grandfathered participants receiving annual contribution calculated at a higher percent of eligible compensation. Under the amended RIA, no participant will receive less than the flat three percent contribution. The Company recognized \$41,680, \$38,387 and \$30,603 in expense related to the RIA in 2021, 2020 and 2019, respectively.

During 2020, we acquired several defined contribution plans comprised of similar company matching contributions and RIA features as our legacy plan. We recorded additional company matching expense of \$4,623 and \$4,190 and RIA expense of \$5,425 and \$7,439, respectively, for these acquired plans in 2021 and 2020. During 2021, these acquired plans were merged into our legacy savings and investment 401(k) plan.

Other Postretirement Benefits - The Company provides postretirement medical and life insurance benefits to certain retirees and eligible dependents. Most plans are contributory, with retiree contributions adjusted annually. The plans are unfunded and pay stated percentages of covered medically necessary expenses incurred by retirees after subtracting payments by Medicare or other providers and after stated deductibles have been met. For most plans, the Company has established cost maximums to more effectively control future medical costs. We have reserved the right to change these benefit plans.

The Company recognized \$1,237, \$1,551 and \$1,838 in expense related to other postretirement benefits in 2021, 2020 and 2019, respectively. Components of net other postretirement benefit cost, other than service cost, are included in other (income), net in the Consolidated Statement of Income.

	2021	2020
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 72,130	\$ 60,998
Service cost	328	250
Interest cost	983	1,686
Acquisition	—	12,638
Actuarial (gain) loss	(4,139)	1,276
Benefits paid	(5,563)	(4,718)
Benefit obligation at end of year	<u>\$ 63,739</u>	<u>\$ 72,130</u>
Funded status	<u>\$ (63,739)</u>	<u>\$ (72,130)</u>
Amounts recognized on the Consolidated Balance Sheet		
Other accrued liabilities	\$ (5,634)	\$ (6,374)
Pensions and other postretirement benefits	(58,105)	(65,756)
Net amount recognized	<u>\$ (63,739)</u>	<u>\$ (72,130)</u>
Amounts recognized in Accumulated Other Comprehensive (Loss)		
Net actuarial gain	\$ (4,311)	\$ (173)
Prior service credit	—	(73)
Net amount recognized	<u>\$ (4,311)</u>	<u>\$ (246)</u>

The presentation of the amounts recognized on the Consolidated Balance Sheet and in accumulated other comprehensive (loss) is on a debit (credit) basis and is before the effect of income taxes.

The decrease in the benefit obligation in 2021, largely reflected in the net actuarial gain component, is primarily due to a slightly higher discount rate and updated census data and actuarial assumptions. The increase in the benefit obligation in 2020, primarily reflected in the acquisition component, is a result of assuming Lord's postretirement plans.

The assumptions used to measure the net periodic benefit cost for postretirement benefit obligations are:

	2021	2020	2019
Discount rate	2.14 %	3.15 %	3.92 %
Current medical cost trend rate (Pre-65 participants)	6.73 %	7.09 %	7.47 %
Current medical cost trend rate (Post-65 participants)	7.03 %	7.43 %	7.87 %
Ultimate medical cost trend rate	4.50 %	4.50 %	4.50 %
Medical cost trend rate decreases to ultimate in year	2028	2028	2026

The discount rate assumption used to measure the benefit obligation was 2.36 percent and 2.14 percent in 2021 and 2020, respectively.

Estimated future benefit payments for other postretirement benefits in the five years ending June 30, 2022 through 2026 are \$5,634, \$5,155, \$4,828, \$4,540 and \$4,317, respectively, and \$18,566 in the aggregate for the five years ending June 30, 2027 through June 30, 2031.

Other - The Company has established nonqualified deferred compensation programs, which permit officers, directors and certain management employees to annually elect to defer a portion of their compensation, on a pre-tax basis, until their retirement. The retirement benefit to be provided is based on the amount of compensation deferred, company matching contributions and earnings on the deferrals. In addition, we maintain a defined contribution nonqualified supplemental executive pension plan in which the Company is the only contributor. During 2021, 2020 and 2019, we recorded expense relating to these programs of \$44,906, \$5,863 and \$5,916, respectively.

The Company has invested in corporate-owned life insurance policies to assist in meeting the obligations under these programs. The policies are held in a rabbi trust and are recorded as assets of the Company.

13. Equity

Changes in accumulated other comprehensive (loss) in shareholders' equity by component:

	Foreign Currency Translation Adjustment and Other	Retirement Benefit Plans	Total
Balance June 30, 2019	\$ (1,011,656)	\$ (1,047,392)	\$ (2,059,048)
Other comprehensive (loss) before reclassifications	(182,281)	(447,161)	(629,442)
Amounts reclassified from accumulated other comprehensive (loss)	—	129,615	129,615
Balance June 30, 2020	\$ (1,193,937)	\$ (1,364,938)	\$ (2,558,875)
Other comprehensive income before reclassifications	328,072	502,853	830,925
Amounts reclassified from accumulated other comprehensive (loss)	—	161,223	161,223
Balance June 30, 2021	\$ (865,865)	\$ (700,862)	\$ (1,566,727)

Significant reclassifications out of accumulated other comprehensive (loss) in shareholders' equity during 2021:

Details about Accumulated Other Comprehensive (Loss) Components	Income (Expense) Reclassified from Accumulated Other Comprehensive (Loss)	Consolidated Statement of Income Classification
Retirement benefit plans		
Amortization of prior service cost and initial net obligation	\$ (5,270)	Other (income) expense, net
Recognized actuarial loss	(207,896)	Other (income) expense, net
Total before tax	(213,166)	
Tax benefit	51,943	
Net of tax	<u>\$ (161,223)</u>	

Significant reclassifications out of accumulated other comprehensive (loss) in shareholders' equity during 2020:

Details about Accumulated Other Comprehensive (Loss) Components	Income (Expense) Reclassified from Accumulated Other Comprehensive (Loss)	Consolidated Statement of Income Classification
Retirement benefit plans		
Amortization of prior service cost and initial net obligation	\$ (5,531)	Other (income) expense, net
Recognized actuarial loss	(165,550)	Other (income) expense, net
Total before tax	(171,081)	
Tax benefit	41,466	
Net of tax	<u>\$ (129,615)</u>	

Share Repurchases - The Company has a program to repurchase its common shares. On October 22, 2014, the Board of Directors of the Company approved an increase in the overall number of shares authorized to repurchase under the program so that, beginning on such date, the aggregate number of shares authorized for repurchase was 35 million. There is no limitation on the number of shares that can be repurchased in a year. Repurchases may be funded primarily from operating cash flows and commercial paper borrowings and the shares are initially held as treasury shares. In March 2020, the Company suspended the share repurchase program in response to business uncertainty resulting from the COVID-19 pandemic. During 2021, the Company reinitiated the share repurchase program and began repurchasing shares under the program in February 2021.

The number of common shares repurchased at the average purchase price follows:

	2021	2020	2019
Shares repurchased	331,259	818,581	4,755,273
Average price per share including commissions	\$ 301.88	\$ 179.29	\$ 168.23

14. Stock Incentive Plans

The Company's 2016 Omnibus Stock Incentive Plan ("2016 SIP") provides for the granting of share-based incentive awards in the form of nonqualified stock options, stock appreciation rights ("SARs"), restricted stock units ("RSUs") and restricted and unrestricted stock to officers and key employees of the Company. On October 23, 2019, the number of shares of common stock authorized for issuance under the 2016 SIP increased to 23.8 million shares. At June 30, 2021, 11.3 million common stock shares were available for future issuance.

We satisfy share-based incentive award obligations by issuing shares of common stock out of treasury, which have been repurchased pursuant to our share repurchase program described in Note 13, or through the issuance of previously unissued common stock.

SARs - Upon exercise, SARs entitle the participant to receive shares of common stock equal to the increase in value of the award between the grant date and the exercise date. SARs are exercisable from one to three years after the date of grant and expire no more than 10 years after grant.

The fair value of each SAR award granted in 2021, 2020 and 2019 was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	2021	2020	2019
Risk-free interest rate	0.4 %	1.5 %	2.8 %
Expected life of award	5.4 years	5.1 years	5.1 years
Expected dividend yield of stock	2.0 %	2.0 %	1.9 %
Expected volatility of stock	35.2 %	25.9 %	24.2 %
Weighted-average fair value	\$ 53.92	\$ 31.68	\$ 35.09

The risk-free interest rate was based on U.S. Treasury yields with a term similar to the expected life of the award. The expected life of the award was derived by referring to actual exercise and post-vesting employment termination experience. The expected dividend yield was based on our historical dividend rate and stock price over a period similar to the expected life of the award. The expected volatility of stock was derived by referring to changes in our historical common stock prices over a time-frame similar to the expected life of the award.

SAR activity during 2021 is as follows (aggregate intrinsic value in millions):

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding June 30, 2020	5,183,970	\$ 132.42		
Granted	741,852	\$ 209.56		
Exercised	(1,741,352)	\$ 116.51		
Canceled	(35,884)	\$ 185.29		
Outstanding June 30, 2021	4,148,586	\$ 152.44	6.3 years	\$ 641.7
Exercisable June 30, 2021	2,677,757	\$ 134.55	5.1 years	\$ 462.1

A summary of the status and changes of shares subject to SAR awards and the related average price per share follows:

	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested June 30, 2020	1,539,502	\$ 32.41
Granted	741,852	\$ 53.92
Vested	(774,721)	\$ 32.09
Canceled	(35,804)	\$ 42.50
Nonvested June 30, 2021	1,470,829	\$ 43.19

During 2021, 2020 and 2019, we recognized stock-based compensation expense of \$35,212, \$26,108 and \$26,568, respectively, relating to SAR awards. The Company derives a tax deduction measured by the excess of the market value over the grant price at the date stock-based awards are exercised. The related income tax benefit was credited to income tax expense.

At June 30, 2021, \$13,089 of expense with respect to nonvested SAR awards has yet to be recognized and will be amortized into expense over a weighted-average period of approximately 16 months. The total fair value of shares vested during 2021, 2020 and 2019 was \$24,857, \$27,209 and \$25,365, respectively.

Information related to SAR awards exercised during 2021, 2020 and 2019 is as follows:

	2021	2020	2019
Net cash proceeds	\$ 4,684	\$ 2,623	\$ 2,475
Intrinsic value	225,025	133,641	95,502
Income tax benefit	\$ 37,437	\$ 21,132	\$ 15,584
Number of shares surrendered	316,330	228,986	158,610

RSUs - RSUs constitute an agreement to deliver shares of common stock to the participant at the end of a vesting period. Generally, the RSUs granted to employees vest, and the underlying stock is issued ratably, over a three-year graded vesting period. Nonvested RSUs may not be transferred and do not have dividend or voting rights. For each nonvested RSU, recipients are entitled to receive a dividend equivalent, payable in cash or common shares, equal to the cash dividend per share paid to common shareholders.

The fair value of each RSU award granted in 2021, 2020 and 2019 was based on the fair market value of our common stock on the date of grant. A summary of the status and changes of shares subject to RSU awards for employees and the related average price per share follows:

	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested June 30, 2020	350,573	\$ 160.66
Granted	137,488	\$ 218.17
Vested	(130,121)	\$ 161.75
Canceled	(8,354)	\$ 188.20
Nonvested June 30, 2021	349,586	\$ 182.22

During 2021, 2020 and 2019, we recognized stock-based compensation expense of \$26,009, \$25,560 and \$25,258, respectively, relating to RSU awards for employees. At June 30, 2021, \$20,543 of expense with respect to nonvested RSU awards has yet to be recognized and will be amortized into expense over a weighted-average period of approximately 20 months. The total fair value of RSU awards vested during 2021, 2020 and 2019 was \$21,048, \$23,380 and \$20,475, respectively. We recognized an income tax benefit of \$796, \$1,037 and \$1,548 relating to the issuance of common stock for RSU awards that vested during 2021, 2020 and 2019, respectively.

Additionally, we granted RSUs with a one-year vesting period to non-employee members of the Board of Directors. Recipients receive a dividend equivalent payable in common shares, equal to the cash dividend per share paid to common shareholders. A summary of the status and changes of shares subject to Board of Directors RSU awards and the related average price per share follows:

	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested June 30, 2020	8,262	\$ 187.49
Granted	8,122	\$ 214.46
Vested	(8,298)	\$ 187.49
Canceled	(610)	\$ 203.23
Nonvested June 30, 2021	7,476	\$ 215.51

The fair value of each RSU award granted to the Board of Directors in 2021, 2020 and 2019 was based on the fair market value of our common stock on the date of grant. In 2021, 2020 and 2019, we recognized stock-based compensation expense of \$1,458, \$1,434, and \$1,345, respectively, relating to these awards. During 2021, 2020 and 2019, we recognized an income tax benefit (cost) of \$2,115, \$86 and \$(82), respectively, related to the vesting of Board of Directors RSU awards. At June 30, 2021, \$649 of expense with respect to nonvested RSU awards granted to the Board of Directors has yet to be recognized and will be amortized into expense over a weighted-average period of approximately five months.

LTIP - The Company's Long Term Incentive Plans ("LTIP") provide for the issuance of unrestricted stock to certain officers and key employees based on the attainment of certain goals relating to our revenue growth, earnings per share growth and return on invested capital during the three-year performance period.

Stock issued and surrendered for LTIP	2021	2020	2019
	2018-19-20	2017-18-19	2016-17-18
LTIP three-year plan			
Number of shares issued	210,864	279,469	293,136
Number of shares surrendered	105,402	132,449	134,169
Share value on date of issuance	\$ 317.60	\$ 134.95	\$ 183.00
Total value of shares issued	\$ 66,970	\$ 37,714	\$ 53,644

Under the Company's 2019-20-21 LTIP, a payout of unrestricted stock will be issued in April 2022.

The fair value of each LTIP award granted in 2021, 2020 and 2019 was based on the fair market value of our common stock on the date of grant. These nonvested LTIP awards entitle participants to earn a dividend equivalent unit, payable in common shares, equal to the cash dividend per share paid to common shareholders. These dividend equivalent units do not have dividend or voting rights and are subject to the same performance goals as the initial award granted. A summary of the status and changes of shares relating to the LTIP and the related average price per share follows:

	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested June 30, 2020	539,059	\$ 186.75
Granted	141,122	\$ 242.80
Vested	(173,582)	\$ 208.83
Canceled	(11,548)	\$ 199.95
Nonvested June 30, 2021	495,051	\$ 194.68

During 2021, 2020 and 2019, we recorded stock-based compensation expense of \$58,804, \$58,273 and \$50,908, respectively, relating to the LTIP. During 2021, 2020 and 2019, we recognized an income tax benefit (cost) of \$1,974, \$(1,251) and \$14,101, respectively, relating to the LTIP.

15. Research and Development

Research and development costs amounted to \$259,039 in 2021, \$293,837 in 2020 and \$294,852 in 2019. These amounts include both costs incurred by the Company related to independent research and development initiatives as well as costs incurred in connection with research and development contracts. Costs incurred in connection with research and development contracts amounted to \$54,051 in 2021, \$56,964 in 2020 and \$44,484 in 2019. These costs are included in the total research and development cost for each of the respective years.

16. Financial Instruments

The Company's financial instruments consist primarily of cash and cash equivalents, marketable securities and other investments, accounts receivable and long-term investments, as well as obligations under accounts payable, trade, notes payable and long-term debt. Due to their short-term nature, the carrying values for cash and cash equivalents, accounts receivable, accounts payable, trade and notes payable approximate fair value.

Marketable securities and other investments include deposits and equity investments. Deposits are recorded at cost, and equity investments are recorded at fair value. Changes in fair value of equity investments are recognized in net income.

The carrying value of long-term debt, which excludes the impact of net unamortized debt issuance costs, and estimated fair value of long-term debt at June 30 are as follows:

	2021	2020
Carrying value of long-term debt	\$ 6,646,029	\$ 7,809,541
Estimated fair value of long-term debt	7,527,268	8,574,401

The fair value of long-term debt is classified within level 2 of the fair value hierarchy.

The Company utilizes derivative and non-derivative financial instruments, including forward exchange contracts, costless collar contracts, cross-currency swap contracts and certain foreign denominated debt designated as net investment hedges, to manage foreign currency transaction and translation risk. The derivative financial instrument contracts are with major investment grade financial institutions, and the Company does not anticipate any material non-performance by any of the counterparties. The Company does not hold or issue derivative financial instruments for trading purposes.

The Company's €700 million aggregate principal amount of Senior Notes due 2025 have been designated as a hedge of the Company's net investment in certain foreign subsidiaries. The translation of the Senior Notes due 2025 into U.S. dollars is recorded in accumulated other comprehensive (loss) and remains there until the underlying net investment is sold or substantially liquidated.

During 2020, we settled the cross-currency swap with an aggregate notional amount of €235 million, which was designated as a net investment hedge, for proceeds of \$44 million. These proceeds are included in cash flows from investing activities in the Consolidated Statement of Cash Flows. Additionally, we entered into two cross-currency swaps with aggregate notional amounts of €359 million and ¥2,149 million due June 2029. These cross-currency swaps have been designated as hedges of net investments in certain foreign subsidiaries.

During 2021, we amended the two cross-currency swaps with aggregate notional amounts of €359 million and ¥2,149 million due June 2029 to cross-currency swaps with aggregate notional amounts of €69 million due November 2034, €290 million due May 2038 and ¥2,149 million due November 2034. These cross-currency swaps are each subject to a credit support annex ("CSA") where either party is obligated to post collateral if the outstanding position exceeds a certain threshold governed by the CSA's starting in June 2029. These cross-currency swaps have been designated as hedges of net investments in certain foreign subsidiaries.

Derivative financial instruments are recognized on the Consolidated Balance Sheet as either assets or liabilities and are measured at fair value.

The location and fair value of derivative financial instruments reported on the Consolidated Balance Sheet are as follows:

	Balance Sheet Caption	2021	2020
Net investment hedges			
Cross-currency swap contracts	Other liabilities	\$ 71,798	\$ 30,860
Cash flow hedges			
Forward exchange contracts	Non-trade and notes receivable	5,376	5,311
Forward exchange contracts	Other accrued liabilities	9,435	3,474
Costless collar contracts	Non-trade and notes receivable	110	2,250
Costless collar contracts	Other accrued liabilities	901	661

The cross-currency swap, forward exchange contracts and costless collar contracts are reflected on a gross basis in the Consolidated Balance Sheet. The Company has not entered into any master netting arrangements.

The cross-currency swap contracts have been designated as hedging instruments. The forward exchange and costless collar contracts have not been designated as hedging instruments and are considered to be economic hedges of forecasted transactions.

Derivatives not designated as hedges are adjusted to fair value by recording gains and losses through the cost of sales caption in the Consolidated Statement of Income.

Derivatives designated as hedges are adjusted to fair value by recording gains and losses through accumulated other comprehensive (loss) on the Consolidated Balance Sheet until the hedged item is recognized in earnings. We elected to assess the effectiveness of the €69 million, €290 million and ¥2,149 million cross-currency swap hedging instruments using the spot method. Under this method, the periodic interest settlements are recognized directly in earnings through interest expense.

Net gains (losses) of \$16 million and \$(27) million relating to forward exchange contracts were recorded within cost of sales on the Consolidated Statement of Income for the year ended June 30, 2021 and 2020, respectively. All other gains or losses on derivative financial instruments that were recorded in the Consolidated Statement of Income during 2021, 2020 and 2019 were not material.

(Losses) gains on derivative and non-derivative financial instruments that were recorded in accumulated other comprehensive (loss) in the Consolidated Balance Sheet are as follows:

	2021	2020
Cross-currency swap contracts	\$ (31,988)	\$ (9,435)
Foreign denominated debt	(32,882)	7,205

During 2021 and 2020, the periodic interest settlements related to the cross-currency swaps were not material. No portion of these financial instruments were excluded from the effectiveness testing during 2019.

A summary of financial assets and liabilities that were measured at fair value on a recurring basis at June 30, 2021 and 2020 are as follows:

	June 30, 2021	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Equity securities	\$ 20,517	\$ 20,517	\$ —	\$ —
Derivatives	5,486	—	5,486	—
Liabilities:				
Derivatives	82,134	—	82,134	—

	June 30, 2020	Quoted Prices In Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Equity securities	\$ 7,901	\$ 7,901	\$ —	\$ —
Derivatives	7,561	—	7,561	—
Liabilities:				
Derivatives	34,995	—	34,995	—

The fair values of the equity securities are determined using the closing market price reported in the active market in which the fund is traded.

Derivatives consist of forward exchange, costless collar and cross-currency swap contracts, the fair values of which are calculated using market observable inputs including both spot and forward prices for the same underlying currencies. The calculation of fair value of the cross-currency swap contracts also utilizes a present value cash flow model that has been adjusted to reflect the credit risk of either the Company or the counterparty.

The primary investment objective for all investments is the preservation of principal and liquidity while earning income.

There are no other financial assets or financial liabilities that are marked to market on a recurring basis.

17. Contingencies

The Company is involved in various litigation matters arising in the normal course of business, including proceedings based on product liability claims, workers' compensation claims and alleged violations of various environmental laws. We are self-insured in the United States for health care, workers' compensation, general liability and product liability up to predetermined amounts, above which third party insurance applies. Management regularly reviews the probable outcome of these proceedings, the expenses expected to be incurred, the availability and limits of the insurance coverage and the established accruals for liabilities. While the outcome of pending proceedings cannot be predicted with certainty, management believes that any liabilities that may result from these proceedings will not have a material adverse effect on our liquidity, financial condition or results of operations.

Environmental - The Company is currently responsible for environmental remediation at various manufacturing facilities presently or formerly operated by the Company and has been named as a “potentially responsible party,” along with other companies, at off-site waste disposal facilities and regional sites.

As of June 30, 2021, we had an accrual of \$17,059 for environmental matters, which are probable and reasonably estimable. The accrual is recorded based upon the best estimate of costs to be incurred in light of the progress made in determining the magnitude of remediation costs, the timing and extent of remedial actions required by governmental authorities and the amount of our liability in proportion to other responsible parties.

Our estimated total liability for environmental matters ranges from a minimum of \$17.1 million to a maximum of \$73.5 million. The largest range for any one site is approximately \$11.4 million. The actual costs we will incur are dependent on final determination of contamination and required remedial action, negotiations with governmental authorities with respect to cleanup levels, changes in regulatory requirements, innovations in investigatory and remedial technologies, effectiveness of remedial technologies employed, the ability of other responsible parties to pay, and any insurance or other third-party recoveries.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure. None.

ITEM 9A. Controls and Procedures. The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's principal executive officer and principal financial officer, of the effectiveness of the Company's disclosure controls and procedures as of June 30, 2021. Based on this evaluation, the Company's principal executive officer and principal financial officer concluded that, as of June 30, 2021, the Company's disclosure controls and procedures were effective.

In response to the COVID-19 pandemic, many of our team members have been working remotely. We are continually monitoring and assessing the changing business environment resulting from COVID-19 on our internal controls to minimize the impact on their design and operating effectiveness. Management has taken measures to ensure that our disclosure controls and procedures and internal controls over financial reporting remained effective and were not materially affected during this period.

There were no changes in the Company's internal controls over financial reporting during the quarter ended June 30, 2021 that materially affected, or are reasonably likely to materially affect, its internal controls over financial reporting.

Management's Report On Internal Control Over Financial Reporting

Our management, including the principal executive officer and the principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)). We assessed the effectiveness of our internal control over financial reporting as of June 30, 2021. In making this assessment, we used the criteria established by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control-Integrated Framework (2013)." We concluded that based on our assessment, the Company's internal control over financial reporting was effective as of June 30, 2021.

Deloitte & Touche LLP, the independent registered public accounting firm that audited the Company's consolidated financial statements, has issued an attestation report on the Company's internal control over financial reporting as of June 30, 2021, which is included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 9B. Other Information. None.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance. Information required with respect to the Directors of the Company is set forth under the caption "Item I – Election of Directors" in the definitive Proxy Statement for the Company's 2021 Annual Meeting of Shareholders, to be held October 27, 2021 (the "2021 Proxy Statement"), and is incorporated herein by reference. Information with respect to the executive officers of the Company is included in Part I, Item 1C of this Annual Report on Form 10-K under the caption "Information about our Executive Officers."

The information set forth under the caption "Delinquent Section 16(a) Reports" in the 2021 Proxy Statement is incorporated herein by reference.

The Company has adopted a Global Code of Business Conduct that applies to its Chief Executive Officer, Chief Financial Officer and Controller. The Global Code of Business Conduct is posted on the Company's investor relations internet website at www.phstock.com under the Corporate Governance page. Any amendment to, or waiver from, a provision of the Company's Global Code of Business Conduct that applies to its Chief Executive Officer, Chief Financial Officer or Controller will also be posted at www.phstock.com under the Corporate Governance page.

The information set forth under the captions "Committees of our Board of Directors - The Audit Committee" and "Committees of Our Board of Directors - Board Committees; Committee Charters" in the 2021 Proxy Statement is incorporated herein by reference.

ITEM 11. Executive Compensation. The information set forth under the captions "Compensation Discussion and Analysis," "Compensation Committee Report," and "Compensation Tables" in the 2021 Proxy Statement is incorporated herein by reference.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information set forth under the captions "Principal Shareholders" in the 2021 Proxy Statement is incorporated herein by reference.

Equity Compensation Plan Information. The following table sets forth certain information regarding the Company's equity compensation plans as of June 30, 2021, unless otherwise indicated.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under Equity compensation plans
Equity compensation plans approved by security holders	5,498,710 ⁽¹⁾	\$154.85	21,200,533 ⁽²⁾
Equity compensation plans not approved by security holders	—	—	—
Total	5,498,710	\$154.85	21,200,533

⁽¹⁾Includes the maximum future payouts of common stock that may be issued under the calendar year 2019-20-21, 2020-21-22 and 2021-22-23 long term incentive performance awards ("LTIP awards"). For these LTIP awards, payouts will be determined based on achieving an average return on average equity of four percent or an average free cash flow margin of four percent. If these performance measures are achieved, the participants will be eligible to receive the maximum payout of 200 percent. The Human Resources and Compensation Committee will then compare our performance to that of a group of our peers and, if appropriate, apply its discretion to reduce the final payouts based on any performance measures that the Committee determines to be appropriate.

⁽²⁾The maximum number of shares of our common stock that may be issued under the Amended and Restated 2016 Omnibus Stock Incentive Plan is 23.8 million shares, of which approximately 11.3 million shares are available for future issuance. The maximum number of shares that may be issued under the Global Employee Stock Purchase Plan is 10 million shares, of which approximately 9.9 million shares are still available for future issuance.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence. The information set forth under the captions "Other Governance Matters - Review and Approval of Transactions with Related Persons" and "Corporate Governance: Board of Directors - Director Independence" in the 2021 Proxy Statement is incorporated herein by reference.

ITEM 14. Principal Accountant Fees and Services. The information set forth under the captions "Audit Fees and All Other Fees" and "Audit Committee Pre-Approval Policies and Procedures" in the 2021 Proxy Statement is incorporated herein by reference.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules.

a. The following are filed as part of this report:

	Page Number in Form 10-K
1. Financial Statements	
Consolidated Statement of Income	36
Consolidated Statement of Comprehensive Income	37
Business Segment Information	38
Consolidated Balance Sheet	40
Consolidated Statement of Cash Flows	41
Consolidated Statement of Equity	42
Notes to Consolidated Financial Statements	43
2. Schedule	
II - Valuation and Qualifying Accounts	80
3. Exhibits	
Exhibit No.	Description of Exhibit
	<u>Plans of Acquisition, Reorganization, Arrangement, Liquidation or Succession:</u>
(2)(a)	Agreement and Plan of Merger among Parker-Hannifin Corporation, CLARCOR, Inc. and Parker Eagle Corporation dated as of December 1, 2016, incorporated by reference to Exhibit 2.1 of Registrant's Report on Form 8-K filed with the SEC on December 1, 2016 (Commission File No. 1-4982).
(2)(b)	Agreement and Plan of Merger among Parker-Hannifin Corporation, Erie Merger Sub, Inc., LORD Corporation and Shareholder Representative Services LLC as the shareholders' representative, dated as of April 26, 2019, incorporated by reference to Exhibit 2.1 of Registrant's Report on Form 8-K filed with the SEC on April 29, 2019 (Commission File No. 1-4982).
(2)(c)	Share Purchase Agreement, among Parker-Hannifin Corporation, EMFCO Holdings Incorporated, the shareholders of the Company, and Fortis Advisors LLC, as the Sellers' representative, dated as of July 26, 2019, incorporated by reference to Exhibit 2.1 of Registrant's Report on Form 8-K filed with the SEC on July 29, 2019 (Commission File No. 1-4982).
(2)(d)	Rule 2.7 Announcement in connection with Parker-Hannifin Corporation's acquisition of Meggitt plc., dated August 2, 2021, incorporated by reference to Exhibit 2.1 of Registrant's Report on Form 8-K filed with the SEC on August 3, 2021 (Commission file No. 1-4982).
	<u>Articles of Incorporation and By-Laws:</u>
(3)(a)	Amended Articles of Incorporation, incorporated by reference to Exhibit 3(a) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
(3)(b)	Regulations, Amended and Restated as of April 22, 2021, incorporated by reference to Exhibit 3(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2021 (Commission File No. 1-4982).
	<u>Instruments Defining Rights of Security Holders:</u>
(4)(a)	Description of Parker-Hannifin's Securities, incorporated by reference to Exhibit 4(a) to Registrant's Report on Form 10-K for the year ended June 30, 2019 (Commission File No. 1-4982).
	<u>Material Contracts:</u>

- (10)(a) Form of Parker-Hannifin Corporation Amended and Restated Change in Control Severance Agreement entered into by Registrant and its executive officers, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(b) Form of Parker-Hannifin Corporation Change in Control Severance Agreement for Executive Officers elected after September 1, 2015 at or above Grade 29, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(c) Form of Parker-Hannifin Corporation Change in Control Severance Agreement for Executive Officers dated after September 1, 2015 below Grade 29, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(d) Parker-Hannifin Corporation Amended and Restated Change in Control Severance Plan, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(e) Form of Indemnification Agreement entered into by the Registrant and its directors and executive officers, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2003 (Commission File No. 1-4982).
- (10)(f) Description of the Parker-Hannifin Corporation Officer Life Insurance Plan, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2005 (Commission File No. 1-4982).
- (10)(g) Parker-Hannifin Corporation Amended and Restated Supplemental Executive Retirement Benefits Program, effective July 1, 2014, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2016 (Commission File No. 1-4982).
- (10)(h) Parker-Hannifin Corporation Amended and Restated Defined Contribution Supplemental Executive Retirement Program, effective January 22, 2015, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(i) Summary of the Parker-Hannifin Corporation Executive Disability Insurance Plan, incorporated by reference to Exhibit 10(j) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(j) Parker-Hannifin Corporation Amended and Restated 2003 Stock Incentive Plan, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(k) Parker-Hannifin Corporation Amended and Restated 2009 Omnibus Stock Incentive Plan, incorporated by reference to Appendix A to Registrant's Definitive Proxy Statement filed with the Commission on September 24, 2012 (Commission File No. 1-4982).
- (10)(l) Parker-Hannifin Corporation 2016 Omnibus Stock Incentive Plan, incorporated by reference to Annex B to Registrant's Definitive Proxy Statement on Schedule 14A, filed with the SEC on September 26, 2016 (Commission File No. 1-4982).
- (10)(m) Parker-Hannifin Corporation First Amendment to 2016 Omnibus Stock Incentive Plan, effective April 1, 2017, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2017 (Commission File No. 1-4982).
- (10)(n) Parker-Hannifin Corporation Amended and Restated 2016 Omnibus Stock Incentive Plan, effective as of October 23, 2019, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K filed with the SEC on October 28, 2019 (Commission File No. 1-4982).
- (10)(o) Parker-Hannifin Corporation 2015 Performance Bonus Plan incorporated by reference to Appendix B to Registrant's Definitive Proxy Statement filed with the Commission on September 28, 2015 (Commission File No. 1-4982).
- (10)(p) Form of 2010 Notice of Stock Options with Tandem Stock Appreciation Rights for Executive Officers, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2009 (Commission File No. 1-4982).
- (10)(q) Form of 2011 Parker-Hannifin Corporation Stock Appreciation Rights Award Agreement for executive officers, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the SEC on August 17, 2010 (Commission File No. 1-4982).
- (10)(r) 2011 Parker-Hannifin Corporation Stock Appreciation Rights Terms and Conditions for executive officers, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K filed with the SEC on August 17, 2010 (Commission File No. 1-4982).

- (10)(s) Form of Parker-Hannifin Corporation Stock Appreciation Rights Award Agreement for executive officers, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2011 (Commission File No. 1-4982).
- (10)(t) Parker-Hannifin Corporation Stock Appreciation Rights Terms and Conditions for executive officers, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2011 (Commission File No. 1-4982).
- (10)(u) Form of 2018 Parker-Hannifin Corporation Stock Appreciation Rights Award Agreement, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission File No. 1-4982).
- (10)(v) 2018 Parker-Hannifin Corporation Stock Appreciation Rights Terms and Conditions, incorporated by reference to Exhibit 10(e) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission File No. 1-4982).
- (10)(w) Parker-Hannifin Corporation Target Incentive Plan, incorporated by reference to Exhibit 10(d) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(x) Parker-Hannifin Corporation Target Incentive Plan Subject to Performance Bonus Plan, incorporated by reference to Exhibit 10(e) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(y) Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan, as amended and restated, effective January 20, 2016, incorporated by reference to Exhibit 10(aa) to Registrant's Annual Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission file No. 1-4982).
- (10)(z) Form of Notice of Award under the Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan (as Amended and Restated), incorporated by reference to Exhibit 10(bb) to the Registrant's Annual Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission file No. 1-4982).
- (10)(aa) Form of Notice of Award under the Parker-Hannifin Corporation Long-Term Incentive Plan Under the Performance Bonus Plan (as Amended and Restated), effective as of January 23, 2019, incorporated by reference to Exhibit 10(f) to the Registrant's Annual Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission file No. 1-4982).
- (10)(bb) Parker-Hannifin Corporation Long-Term Incentive Performance Plan Under the Performance Bonus Plan (as Amended and Restated), effective as of January 23, 2019, incorporated by reference to Exhibit 10(g) to the Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission File No. 1-4982).
- (10)(cc) Form of Award under the Parker-Hannifin Corporation Long-Term Incentive Plan Under the Performance Bonus Plan (as Amended and Restated) effective as of January 27, 2021, incorporated by reference to Exhibit 10(a) to the Registrant's Report on Form 10-Q for the quarterly period ended March 31, 2021 (Commission File No. 1-4982).
- (10)(dd) Parker-Hannifin Corporation Restricted Stock Unit Award Agreement dated August 17, 2016 for Lee C. Banks, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(ee) Parker-Hannifin Corporation Restricted Stock Unit Terms and Conditions for Lee C. Banks, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(ff) Form of Parker-Hannifin Corporation Restricted Stock Unit Award Agreement, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission file No. 1-4982).
- (10)(gg) Form of Parker-Hannifin Corporation Restricted Stock Unit Award Agreement, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission File No. 1-4982).
- (10)(hh) Form of Parker-Hannifin Corporation Restricted Stock Unit Terms and Conditions for Awards Granted, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2018 (Commission File No. 1-4982).
- (10)(ii) Form of 2018 Parker-Hannifin Corporation Restricted Stock Unit Award Agreement to Certain Executive Officers, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2018 (Commission File No. 1-4982).

- (10)(jj) Parker-Hannifin Corporation 2018 Restricted Stock Unit Terms and Conditions for Certain Executive Officers, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2018 (Commission File No. 1-4982).
- (10)(kk) Parker-Hannifin Corporation Profitable Growth Incentive Plan, incorporated by reference to Exhibit 10(c) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2014 (Commission File No. 1-4982).
- (10)(ll) Form of Notice of RONA Bonus Award Under the Parker-Hannifin Corporation Performance Bonus Plan, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2009 (Commission File No. 1-4982).
- (10)(mm) Parker-Hannifin Corporation RONA Plan Subject to Performance Bonus Plan, incorporated by reference to Exhibit 10(f) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2010 (Commission File No. 1-4982).
- (10)(nn) Parker-Hannifin Corporation Summary of RONA Bonus Awards in Lieu of Certain Executive Perquisites, incorporated by reference to Exhibit 10(h) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2008 (Commission File No. 1-4982).
- (10)(oo) Parker-Hannifin Corporation Savings Restoration Plan, restated as of September 1, 2004, incorporated by reference to Exhibit 10(t) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2004 (Commission File No. 1-4982).
- (10)(pp) Parker-Hannifin Corporation Amended and Restated Savings Restoration Plan, effective January 1, 2016, incorporated by reference to Exhibit 10(b) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2016 (Commission File No. 1-4982).
- (10)(qq) Parker-Hannifin Corporation Amended and Restated Pension Restoration Plan, effective July 1, 2016, incorporated by reference to Exhibit 10(mm) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(rr) Parker-Hannifin Corporation Executive Deferral Plan, restated as of September 1, 2004, incorporated by reference to Exhibit 10(v) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2004 (Commission File No. 1-4982).
- (10)(ss) Parker-Hannifin Corporation Amended and Restated Executive Deferral Plan, effective September 2, 2015, incorporated by reference to Exhibit 10(pp) to Registrant's Report on Form 10-K for the fiscal year ended June 30, 2016 (Commission File No. 1-4982).
- (10)(tt) Amendment Two to the Parker-Hannifin Corporation Amended and Restated Executive Deferral Plan (effective September 2, 2015), dated and effective October 14, 2019, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 10-Q filed with the SEC on February 5, 2020 (Commission File No. 1-4982).
- (10)(uu) Parker-Hannifin Corporation Global Employee Stock Purchase Plan, incorporated by reference to Appendix A to Registrant's Definitive Proxy Statement filed with the SEC on September 22, 2014 (Commission File No. 1-4982).
- (10)(vv) Parker-Hannifin Corporation Claw-back Policy, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the SEC on August 18, 2009 (Commission File No. 1-4982).
- (10)(ww) Amended and Restated Deferred Compensation Plan for Directors of Parker-Hannifin Corporation, effective January 22, 2015, incorporated by reference to Exhibit 10(i) to Registrant's Report on Form 10-Q for the quarterly period ended December 31, 2015 (Commission File No. 1-4982).
- (10)(xx) Summary of the Compensation of the Non-Employee Members of the Board of Directors, effective October 24, 2018, incorporated by reference to Exhibit 10(a) to Registrant's Report on Form 10-Q for the quarterly period ended September 30, 2018 (Commission File No. 1-4982).
- (10)(yy) Cooperation Agreement, by and between Parker-Hannifin Corporation and Meggitt plc, dated August 2, 2021, incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K filed with the SEC on August 3, 2021 (Commission File No. 1-4982).
- (10)(zz) Bridge Credit Agreement, by and between Parker-Hannifin Corporation, Citibank, N.A., as administrative agent, and certain financial institution parties thereto, dated August 2, 2021, incorporated by reference to Exhibit 10.2 to Registrant's Report on Form 8-K filed with the SEC on August 3, 2021 (Commission File No. 1-4982).
- (18) LIFO Preferability Letter*
- (21) List of Subsidiaries of Registrant.*
- (23) Consent of Independent Registered Public Accounting Firm.*

- (24) Power of Attorney.*
- (31)(a) Certification of the Principal Executive Officer Pursuant to 17 CFR 240.13a-14(a), as Adopted Pursuant to §302 of the Sarbanes-Oxley Act of 2002.*
- (31)(b) Certification of the Principal Financial Officer Pursuant to 17 CFR 240.13a-14(a), as Adopted Pursuant to §302 of the Sarbanes-Oxley Act of 2002.*
- (32) Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to §906 of the Sarbanes-Oxley Act of 2002.*
- 101.INS The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.*
- 101.SCH Inline XBRL Taxonomy Extension Schema Document.*
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document.*
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document.*
- 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document.*
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document.*
- 104 Cover page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

* Submitted electronically herewith.

Attached as Exhibit 101 to this Annual Report are the following formatted in Inline XBRL (Extensible Business Reporting Language): (i) Consolidated Statement of Income for the years ended June 30, 2021, 2020 and 2019, (ii) Consolidated Statement of Comprehensive Income for the years ended June 30, 2021, 2020 and 2019, (iii) Consolidated Balance Sheet at June 30, 2021 and 2020, (iv) Consolidated Statement of Cash Flows for the years ended June 30, 2021, 2020 and 2019, (v) Consolidated Statement of Equity for the years ended June 30, 2021, 2020 and 2019, and (vi) Notes to Consolidated Financial Statements.

Shareholders may request a copy of any of the exhibits to this Annual Report on Form 10-K by writing to the Secretary, Parker-Hannifin Corporation, 6035 Parkland Boulevard, Cleveland, Ohio 44124-4141.

Individual financial statements and related applicable schedules for the Registrant (separately) have been omitted because the Registrant is primarily an operating company and its subsidiaries are considered to be wholly-owned.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PARKER-HANNIFIN CORPORATION

By: /s/ Todd M. Leombruno
Todd M. Leombruno
Executive Vice President and Chief Financial Officer

August 25, 2021

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Signature and Title

THOMAS L. WILLIAMS, Chairman of the Board of Directors and Principal Executive Officer; ANGELA R. IVES, Principal Accounting Officer; LEE C. BANKS, Director; JILLIAN C. EVANKO, Director; LANCE M. FRITZ, Director; LINDA A. HARTY, Director; WILLIAM F. LACEY, Director; KEVIN A. LOBO, Director; CANDY M. OBOURN, Director; JOSEPH SCAMINACE, Director; ÅKE SVENSSON, Director; LAURA K. THOMPSON, Director; JAMES R. VERRIER, Director; and JAMES L. WAINSCOTT, Director.

Date: August 25, 2021

/s/ Todd M. Leombruno

Todd M. Leombruno, Executive Vice President
and Chief Financial Officer (Principal Financial
Officer and Attorney-in-Fact)

PARKER-HANNIFIN CORPORATION

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS
FOR THE YEARS ENDED JUNE 30, 2019, 2020 AND 2021
(Dollars in Thousands)

Column A	Column B	Column C	Column D	Column E
Description	Balance at Beginning of Period	Additions Charged to Costs and Expenses	Other (Deductions)/ Additions (A)	Balance at End of Period
<u>Allowance for credit losses:</u>				
Year ended June 30, 2019	\$ 9,672	\$ 2,034	\$ (2,832)	\$ 8,874
Year ended June 30, 2020	\$ 8,874	\$ 4,860	\$ (2,090)	\$ 11,644
Year ended June 30, 2021	\$ 11,644	\$ 4,673	\$ (4,239)	\$ 12,078
<u>Deferred tax asset valuation allowance:</u>				
Year ended June 30, 2019	\$ 694,857	\$ 102,835	\$ —	\$ 797,692
Year ended June 30, 2020	\$ 797,692	\$ (42,217)	\$ 15,955	\$ 771,430
Year ended June 30, 2021	\$ 771,430	\$ 94,781	\$ (447)	\$ 865,764

- (A) For allowance for credit losses, net balance is comprised of deductions due to divestitures or uncollectible accounts charged off, additions due to acquisitions or recoveries, and currency translation adjustments. For deferred tax asset valuation allowance, the balance primarily represents adjustments due to acquisitions.

CERTIFICATIONS

I, Thomas L. Williams, certify that:

1. I have reviewed this annual report on Form 10-K of Parker-Hannifin Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: August 25, 2021

/s/ Thomas L. Williams

Thomas L. Williams

Chief Executive Officer

CERTIFICATIONS

I, Todd M. Leombruno, certify that:

1. I have reviewed this annual report on Form 10-K of Parker-Hannifin Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: August 25, 2021

/s/ Todd M. Leombruno

Todd M. Leombruno

Executive Vice President and Chief Financial Officer

Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
§ 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Annual Report on Form 10-K of Parker-Hannifin Corporation (the “Company”) for the fiscal year ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned officers of the Company certifies, that, to such officer’s knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: August 25, 2021

/s/ Thomas L. Williams

Name: Thomas L. Williams

Title: Chief Executive Officer

/s/ Todd M. Leombruno

Name: Todd M. Leombruno

Title: Executive Vice President and Chief Financial Officer

RECONCILIATION OF NON-GAAP FINANCIAL INFORMATION

To supplement the financial information presented in accordance with U.S. generally accepted accounting principles ("GAAP") in this Annual Report, certain non-GAAP financial measures as defined by the SEC rules are used. The non-GAAP measures included in this Annual Report have been reconciled to the comparable GAAP measures within the tables shown below:

RECONCILIATION OF EBITDA TO ADJUSTED EBITDA

(Unaudited)
(Dollars in millions)

	Twelve Months Ended June 30,					
	2016	2017	2018	2019 ¹	2020 ¹	2021
Net sales	\$ 11,361	\$ 12,029	\$ 14,302	\$ 14,320	\$ 13,696	\$ 14,348
Net income	807	984	1,061	1,525	1,202	1,747
Income taxes	308	345	641	424	305	500
Depreciation and amortization	307	355	466	436	538	595
Interest expense	137	162	214	190	308	250
EBITDA*	\$ 1,558	\$ 1,846	\$ 2,382	\$ 2,576	\$ 2,353	\$ 3,092
Adjustments:						
Voluntary retirement expense	12					
Business realignment charges	97	56	46	16	76	48
Acquisition-related expenses & Costs to Achieve		103	37	30	211	15
Loss / (Gain) on Sale and Writedown of Assets or Land			32			(101)
Adjusted EBITDA*	\$ 1,667	\$ 2,006	\$ 2,497	\$ 2,621	\$ 2,639	\$ 3,055
EBITDA margin	13.7%	15.3%	16.7%	18.0%	17.2%	21.6%
Adjusted EBITDA margin	14.7%	16.7%	17.5%	18.3%	19.3%	21.3%

¹Amounts have been adjusted to reflect the change in inventory accounting method.

*Totals may not foot due to rounding

RECONCILIATION OF EARNINGS PER DILUTED SHARE TO ADJUSTED EARNINGS PER DILUTED SHARE

(Unaudited)
(Amounts in dollars)

	Twelve Months Ended June 30,					
	2016	2017	2018	2019 ¹	2020 ¹	2021
Earnings per diluted share	\$ 5.89	\$ 7.25	\$ 7.83	\$ 11.57	\$ 9.26	\$ 13.35
Adjustments:						
Acquisition-related intangible asset amortization expense	0.74	1.02	1.59	1.51	2.19	2.49
Business realignment charges	0.80	0.42	0.34	0.12	0.59	0.36
Acquisition-related expenses & Costs to achieve		0.76	0.27	0.23	1.62	0.11
(Gain) / loss on sale and writedown of assets or land			0.24			(0.77)
Tax effect of adjustments ²	(0.44)	(0.59)	(0.42)	(0.44)	(1.03)	(0.50)
Favorable tax settlement					(0.19)	
Tax expense related to U.S. Tax Reform			1.72	0.11		
Adjusted earnings per diluted share	\$ 6.99	\$ 8.86	\$ 11.57	\$ 13.10	\$ 12.44	\$ 15.04

¹Amounts have been adjusted to reflect the change in inventory accounting method.

²This line item reflects the aggregate tax effect of all non-tax adjustments reflected in the preceding line items of the table. We estimate the tax effect of each adjustment item by applying our overall effective tax rate for continuing operations to the pre-tax amount, unless the nature of the item and/or the tax jurisdiction in which the item has been recorded requires application of a specific tax rate or tax treatment, in which case the tax effect of such item is estimated by applying such specific tax rate or tax treatment.

RECONCILIATION OF TOTAL SEGMENT OPERATING MARGIN TO ADJUSTED TOTAL SEGMENT OPERATING MARGIN

(Unaudited)
(Dollars in millions)

	Twelve Months Ended June 30, 2021	Twelve Months Ended June 30, 2020
	\$ 14,348	\$ 13,696
Net sales		
Total segment operating income	\$ 2,638	\$ 2,138
Adjustments:		
Business realignment charges	45	74
Acquisition-related expenses & Costs to achieve	12	92
Acquisition-related intangible asset amortization expense	325	285
Adjusted total segment operating income*	\$ 3,021	\$ 2,589
Total segment operating margin	18.4%	15.6%
Adjusted total segment operating margin	21.1%	18.9%

*Totals may not foot due to rounding

RECONCILIATION OF CASH FLOW FROM OPERATIONS TO ADJUSTED CASH FLOW FROM OPERATIONS AND FREE CASH FLOW

(Unaudited)
(Dollars in millions)

Cash Provided by Operating Activities

Year-to-Date										
	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Cash Provided by Operating Activities	\$ 631	\$ 558	\$ 662	\$ 854	\$ 951	\$ 957	\$ 1,317	\$ 1,129	\$ 1,219	\$ 1,167
Discretionary Pension Contribution	-	106	75	83	101	161	12	-	100	400
Cash Provided by Operating Activities - Adjusted*	\$ 631	\$ 663	\$ 737	\$ 936	\$ 1,051	\$ 1,118	\$ 1,329	\$ 1,129	\$ 1,319	\$ 1,567
	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
Cash Provided by Operating Activities	\$ 1,530	\$ 1,191	\$ 1,388	\$ 1,363	\$ 1,211	\$ 1,302	\$ 1,597	\$ 1,730	\$ 2,071	\$ 2,575
Discretionary Pension Contribution	-	226	75	-	200	220	-	200	-	-
Cash Provided by Operating Activities - Adjusted*	\$ 1,530	\$ 1,417	\$ 1,463	\$ 1,363	\$ 1,411	\$ 1,522	\$ 1,597	\$ 1,930	\$ 2,071	\$ 2,575

Free Cash Flow

Year-to-Date	
	FY21
Cash Provided by Operating Activities	\$ 2,575
Capital Expenditures	210
Free Cash Flow	2,365
Discretionary Pension Contribution	-
Free Cash Flow - Adjusted for Discretionary Pension*	\$ 2,365

*Totals may not foot due to rounding

These non-GAAP measures are not measures of financial performance under U.S. GAAP and should not be considered as an alternative to the U.S. GAAP measures. Parker-Hannifin's calculation of these non-GAAP measures may not be comparable to the calculations of similarly titled measures reported by other companies.

Our purpose, Enabling Engineering Breakthroughs that Lead to a Better Tomorrow, resonates with our team members and represents a higher calling to each person's work. Despite the challenges of the last year, it has acted as a north star that each of us can follow with the understanding that our products are essential today and vital for a better tomorrow.

With Appreciation

Executive Management



M. CRAIG MAXWELL

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of M. Craig Maxwell after 24 years of dedicated service. Mr. Maxwell joined Parker in 1996 as a Manager of New Business Development, eventually becoming Business Unit Manager for the Fluid Control Division in 2002 before being elected Chief Technology and Innovation Officer in 2003. In this role, he had responsibility for global product development and growth in new and emerging markets. He was instrumental in the establishment of the Winovation system, which applies a stage gate structure to the research and development of new products, and Simple by Design™ which significantly improves customer value and design excellence. He also championed the creation of the Parker Technology Center and Motion Technology Center, to facilitate cross group collaboration and leverage technologies for a more sustainable world. He will be remembered for his transformational leadership and for the lasting impact his contributions have left on Parker and those around him.



CATHERINE A. SUEVER

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Catherine A. Suever after 33 years of dedicated service. Ms. Suever leveraged her extensive knowledge and financial expertise to help effectively guide Parker through several periods of economic recession and expansion, drive implementation of the Win Strategy, manage major acquisitions, and ultimately achieve record financial performance. Ms. Suever joined Parker in 1987 as the Assistant Manager of External Reporting and held finance and operations positions of increasing responsibility, becoming an Officer of the company as Vice President and Controller in 2010. She was elected Chief Financial Officer in 2017. Ms. Suever also championed Parker's participation in an annual Bike MS fundraiser, leading Parker team members in a cycling group that has raised more than \$100,000 to help make the world a better place for people living with Multiple Sclerosis. She will be remembered for her skillful leadership and distinguished character, which has served as an example of Parker's values and leading with purpose.

Board of Directors



ROBERT G. BOHN

The Board of Directors and Management of Parker Hannifin acknowledge the retirement of Robert G. Bohn, retired Chairman of the Board and Chief Executive Officer of Oshkosh Corporation, who served on Parker Hannifin's Board of Directors for 11 years. Mr. Bohn provided Parker valuable leadership and strategic insights through his extensive experience leading a global industrial company, helping to drive Parker shareholder value for over a decade.

The Global Leader in Motion & Control Technologies



Product Groups

Motion Systems

Key Markets

Agriculture
Construction
Distribution
General machinery
Machine tool
Marine
Material handling
Military
Mining
Oil & gas
Power generation
Semiconductor
Transportation
Truck & bus
Turf

Key Products

Accumulators
Air preparation (FRL) & dryers
Cartridge valves
Clusters
Controllers & human machine interfaces (HMI)
Coolers
Cylinders
Drive controlled pumps
Drives (AC/DC Servo)
Electric actuators & positioners
Electric motors & gearheads
Electrohydraulic actuators
Electrohydraulic pumps
Electronic displays & HMI
Fan drives
Gerotor pumps & motors
Grippers
Helical actuators
Hydraulic valves
Industrial valves
Integrated hydrostatic transmissions
IO-Link controllers
IoT
Joysticks
Mobile valves
Piston pumps & motors
Pneumatic cylinders
Pneumatic valves
Power take-offs
Rotary actuators
Screw pumps
Sensors
Software
Vane pumps & motors

Aerospace

Key Markets

Aftermarket services
Commercial transport aircraft
Engines
General & business aviation
Helicopters
Military aircraft
Missiles
Power generation (industrial gas turbines)
Regional transport aircraft
Unmanned aerial vehicles

Key Products

Control actuation systems & components
Engine build-up ducting
Engine exhaust nozzles & assemblies
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Lubrication components
Pilot controls
Pneumatic control components
Thermal management
Wheels & brakes

Fluid Connectors

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction
Food & beverage
Forestry
Industrial machinery
Life sciences
Material handling
Mining
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Diagnostic & IoT sensors
Hose couplings
Hose crimpers
Industrial hose
Low-pressure fittings & adapters
Polytetrafluoroethylene (PTFE) hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings



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Instrumentation

Key Markets

Air conditioning
Alternative fuels
Analytical
Chemical
Food & beverage
Life sciences
Microelectronics
Oil & gas
Refining
Refrigeration
Transportation

Key Products

Analytical instruments & sample conditioning systems
Compressed natural gas dispensers
Cryogenic valves
Diesel exhaust treatment systems
Electronic valves
Emissions
Filter driers
Fluid system & control fittings, meters, valves, regulators & manifold valves
Fluoropolymer chemical delivery fittings, valves & pumps
High-pressure fittings, valves, pumps & systems
High-purity gas delivery fittings, valves & regulators
Miniature valves & pumps
Natural gas on-board fuel systems
Pressure regulating valves
Refrigeration & air conditioning electronic controls & monitoring
Solenoid valves

Filtration

Key Markets

Aerospace & defense
Agriculture
Construction
Food & beverage
Heating, ventilation & air conditioning (HVAC)
Industrial machinery
Life sciences
Marine
Mining
Oil & gas
Power generation
Renewable energy
Transportation
Water purification

Key Products

Aerospace filters & systems
Air pollution control & dust collection systems & filters
Compressed air & gas treatment solutions
Engine fuel, oil, air & closed crankcase ventilation filtration systems
Filtration & purification systems
Fluid condition monitoring systems
Gas turbine air inlet filters
HVAC filters
Hydraulic & lubrication filters & systems
Industrial & analytical gas generators
Instrumentation filters
Membrane, fiber & sintered metal filters
Natural gas filters
Process liquid, air & gas filters
Sterile air filters
Water purification filters & systems

Engineered Materials

Key Markets

Aerospace
Agriculture
Chemical processing
Construction
Defense
Information technology
Life sciences
Microelectronics
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation
Truck & bus

Key Products

Active vibration control systems
Bearings & dampers
Coatings
Dynamic seals
Elastomeric mounts & isolators
Elastomeric o-rings
Electromagnetic interference shielding
Extrusion & fabricated seals
High-temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical products fabrication & assembly
Metal & plastic composite bonded seals
Precision-cut seals
Rubber-to-substrate adhesives
Specialty chemicals
Structural adhesives
Thermal management
Wireless sensing systems

UNMATCHED BREADTH OF
TECHNOLOGY & ENGINEERING EXPERTISE



BOARD OF DIRECTORS

THOMAS L. WILLIAMS

Chairman and Chief Executive Officer
Parker-Hannifin Corporation

LEE C. BANKS

Vice Chairman and President
Parker-Hannifin Corporation

JILLIAN C. EVANKO

President and Chief Executive Officer
Chart Industries, Inc. (cryogenic technologies)

LANCE M. FRITZ

Chairman, President and Chief
Executive Officer
Union Pacific Corporation (rail transport)

LINDA A. HARTY

Former Treasurer
Medtronic plc (medical technology)

WILLIAM F. LACEY

President and Chief Executive Officer
GE Lighting, a Savant company (lighting
technologies)

KEVIN A. LOBO

Chairman, Chief Executive Officer
and President
Stryker Corporation (medical technologies)

CANDY M. OBOURN

Former Chairman
Isoflux Incorporated (coating technologies)

JOSEPH SCAMINACE

Former Chairman and Chief Executive Officer
OM Group, Inc. (metal-based specialty
chemicals)

ÅKE SVENSSON

Chairman
Swedavia AB (transport infrastructure)

LAURA K. THOMPSON

Former Executive Vice President
and Chief Financial Officer
The Goodyear Tire and Rubber Company
(tire manufacturing)

JAMES R. VERRIER

Former President and Chief Executive Officer
BorgWarner Inc. (powertrain solutions)

JAMES L. WAINSCOTT

Former Chairman, Chief Executive Officer
and President
AK Steel Holding Corporation (steel producer)

EXECUTIVE MANAGEMENT

THOMAS L. WILLIAMS

Chairman and Chief Executive Officer

LEE C. BANKS

Vice Chairman and President

JENNIFER A. PARMENTIER

Chief Operating Officer

TODD M. LEOMBRUNO

Executive Vice President and Chief
Financial Officer

MARK J. HART

Executive Vice President – Human Resources
and External Affairs

WILLIAM “SKIP” BOWMAN

Vice President and President –
Instrumentation Group

BEREND BRACHT

Vice President and President –
Motion Systems Group

MARK T. CZAJA

Vice President – Chief Technology and
Innovation Officer

ROBIN J. DAVENPORT

Vice President – Corporate Finance

THOMAS C. GENTILE

Vice President – Global Supply Chain

JOACHIM GUHE

President – Europe, Middle East and Africa
(EMEA) Group

ANGELA R. IVES

Vice President and Controller

JOSEPH R. LEONTI

Vice President, General Counsel
and Secretary

CANDIDO LIMA

President – Latin America Group

ROBERT W. MALONE

Vice President and President –
Filtration Group

MICHAEL J. O'HARA

Vice President – Global Sales and Marketing

DINU J. PAREL

Vice President – Chief Digital and
Information Officer

ANDREW D. ROSS

Vice President and President –
Fluid Connectors Group

ROGER S. SHERRARD

Vice President and President –
Aerospace Group

MICHAEL WEE

President – Asia Pacific Group

ANDREW M. WEEKS

Vice President and President –
Engineered Materials Group

INVESTOR INFORMATION

ANNUAL MEETING

The 2021 Annual Meeting of Shareholders
will be held on Wednesday, October 27, 2021,
virtually via live webcast at
www.virtualshareholdermeeting.com/PH2021
at 9:00 a.m. EDT.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche, LLP, Cleveland, Ohio

TRANSFER AGENT & REGISTRAR

Equiniti Trust Company
EQ Shareowner Services
P.O. Box 64854
St. Paul, Minnesota 55164-0854
Telephone 800 468 9716
www.shareowneronline.com

STOCK INFORMATION

New York Stock Exchange
Ticker symbol: PH
www.phstock.com

PARKER CORPORATE HEADQUARTERS

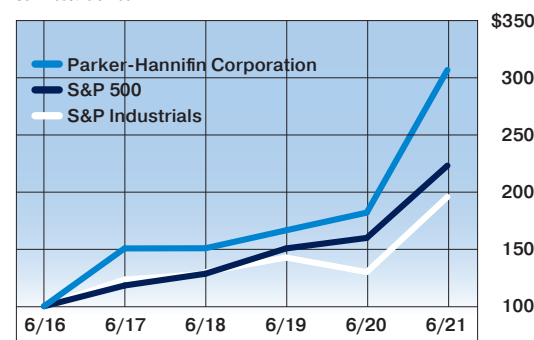
Parker-Hannifin Corporation
6035 Parkland Boulevard
Cleveland, Ohio 44124-4141
216 896 3000

INVESTOR CONTACT

ROBIN J. DAVENPORT
Vice President – Corporate Finance
216 896 2265
rjdavenport@parker.com

Comparison of 5-Year Cumulative Total Return*

Among Parker-Hannifin Corporation, the S&P 500 Index and the
S&P Industrials Index



	2016	2017	2018	2019	2020	2021
Parker-Hannifin Corporation	100.00	150.70	149.32	165.93	182.45	310.16
S&P 500	100.00	117.90	134.84	148.89	160.06	225.36
S&P Industrials	100.00	122.27	128.79	142.23	129.40	195.96

*\$100 invested on 6/30/16 in stock or index, including reinvestment of dividends.
Fiscal year ending June 30.

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PH

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NYSE

