ITW

2021 Annual Report

About ITW

Founded in 1912, ITW (NYSE: ITW) is a global industrial company built around a differentiated and proprietary business model. The company's seven industry-leading segments leverage the ITW Business Model to generate solid growth with best-in-class margins and returns in markets where highly innovative, customer-focused solutions are required. ITW's approximately 45,000 dedicated colleagues around the world thrive in the company's decentralized, entrepreneurial culture. In 2021, the company achieved revenue of $14.5 billion, with roughly half coming from outside North America. To learn more, please visit www.itw.com.

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To Our Fellow Shareholders

In a year marked by continued COVID-19 pandemic surges, unprecedented supply chain disruptions, and the most significant cost inflation we have seen in 50 years, the ITW team delivered differentiated service for our customers, record financial performance for our shareholders, and continued progress in the execution of our long-term enterprise strategy.

ITW's 2021 Performance Highlights

» Revenue of $14.5 billion, up 15%

» Organic growth of 12%

» GAAP EPS of $8.51, up 28%

» Peer group best-in-class operating margin of 24.1%

» Peer group best-in-class after-tax Return on Invested Capital (ROIC)[1] of 29.5%

» Deployed $1.3 billion to support the long-term profitable growth of the company through investments in our highly profitable core businesses and in high-quality acquisitions

» Raised our dividend for the 58th consecutive year (+7%/share)

The core focus of our strategy is to leverage ITW's powerful and proprietary competitive advantages – what we refer to as the ITW Business Model (see pages 4-5) – to consistently deliver top-tier performance in any environment. In order to do so, we must have both the agility to take full advantage of our opportunities when times are good, and the resilience to be able to continue to execute for our customers and remain invested in our long-term strategy when they are not. We can safely say that the resilience component of this equation has been rigorously tested by the conditions we have confronted over the past two years and that the company passed with flying colors.

In the Global Pandemic, ITW Took the Long View and Remained Fully Invested

In the early stages of the global pandemic, it became clear to us that the operational capabilities and financial position that the company had built up through the execution of our enterprise strategy put ITW in a uniquely strong position as we contemplated the challenges and uncertainties ahead. And from there, it didn't take us long to make two key decisions regarding how ITW would manage through the pandemic:

1. We would not initiate any employment reduction initiatives at any point in 2020, and we would provide full compensation and benefits support to all ITW team members. While we believed fundamentally that this was a critical moment to demonstrate our commitment to our people and to ITW's core values, we also believed that this approach would put us in a significantly advantaged position with regard to our ability to support our customers in the recovery.

2. We would remain fully invested in our long-term enterprise strategy initiatives and rather than "hunkering down," we would focus every ITW division on positioning their business to "Win the Recovery" with their customers and in their markets.

Now here we are almost exactly two years later and the people that we retained and the marketing, innovation, and capacity investments that we continued to fund as a result of these two decisions are fueling our record financial results and have ITW strongly positioned to continue to accelerate organic growth and sustain our best-in-class margins and returns in 2022 and beyond.

[1] *After-tax return on average invested capital (ROIC) is a non-GAAP measure. Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in the 2021 Form 10-K regarding this non-GAAP measure, including a reconciliation to the most closely comparable GAAP measure.*

ITW's Enterprise Strategy: Nine Years In

Back in 2012, we launched a new enterprise strategy for the company that was built around five key tenets:

1. **The ITW Business Model is our defining competitive advantage and our most valuable asset.** It provides us with a powerful set of strategic, operational, and cultural practices that when properly applied and practiced drive high-quality organic growth, best-in-class margins and returns, and consistent "do what we say" execution.

2. **ITW's highly differentiated business model must translate into consistent top-tier performance.** In any environment, over any 10-year period … no excuses.

3. **Solid growth with best-in-class margins and returns is our performance positioning objective.** We prioritize quality of growth over quantity of growth.

4. **Our focus is on being the best ITW that we can be.** Excellence in the practice of the ITW Business Model everywhere in the company every day.

5. **Invest capital and management time, effort, and resources only where we can leverage the ITW Business Model into meaningful and sustainable competitive advantage.** Highly disciplined and selective with regard to our business portfolio. Return surplus capital to shareholders rather than pursue opportunities that reside outside of our core competitive advantages.

We have come a long way over the last nine years in our quest to be the "best ITW we can be":

- Increased earnings per share by 165%
- Increased operating margin by 8.2 percentage points to 24.1% (#1 in our peer group)
- Increased after-tax ROIC[1] by 15.0 percentage points to 29.5% (#1 in our peer group)
- Increased the company's market capitalization to $77 billion from $23 billion
- Returned $26 billion of capital to our shareholders in the form of dividends and share repurchases
- Increased ITW's annual dividend per share by 221% while reducing ITW's share count by more than 30%
- Generated Total Shareholder Return (TSR) of 398% vs. 292% peer group average and 298% for the S&P 500

From our perspective, the really good news is that while we have made considerable progress over the last nine years, we are far from done as we continue to find new opportunities for additional improvement on our path to ITW's full potential.

Management, Governance, and Organizational Developments

A deep and experienced management team and a highly accomplished Board of Directors are critical components of ITW's long-term performance and success. We value and appreciate them always, and especially during challenging times such as these.

We recognize Steven L. Martindale, who retired as executive vice president in 2021 after 19 years of service. We thank Steve for his many contributions and leadership over the course of his distinguished career and wish him the very best in his retirement.

We also recognize and thank Kevin M. Warren, who retired after serving as a member of our Board of Directors for 11 years, and we were pleased to welcome Darrell L. Ford, executive vice president and chief human resources officer of UPS International, to our Board of Directors.

In 2021, we welcomed several new members to our Executive Leadership Team. Patricia A. Hartzell was elected as executive vice president of the Test & Measurement and Electronics segment, and Javier Gracia Carbonell was elected as executive vice president of the Construction Products segment. Patty and Xavi have been with the company 23 years and 15 years, respectively. We were also pleased to welcome Jennifer Kaplan Schott as our senior vice president, general counsel and secretary.

While organic growth is our number-one growth focus and priority, we are delighted to supplement that whenever we come across an opportunity to acquire a high-quality business that is a strong fit with our enterprise strategy and our disciplined financial framework. In late 2021, we closed on just such an opportunity in the MTS Test & Simulation business. MTS is a great strategic fit for ITW and highly complementary to our existing Test & Measurement business. We are very pleased to welcome the MTS team to ITW.

Moving Forward

ITW today has never been stronger in our ability to translate our unique competitive advantages into differentiated performance for our customers and shareholders nor better prepared to do so in the context of an external environment that will continue to be characterized by a high degree of change, volatility, and risk. Given these factors both internal and external, we have no doubt that the ITW Business Model and our strategy centered on leveraging it to its full potential will be as formidable of a

[1] *After-tax return on average invested capital (ROIC) is a non-GAAP measure. Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in the 2021 Form 10-K regarding this non-GAAP measure, including a reconciliation to the most closely comparable GAAP measure.*

E. Scott Santi Christopher A. O'Herlihy

competitive advantage and performance differentiator for the company over the next 10 years as it has been over the last nine … if not more so. We, along with our 45,000-plus ITW colleagues around the world, are excited and energized by the opportunities and challenges ahead.

In closing, we offer our deepest thanks and admiration to our ITW colleagues around the world for the hard work, dedication, and ingenuity they bring to serving our customers and executing our strategy with excellence each and every day. Their performance over the past two years has provided another compelling proof point that ITW is a company that has the enduring competitive advantages, agility, and resilience necessary to consistently deliver top-tier performance in any environment. And it is entirely due to their efforts that ITW is today considered by many to be among the world's best performing, highest-quality, and most respected industrial companies.

Finally, on behalf of your Board of Directors and your management team, we thank you, our fellow shareholders, for your continued support.

Sincerely,

Scott Santi

E. Scott Santi
Chairman and Chief Executive Officer

Chris O'Herlihy

Christopher A. O'Herlihy
Vice Chairman

March 25, 2022

Advancing Our Sustainability Commitments

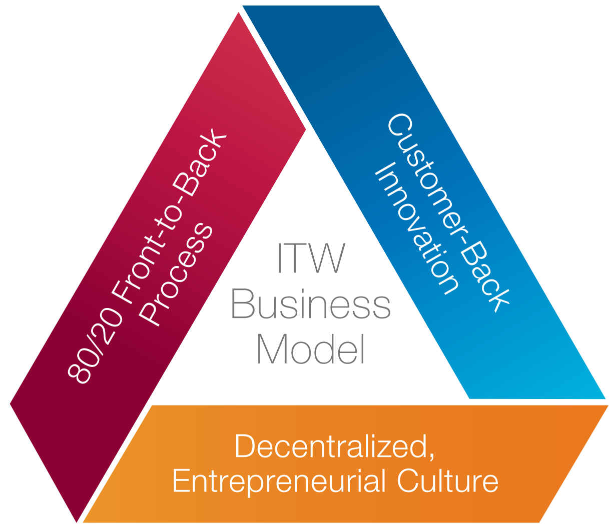
Our commitment to sustainability is a key component of our goal to be one of the world's best performing, highest-quality, and most respected industrial companies.

Throughout 2021, we continued to advance our sustainability efforts, including:

- » Reducing our greenhouse gas (GHG) emissions intensity by 37% through 2021 (compared with the 2017 baseline), on our way toward reaching our 40% intensity reduction target by 2030.
- » Carefully considering our next GHG emissions target, which includes actively studying the feasibility of ITW's potential path to carbon neutrality.
- » Expanding our portfolio of clean-tech products, which represented 29% of ITW's overall revenue in 2021.
- » Making steady and consistent progress on our diversity and inclusion priorities, which included expanding our inclusive-leader training initiative to all managers and supervisors across our global businesses with nearly 4,300 participating this year.
- » Providing additional diversity data by disclosing U.S. EEO-1 data.
- » Continuing to execute our "Do More" Agenda, which reaffirms our commitment to promote and support more inclusive economic growth and opportunity in underserved communities.
- » Progressing toward our goal to increase third-party spend on products and services from diverse suppliers, which includes racially/ethnically diverse, woman-owned, veteran-owned and LGBTQ+-owned companies.

Find out more about our commitments to our people, our communities, and our environment in our 2021 Sustainability Report at www.itw.com/sustainability.

Our Business Model Is Our Competitive Advantage



The ITW Business Model is comprised of three elements:

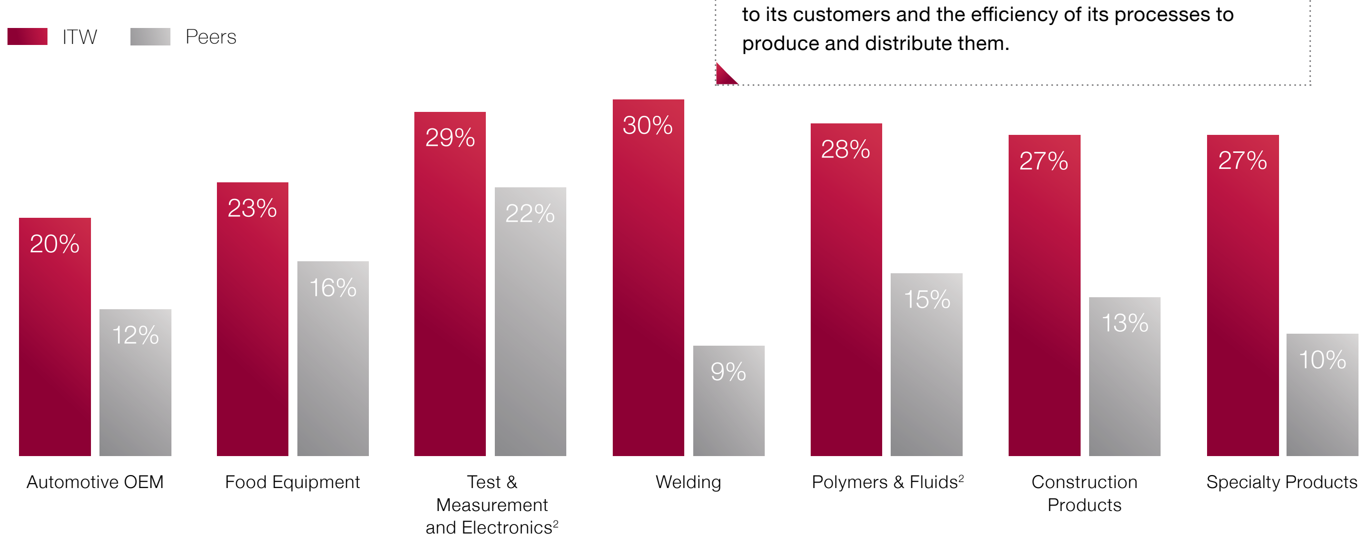
80/20 Front-to-Back defines how we operate. It is a unique set of proprietary tools and methodologies that our divisions use to structure and operate their businesses to (a) maximize the performance, execution, and value-add they provide to their largest and most profitable customers, and (b) minimize the costs, complexity, and distractions associated with serving small customers. Through the application of ITW's 80/20 Front-to-Back process, our divisions deliver best-in-class customer-facing execution, high-quality organic growth, and superior profitability and return on capital performance.

Customer-Back Innovation drives how we innovate. At ITW, we innovate from the customer back, not from the research and development center out. Our divisions partner with their key customers to create unique solutions that solve difficult technical challenges and improve business performance. The deep capabilities and creativity of our people in this regard are evidenced by our portfolio of approximately 19,300 granted and pending patents, including more than 1,800 new patent applications filed in 2021.

Our **Decentralized, Entrepreneurial Culture** is the key to how we execute. Our people are clear about what is expected of them with regard to our business model, our strategy, and our values. Within this framework, we empower our business teams to make decisions and customize their approach in order to maximize the relevance and impact of the ITW Business Model for their specific customers and end markets. Our people thrive in ITW's "flexibility within the framework" culture; they think and act like entrepreneurs, they are accountable, and they deliver.

2021 Operating Margin by Segment vs. Peer Average[1]

At ITW, we believe operating margin is the best indicator of relative competitive advantage, as it incorporates both the level of value-add in the solutions a business provides to its customers and the efficiency of its processes to produce and distribute them.



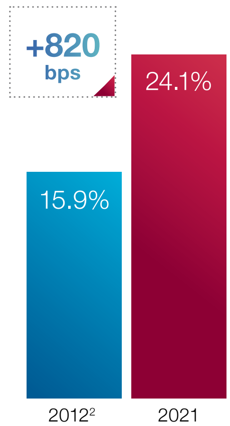
[1] *See appendix for segment peer group definition.*

[2] *Test & Measurement and Electronics and Polymers & Fluids exclude 170 bps and 250 bps, respectively, of unfavorable operating margin impact of amortization expense related to intangible assets.*

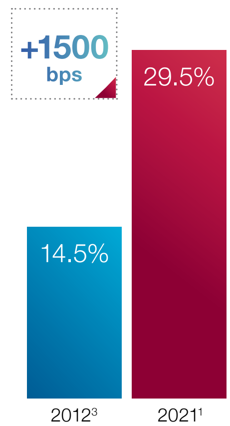
ITW's Performance Since the Launch of Our Enterprise Strategy in 2012

Earnings Per Share

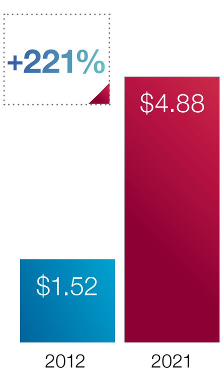
Operating Margin



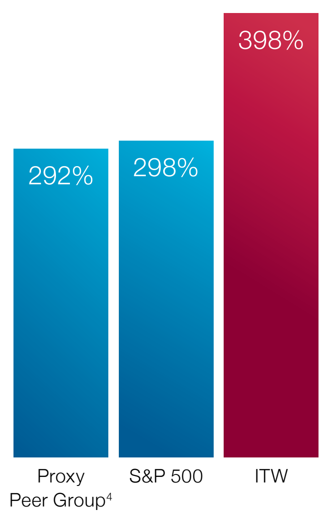
After-Tax ROIC



Annual Dividend



Total Shareholder Return



[1] *After-tax return on average invested capital (ROIC) and 2012 Adjusted EPS are non-GAAP measures. Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in the 2021 Form 10-K and the appendix included in this Annual Report for information regarding these non-GAAP measures, including reconciliations to the most closely comparable GAAP measures.*

[2] *As reported in the 2012 Form 10-K.*

[3] *As reported in the 2013 Form 10-K.*

[4] *See appendix for proxy peer group definition.*

ITW's Diversified High-Quality

ITW's business portfolio criteria:

- ✓ End markets with strong and sustainable differentiation
- ✓ Positive long-term macro fundamentals
- ✓ Strong and durable competitive advantages with relevance to key end market trends

ITW's Seven Operating Segments

Automotive OEM

Highly focused, global, niche supplier of solutions to top-tier OEMs and their suppliers

2021 revenue
$2.8 billion

2021 operating margin
19.5%

Food Equipment

Industry-leading global positions through differentiated innovation in commercial dishwashing, cooking, refrigeration, retail, and integrated service offerings

2021 revenue
$2.1 billion

2021 operating margin
22.6%

Test & Measurement and Electronics

Leading global supplier of production and laboratory testing and assembly equipment, accessories, consumables, and aftermarket parts and service

2021 revenue
$2.3 billion

2021 operating margin
29.1%[1]

Business Portfolio

✓ Significant potential to deliver above-market organic growth over the long term

✓ Ability to leverage the ITW Business Model to generate consistent best-in-class margins and returns

Welding

Highly focused supplier of value-added welding equipment and specialty consumables for a variety of commercial, industrial, and infrastructure applications

2021 revenue
$1.7 billion
2021 operating margin
29.7%

Polymers & Fluids

Specialized adhesives, lubricants, and additives for industrial- and consumer-related end markets

2021 revenue
$1.8 billion
2021 operating margin
27.9%[1]

Construction Products

Global provider of innovative fastening solutions that improve contractor productivity and building quality in residential and commercial construction

2021 revenue
$1.9 billion
2021 operating margin
27.2%

Specialty Products

Innovative, value-added solutions for consumer packaging, product branding, and other niche applications

2021 revenue
$1.9 billion
2021 operating margin
27.2%

[1] *Test & Measurement and Electronics and Polymers & Fluids exclude 170 bps and 250 bps, respectively, of unfavorable operating margin impact of amortization expense related to intangible assets.*

Corporate Executives

PICTURED LEFT TO RIGHT: John R. Hartnett, Patricia A. Hartzell, Javier Gracia Carbonell, Lei Zhang Schlitz, Jennifer Kaplan Schott, Michael M. Larsen, E. Scott Santi, Christopher A. O'Herlihy, Mary K. Lawler, Axel R. J. Beck, Sharon A. Szafranski, T. Kenneth Escoe, Michael R. Zimmerman

E. Scott Santi
Chairman and Chief Executive Officer

Christopher A. O'Herlihy
Vice Chairman

Michael M. Larsen
Senior Vice President and
Chief Financial Officer

Mary K. Lawler
Senior Vice President and
Chief Human Resources Officer

Jennifer Kaplan Schott
Senior Vice President,
General Counsel and Secretary

Axel R. J. Beck
Executive Vice President,
Food Equipment

T. Kenneth Escoe
Executive Vice President,
Specialty Products

Javier Gracia Carbonell
Executive Vice President,
Construction Products

John R. Hartnett
Executive Vice President,
Welding

Patricia A. Hartzell
Executive Vice President,
Test & Measurement and Electronics

Lei Zhang Schlitz
Executive Vice President,
Automotive OEM

Sharon A. Szafranski
Executive Vice President,
Welding

Michael R. Zimmerman
Executive Vice President,
Polymers & Fluids

Board of Directors

Daniel J. Brutto
Retired President,
UPS International
Retired Senior Vice President,
United Parcel Service, Inc.

Susan Crown
Chairman and Chief Executive Officer,
Owl Creek Partners, LLC

Darrell L. Ford
Executive Vice President and
Chief Human Resources Officer,
UPS International

James W. Griffith
Retired President and
Chief Executive Officer,
The Timken Company

Jay L. Henderson
Retired Vice Chairman, Client Service,
PricewaterhouseCoopers LLP

Richard H. Lenny
Non-Executive Chairman,
Conagra Brands, Inc.

E. Scott Santi
Chairman and Chief Executive Officer,
Illinois Tool Works Inc.

David B. Smith Jr.
Executive Vice President for Policy &
Legal Affairs and General Counsel,
Mutual Fund Directors Forum

Pamela B. Strobel
Retired Executive Vice President and
Chief Administrative Officer,
Exelon Corporation
Retired President,
Exelon Business Services Company

André D. Williams
Chief Executive Officer,
American Express National Bank and
Group President, Enterprise Services,
American Express Company

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 December 31, 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 number 1-4797

ILLINOIS TOOL WORKS INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**36-1258310**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
155 Harlem Glenview Illinois	**60025**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **(847) 724-7500**

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

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock	ITW	New York Stock Exchange
1.75% Euro Notes due 2022	ITW22	New York Stock Exchange
1.25% Euro Notes due 2023	ITW23	New York Stock Exchange
0.250% Euro Notes due 2024	ITW24A	New York Stock Exchange
0.625% Euro Notes due 2027	ITW27	New York Stock Exchange
2.125% Euro Notes due 2030	ITW30	New York Stock Exchange
1.00% Euro Notes due 2031	ITW31	New York Stock Exchange
3.00% Euro Notes due 2034	ITW34	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 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. (Check one):

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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 voting stock held by non-affiliates of the registrant as of June 30, 2021 was approximately $70.1 billion based on the New York Stock Exchange closing sales price as of June 30, 2021.

Shares of common stock outstanding at January 31, 2022: 312,926,939.

Documents Incorporated by Reference

Portions of the 2022 Proxy Statement for Annual Meeting of Stockholders to be held on May 6, 2022.	Part III

Table of Contents

PART I

ITEM 1. *Business*

General

Illinois Tool Works Inc. (the "Company" or "ITW") was founded in 1912 and incorporated in 1915. The Company's ticker symbol is ITW. The Company is a global manufacturer of a diversified range of industrial products and equipment with 83 divisions in 52 countries. As of December 31, 2021, the Company employed approximately 45,000 people.

The Company's operations are organized and managed based on similar product offerings and end markets, and are reported to senior management as the following seven segments: Automotive OEM; Food Equipment; Test & Measurement and Electronics; Welding; Polymers & Fluids; Construction Products; and Specialty Products. The following is a description of the Company's seven segments:

Automotive OEM— This segment is a global, niche supplier to top tier OEMs, providing unique innovation to address pain points for sophisticated customers with complex problems. Businesses in this segment produce components and fasteners for automotive-related applications. This segment primarily serves the automotive original equipment manufacturers and tiers market. Products in this segment include:

- plastic and metal components, fasteners and assemblies for automobiles, light trucks and other industrial uses.

Food Equipment— This segment is a highly focused and branded industry leader in commercial food equipment differentiated by innovation and integrated service offerings. This segment primarily serves the food service, food retail and food institutional/restaurant markets. Products in this segment include:

- warewashing equipment;
- cooking equipment, including ovens, ranges and broilers;
- refrigeration equipment, including refrigerators, freezers and prep tables;
- food processing equipment, including slicers, mixers and scales;
- kitchen exhaust, ventilation and pollution control systems; and
- food equipment service, maintenance and repair.

Test & Measurement and Electronics— This segment is a branded and innovative producer of test and measurement and electronic manufacturing and maintenance, repair, and operations, or "MRO" solutions that improve efficiency and quality for customers in diverse end markets. Businesses in this segment produce equipment, consumables, and related software for testing and measuring of materials and structures, as well as equipment and consumables used in the production of electronic subassemblies and microelectronics. This segment primarily serves the electronics, general industrial, automotive original equipment manufacturers and tiers, industrial capital goods, energy and consumer durables markets. Products in this segment include:

- equipment, consumables, and related software for testing and measuring of materials, structures, gases and fluids;
- electronic assembly equipment;
- electronic components and component packaging;
- static control equipment and consumables used for contamination control in clean room environments; and
- pressure sensitive adhesives and components for electronics, medical, transportation and telecommunications applications.

Welding— This segment is a branded value-added equipment and specialty consumable manufacturer with innovative and leading technology. Businesses in this segment produce arc welding equipment, consumables and accessories for a wide array of industrial and commercial applications. This segment primarily serves the general industrial market, which includes fabrication, shipbuilding and other general industrial markets, and energy, construction, MRO, automotive original equipment manufacturers and tiers, and industrial capital goods markets. Products in this segment include:

- arc welding equipment; and
- metal arc welding consumables and related accessories.

Polymers & Fluids— This segment is a branded supplier to niche markets that require value-added, differentiated products. Businesses in this segment produce engineered adhesives, sealants, lubrication and cutting fluids, and fluids and polymers for auto aftermarket maintenance and appearance. This segment primarily serves the automotive aftermarket, general industrial, MRO and construction markets. Products in this segment include:

- adhesives for industrial, construction and consumer purposes;
- chemical fluids which clean or add lubrication to machines;
- epoxy and resin-based coating products for industrial applications;
- hand wipes and cleaners for industrial applications;
- fluids, polymers and other supplies for auto aftermarket maintenance and appearance;
- fillers and putties for auto body repair; and
- polyester coatings and patch and repair products for the marine industry.

Construction Products— This segment is a branded supplier of innovative engineered fastening systems and solutions. This segment primarily serves the residential construction, renovation/remodel and commercial construction markets. Products in this segment include:

- fasteners and related fastening tools for wood and metal applications;
- anchors, fasteners and related tools for concrete applications;
- metal plate truss components and related equipment and software; and
- packaged hardware, fasteners, anchors and other products for retail.

Specialty Products— This segment is focused on diversified niche market opportunities with substantial patent protection producing beverage packaging equipment and consumables, product coding and marking equipment and consumables, and appliance components and fasteners. This segment primarily serves the food and beverage, consumer durables, general industrial, industrial capital goods and printing and publishing markets. Products in this segment include:

- line integration, conveyor systems and line automation for the food and beverage industries;
- plastic consumables that multi-pack cans and bottles and related equipment;
- foil, film and related equipment used to decorate consumer products;
- product coding and marking equipment and related consumables;
- plastic and metal closures and components for appliances;
- airport ground support equipment; and
- components for medical devices.

The information set forth below is applicable to all segments of the Company unless otherwise noted.

The ITW Business Model

The powerful and highly differentiated ITW Business Model is the Company's core source of value creation. The ITW Business Model is the Company's competitive advantage and defines how ITW creates value for its shareholders. It is comprised of three unique elements:

- ITW's **80/20 Front-to-Back** process is the operating system that is applied in every ITW business. Initially introduced as a manufacturing efficiency tool in the 1980s, ITW has continually refined, improved and expanded 80/20 into a proprietary, holistic business management process that generates significant value for the Company and its customers. Through the application of data driven insights generated by 80/20 practice, ITW focuses on its largest and best opportunities (the "80") and eliminates cost, complexity and distractions associated with the less profitable opportunities (the "20"). 80/20 enables ITW businesses to consistently achieve world-class operational excellence in product availability, quality, and innovation, while generating superior financial performance;

- **Customer-back Innovation** has fueled decades of profitable growth at ITW. The Company's unique innovation approach is built on insight gathered from the 80/20 Front-to-Back process. Working from the customer back, ITW businesses position themselves as the go-to problem solver for their "80" customers. ITW's innovation efforts are focused on understanding customer needs, particularly those in "80" markets with solid long-term growth fundamentals, and creating unique solutions to address those needs. These customer insights and learnings drive innovation at ITW and have contributed to a portfolio of approximately 19,300 granted and pending patents;

- ITW's **Decentralized, Entrepreneurial Culture** enables ITW businesses to be fast, focused, and responsive. ITW businesses have significant flexibility within the framework of the ITW Business Model to customize their approach in order to best serve their specific customers' needs. ITW colleagues recognize their unique responsibilities to execute the Company's strategy and values. As a result, the Company maintains a focused and simple organizational structure that, combined with outstanding execution, delivers best-in-class services and solutions adapted to each business' customers and end markets.

Enterprise Strategy

In late 2012, ITW began its strategic framework transitioning the Company on its current path to fully leverage the compelling performance potential of the ITW Business Model. The Company undertook a complete review of its performance, focusing on its businesses delivering consistent above-market growth with best-in-class margins and returns, and developing a strategy to replicate that performance across its operations.

ITW determined that solid and consistent above-market organic growth is the core growth engine to deliver world-class financial performance and compelling long-term returns for its shareholders. To shift its primary growth engine to organic, the Company began executing a multi-step approach.

- The first step was to narrow the focus and improve the quality of ITW's business portfolio. As part of the Portfolio Management initiative, ITW exited businesses that were operating in commoditized market spaces and prioritized sustainable differentiation as a must-have requirement for all ITW businesses. This process included both divesting entire businesses and exiting commoditized product lines and customers inside otherwise highly differentiated ITW divisions.

  As a result of this work, ITW's business portfolio now has significantly higher organic growth potential. ITW segments and divisions now possess attractive and differentiated product lines and end markets as they continue to improve operating margins and generate price/cost increases. The Company achieved this through product line simplification, or eliminating the complexity and overhead costs associated with smaller product lines and customers, while supporting and growing the businesses' largest / most profitable customers and product lines.

- Step two, Business Structure Simplification, was implemented to simplify and scale up ITW's operating structure to support increased engineering, marketing, and sales resources, and improve global reach and competitiveness, all of which were critical to driving accelerated organic growth. ITW now has 83 scaled-up divisions with significantly enhanced focus on growth investments, core customers and products, and customer-back innovation.

- The Strategic Sourcing initiative established sourcing as a core strategic and operational capability at ITW, delivering an average of one percent reduction in spend each year from 2013 through 2021 and continues to be a key contributor to the Company's ongoing enterprise strategy.

- With the initial portfolio realignment and scale-up work largely complete, the Company shifted its focus to preparing for and accelerating organic growth, reapplying the 80/20 Front-to-Back process to optimize its newly scaled-up divisions for growth, first, to build a foundation of operational excellence, and second, to identify the best opportunities to drive organic growth.

ITW has clearly demonstrated superior 80/20 management, resulting in meaningful incremental improvement in margins and returns as evidenced by the Company's operating margin and after-tax return on invested capital. At the same time, these 80/20 initiatives can also result in restructuring initiatives that reduce costs and improve profitability and returns.

Path to Full Potential

Since the launch of the enterprise strategy, the Company has made considerable progress to position itself to reach full potential. The ITW Business Model and unique set of capabilities are a source of strong and enduring competitive advantage, but for the Company to truly reach its full potential, every one of its divisions must also be operating at its full potential. To do so, the Company remains focused on its core principles to position ITW to perform to its full potential:

- Portfolio discipline
- 80/20 Front-to-Back practice excellence
- Full-potential organic growth

Portfolio Discipline

The Company only operates in industries where it can generate significant, long-term competitive advantage from the ITW Business Model. ITW businesses have the right "raw material" in terms of market and business attributes that best fit the ITW Business Model and have significant potential to drive above-market organic growth over the long-term.

The Company focuses on high-quality businesses, ensuring it operates in markets with positive long-term macro fundamentals and with customers that have critical needs and value ITW's differentiated products, services and solutions. ITW's portfolio operates in highly diverse end markets and geographies which makes the Company more resilient in the face of uncertain or volatile market environments.

The Company routinely evaluates its portfolio to ensure it delivers sustainable differentiation and drives consistent long-term performance. This includes both implementing portfolio refinements and assessing selective high-quality acquisitions to supplement ITW's long-term growth potential.

The Company previously communicated its intent to explore options, including potential divestitures, for certain businesses with revenues totaling up to $1 billion. In the fourth quarter of 2019, the Company completed the divestitures of three businesses and continues to evaluate options for certain other businesses. However, due to the COVID-19 pandemic, the Company deferred any further significant divestiture activity until 2022 or later. The Company intends to reinitiate the divestiture process in 2022 for certain businesses with combined annual revenues of approximately $0.5 billion. Refer to Note 4. Divestitures in Item 8. Financial Statements and Supplementary Data for further information regarding divestiture activity.

80/20 Front-to-Back Practice Excellence

The 80/20 Front-to-Back process is a rigorous, iterative and highly data-driven approach to identify where the Company has true differentiation and the ability to drive sustainable, high-quality organic growth. The Company simplifies and eliminates complexity and redesigns every aspect of its business to ensure focused execution on key opportunities, markets, customers, and products.

ITW will continue to drive 80/20 Front-to-Back practice excellence in every division in the Company, every day. Driving strong operational excellence in the quality of 80/20 Front-to-Back practice across the Company, division by division, will produce further customer-facing performance improvement in a number of divisions and additional structural margin expansion at the enterprise level.

Near-term Priorities

While it was the challenges brought about by the COVID-19 pandemic that dominated the Company's attention starting in 2020, it was the collection of capabilities and competitive advantages that have been built and honed over the past nine years through the execution of ITW's enterprise strategy that provided the Company with the options to respond. This, coupled with the proprietary and powerful ITW Business Model, diversified high-quality business portfolio and diligent execution put the Company in a position of strength in dealing with the global pandemic.

As the global pandemic continues, the Company continues to focus its efforts on (1) protecting the health and support the well-being of ITW's colleagues; (2) serving the Company's customers with excellence; (3) maintain financial strength, liquidity and strategic optionality; and (4) leverage the Company's strengths to position it to fully participate in the recovery.

"Win the Recovery" is an execution component of the Company's enterprise strategy, not a separate initiative, with every one of the Company's divisions identifying specific opportunities presented by the pandemic to capture sustainable share gains that are aligned with the ITW long-term enterprise strategy. The Company expects these efforts to contribute meaningfully to accelerate its progress toward full-potential organic growth. The Company continues to focus on delivering strong results in any environment while executing its long-term strategy to achieve and sustain ITW's full potential performance.

Full-potential Organic Growth

Reaching full potential means that every division is positioned for sustainable, high-quality organic growth. The Company has clearly defined action plans aimed at leveraging the performance power of the ITW Business Model to achieve full-potential organic growth in every division, with specific focus on:

- "80" focused Market Penetration - fully leveraging the considerable growth potential that resides in the Company's largest and most differentiated product offerings and customer relationships
- Customer-back Innovation - strengthening the Company's commitment to serial innovation and delivering a continuous flow of differentiated new products to its key customers
- Strategic Sales Excellence - deploying a high-performance sales function in every division

As the Company continues to make progress toward its full potential, the Company will explore opportunities to reinforce or further expand the long-term organic growth potential of ITW through the addition of selective high-quality acquisitions, such as the acquisition of the Test & Simulation business of MTS Systems Corporation ("MTS") from Amphenol Corporation on December 1, 2021. The operating results of the MTS Test & Simulation business were reported within the Company's Test & Measurement and Electronics segment. Refer to Note 3. Acquisitions in Item 8. Financial Statements and Supplementary Data for further information regarding this acquisition.

Current Year Developments

Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Distribution Methods

The Company's businesses primarily distribute their products directly to industrial manufacturers and through independent distributors.

Backlog

Backlog generally is not considered a significant factor in the Company's businesses as relatively short delivery periods and rapid inventory turnover are characteristic of most of their products. Total backlog was $2.9 billion and $1.6 billion as of December 31, 2021 and 2020, respectively. The increase in backlog as of December 31, 2021 was primarily due to increased customer orders and the global supply chain disruptions impacting the Company's customers, and the acquisition of the MTS Test & Simulation business. Refer to Note 3. Acquisitions in Item 8. Financial Statements and Supplementary Data for further information regarding this acquisition. Due to the predominately short-term nature of the Company's arrangements with its customers, backlog orders expected to be completed beyond calendar year 2022 are not significant and represent approximately 5% of total backlog as of December 31, 2021.

Competition

With operations in 52 countries, the Company offers a wide range of products in a myriad of markets, many of which are fragmented, and the Company encounters a variety of competitors that vary by product line, end market and geographic area. The Company's competitors include many regional or specialized companies, as well as large U.S. and non-U.S. companies or divisions of large companies. Each of the Company's segments generally has several main competitors and numerous smaller ones in most of their end markets and geographic areas. In addition to numerous smaller regional competitors, the Welding segment competes globally with Lincoln Electric and ESAB.

In virtually all segments, the Company differentiates its businesses from its competitors based on product innovation, product quality, brand preference and service delivery. Technical capability is also a competitive factor in most segments. The Company believes that each segment's primary competitive advantages derive from the ITW Business Model and decentralized operating structure, which creates a strong focus on end markets and customers at the local level, enabling its businesses to respond rapidly to market dynamics. This structure enables the Company's businesses to drive operational excellence utilizing the Company's 80/20 Front-to-Back process and leveraging its product innovation capabilities. The Company also believes that its global footprint is a competitive advantage in many of its markets, especially in its Automotive OEM segment.

Raw Materials

The Company uses raw materials of various types, primarily steel, resins and chemicals, that are available from numerous commercial sources. The availability of materials and energy has not resulted in any significant business interruptions or other major problems, and no such problems are currently anticipated.

Intellectual Property

The Company owns approximately 3,900 unexpired U.S. patents and 9,700 foreign patents covering articles, methods and machines. In addition, the Company has approximately 1,500 applications for patents pending in the U.S. Patent Office and 4,200 applications pending in foreign patent offices. There is no assurance that any of these patents will be issued. The Company maintains a patent group for the administration of patents and processing of patent applications.

The Company believes that many of its patents are valuable and important; however, the expiration of any one of the Company's patents would not have a material effect on the Company's results of operations or financial position. The Company also credits its success in the markets it serves to engineering capability; manufacturing techniques; skills and efficiency; marketing and sales promotion; and service and delivery of quality products to its customers.

In addition to patents, many of the Company's products and services are sold under various owned or licensed trademarks, which are important to the Company in the aggregate. Some of the Company's more significant trademarks include ITW, which is also used in conjunction with the trademarks of many of the Company's businesses; Deltar and Shakeproof in the Automotive OEM segment; Hobart in the Food Equipment segment; Instron and MTS in the Test & Measurement and Electronics segment; Miller in the Welding segment; Rain-X and Permatex in the Polymers & Fluids segment; Paslode in the Construction Products segment; and Hi-Cone in the Specialty Products segment.

Government Regulations

The Company believes that its businesses and operations, including its manufacturing plants and equipment, are in substantial compliance with all applicable government laws and regulations, including those related to environmental, consumer protection, international trade, labor and employment, human rights, tax, anti-bribery and competition matters. Any additional measures to maintain compliance are not expected to materially affect the Company's capital expenditures (including expenditures for environmental control facilities), competitive position, financial position or results of operations.

Various legislative and administrative regulations applicable to the Company in the matters noted above have become effective or are under consideration in many parts of the world. To date, such developments have not had a substantial adverse impact on the Company's revenues, earnings or cash flows. However, if new or amended laws or regulations impose significant operational restrictions and compliance requirements upon the Company or its products, the Company's business, capital expenditures, results of operations, financial condition and competitive position could be negatively impacted. Refer to Item 1A. Risk Factors for further information.

Human Capital Management

As of December 31, 2021, the Company employed approximately 45,000 people, with approximately 17,000 people located in the United States and the remainder in multiple other countries where the Company's businesses operate. The Company strives to be a great employer through its demonstrated commitment to talent development, employee safety, workplace culture, compensation and benefits, and diversity and inclusion.

Talent Development. The Company's Great ITW Leader Framework defines the leadership capabilities and attributes that guide all leadership talent assessment, development and selection decisions. Great ITW Leaders are expected to be experts in the practice of the ITW Business Model, make great strategic choices, deliver great results, be great talent managers and provide strong leadership. Great ITW Leaders who have expertise in the ITW Business Model are the critical factor in translating the potential of the ITW Business Model into full performance. Because this expertise develops over time and through specific experiences, the Company focuses on developing and promoting its own talent to ensure the Company's sustained business success over the long term.

Employee Safety. The safety and well-being of ITW's colleagues around the world has been, and always will be, its top priority. Guided by the Company's Enterprise Safety Strategy and the philosophy that every accident is preventable, ITW strives every day to foster a proactive safety culture. ITW's Enterprise Safety Strategy is based on the following core principles: (i) a goal of zero accidents; (ii) shared ownership for safety (business and individual); (iii) proactive approach focused on accident prevention; and (iv) continuous improvement philosophy.

Consistent with these commitments, employee health and safety has been a top priority during the COVID-19 pandemic. Among its many actions and initiatives, the Company redesigned production processes to ensure proper social distancing practices, adjusted shift schedules and assignments to help colleagues who have child and elder care needs, and implemented aggressive workplace sanitation practices and a coordinated response to ensure access to personal protective equipment to minimize infection risk. Moreover, the Company's commitment to its employees was reinforced when the Company decided not to initiate any enterprise-wide employment reduction mandates or programs at any point in 2020 or 2021.

Workplace Culture. The Company operates under a decentralized, entrepreneurial culture that is crucial to the Company's performance and is one of the three unique elements of the ITW Business Model. ITW believes its colleagues around the world thrive in this culture, as it allows them to experience significant autonomy, a sense of shared ownership with their colleagues, and a work atmosphere deeply rooted in the Company's core values of Integrity, Respect, Trust, Shared Risk and Simplicity.

Compensation and Benefits. As a global employer, the Company is committed to providing market-competitive compensation and benefits to attract and retain great talent across its global divisions. Specific compensation and benefits vary worldwide and are based on regional practices. In the U.S., the Company focuses on providing a comprehensive, competitive benefits package that supports the health and wellness, educational endeavors, community involvement and financial stability of its colleagues.

Diversity and Inclusion. ITW believes it is at its best when it brings together unique perspectives, experiences and ideas. Rooted in ITW's core values of Respect and Integrity, the Company is committed to equal employment opportunity, fair treatment and creating diverse and inclusive workplaces where all ITW colleagues can perform to their full potential. ITW remains committed to achieving its diversity and inclusion goals and enhancing the diversity of its global leadership teams. ITW drives progress through a comprehensive enterprise Diversity and Inclusion Framework, which focuses on (i) leadership commitment and accountability; (ii) attracting and retaining global, diverse talent; (iii) creating inclusive workplaces; and (iv) striving to be a great employer.

Labor Relations. Less than three percent of the Company's U.S. employees are represented by a labor union. Outside the U.S., employees in certain countries are represented by an employee representative organization, such as a union, works council or employee association. The Company considers its employee relations to be excellent.

The Company's Sustainability Report (formerly called the Corporate Social Responsibility Report), published annually and available on the Company's website (www.itw.com), contains more information about the Company's human capital and its programs, goals and progress. Information in the Sustainability Report or on the Company's website is not incorporated herein by reference.

Information About Our Executive Officers

The executive officers of the Company serve at the discretion of the Board of Directors. Set forth below is information regarding the principal occupations and employment and business experience over the past five years for each executive officer. Unless otherwise stated, employment is by the Company.

Executive Officers of the Company as of February 11, 2022 were as follows:

Name	Age	Present Position	Year Elected to Present Position	Other Positions Held During 2017-2021
E. Scott Santi	60	Chairman & Chief Executive Officer	2015	
Axel Beck	56	Executive Vice President	2020	Group President, food equipment businesses, 2016-2020.
Kenneth Escoe	46	Executive Vice President	2020	Vice President/General Manager, specialty products businesses, 2016-2019; Group President, specialty products businesses, 2019-2020.
Javier Gracia Carbonell	49	Executive Vice President	2022	Vice President/General Manager, construction businesses, 2017-2020; Group President, construction businesses, 2020-2021.
John R. Hartnett	61	Executive Vice President	2012	
Patricia A. Hartzell	45	Executive Vice President	2022	Vice President/General Manager, test and measurement & electronics businesses, 2017-2020; Group President, test and measurement & electronics businesses, 2020-2021.
Michael M. Larsen	53	Senior Vice President & Chief Financial Officer	2013	
Mary K. Lawler	56	Senior Vice President & Chief Human Resources Officer	2014	
Christopher O'Herlihy	58	Vice Chairman	2015	
Randall J. Scheuneman	54	Vice President & Chief Accounting Officer	2009	
Lei Schlitz	55	Executive Vice President	2015	
Jennifer Schott	48	Senior Vice President, General Counsel & Secretary	2021	Vice President, Assistant General Counsel & Assistant Secretary, Discover Financial Services, 2016-2019; Deputy General Counsel & Assistant Secretary, Caterpillar, Inc. 2019-2021.
Sharon Szafranski	55	Executive Vice President	2020	Vice President/General Manager, test & measurement and electronics businesses, 2016-2019; Group President, test & measurement and electronics businesses, 2019-2020.
Michael R. Zimmerman	61	Executive Vice President	2015	

Available Information

The Company electronically files reports with the Securities and Exchange Commission (the "SEC"). The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Copies of the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are also available free of charge through the Company's website (www.itw.com), as soon as reasonably practicable after electronically filing with or otherwise furnishing such information to the SEC. The Company's Code of Ethics for the CEO and key financial and accounting personnel is also posted on the Company's website.

ITEM 1A. ***Risk Factors***

The Company's business, financial condition, results of operations and cash flows are subject to various risks, including, but not limited to, those set forth below, which could cause actual results to vary materially from recent results or from anticipated future results. These risk factors should be considered together with information included elsewhere in this Annual Report on Form 10-K.

Economic Risks

The COVID-19 pandemic has adversely affected the Company's business, financial condition and results of operations and could affect the Company's liquidity. The full and long-term extent of the effects of the COVID-19 pandemic on our business depend on future events that continue to be highly uncertain and cannot be predicted.

The COVID-19 pandemic and the continued measures taken globally to reduce its spread have negatively impacted the global economy, disrupted consumer/customer demand and global supply chains, and created significant volatility and disruption of financial markets. These measures and the continued volatility of the global economy adversely affected our results of operations for 2020, and while most of our segments achieved strong results in 2021, we are currently unable to quantify the full and long-term impact of the pandemic on our financial condition, results of operations and liquidity.

The Company has implemented numerous actions in order to focus on the needs of its colleagues and customers, such as redesigning production processes, adjusting shift schedules and assignments and implementing aggressive new workplace sanitation practices and a coordinated response to ensure access to personal protective equipment to minimize infection risk. Further actions may be required in response to evolving conditions such as renewed travel restrictions, quarantine, and stay-at-home orders as well as uncertainty regarding the emergence of new variants and the timing of widespread availability of testing, vaccines and treatments. We cannot predict whether there will be pandemic-related facility closures in the future.

The COVID-19 pandemic continues to have the potential to significantly and extendedly alter demand for our products and to disrupt our supply chain as a result of shifts in demand, illness, quarantine, travel restrictions, transportation disruptions, increased border controls or closures, or financial hardship. We have been able to procure the critical raw materials and components necessary to continue production, but prices for some raw materials have increased significantly and there is no guarantee that we will be able to procure critical raw materials in the future without materially adversely impacting our operating margins. A prolonged extension of the conditions resulting from the pandemic could force both customer and supplier bankruptcies, which we expect would adversely impact our results; however, given the uncertainty around the continued duration and breadth of the COVID-19 pandemic, we cannot reasonably estimate the extent of these adverse effects on our operations.

The Company has sought to implement a differentiated strategy to manage through the pandemic, including a focus on thoughtful cost management and continued investment in areas of strategic importance in order to maintain optionality and fully participate in the recovery phase. Although some opportunities have already emerged from this strategy, the Company cannot estimate the extent or the timing of the benefits from this strategy, if any. If the Company's strategy does not generate the expected benefits, the Company's long-term financial results could be adversely impacted.

Furthermore, the COVID-19 pandemic has the potential to impact the proper functioning of financial and capital markets. If the economic recovery is protracted, we may not be able to access our short-term credit facilities and may be required to seek additional financing sources, which may not be available on reasonable terms or at all. If the Company suffers a liquidity shortage, we may be forced to reduce our workforce, decrease or suspend dividend payments or share repurchases, or adopt other measures. We cannot predict the likelihood, timing or the consequences of a future liquidity shortage in our business.

The ultimate significance of the COVID-19 pandemic on our business will depend on events that are beyond our control and that we cannot predict. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business, financial condition or results of operations.

The Company's results are impacted by global economic conditions. Downturns in the markets served by the Company could adversely affect its businesses, results of operations or financial condition.

The Company's businesses are impacted by economic conditions around the globe. Slower economic growth, financial market instability, inflation, natural disasters, public health crises (such as the COVID-19 pandemic), labor market challenges, supply chain disruptions, government deficit reduction, sequestration and other austerity measures impacting the markets the Company serves can adversely affect the Company's businesses by reducing demand for the Company's products and services, limiting financing available to the Company's customers, causing production delays, increasing order cancellations and the difficulty in collecting accounts receivable, increasing price competition, or increasing the risk that counterparties to the Company's contractual arrangements will become insolvent or otherwise unable to fulfill their obligations.

The global nature of the Company's operations subjects it to political, economic and social risks that could adversely affect its business, results of operations or financial condition.

Over 50% of the Company's net sales are derived from customers outside the United States, and the Company currently operates in 52 countries. The risks inherent in the Company's global operations include:

- fluctuation in currency exchange rates;
- limitations on ownership or participation in local enterprises;
- price controls, exchange controls and limitations on repatriation of earnings;
- transportation delays and disruptions;
- political, social and economic instability and disruptions;
- acts of terrorism;
- the impact of widespread public health crises (such as the COVID-19 pandemic);
- government embargoes or foreign trade restrictions;
- the imposition of duties and tariffs and other trade barriers and retaliatory countermeasures;
- government actions impacting international trade agreements, including the EU-UK Trade and Cooperation Agreement;
- import and export controls;
- social and labor unrest and current and changing regulatory environments;
- the potential for expropriation or nationalization of enterprises;
- difficulties in staffing and managing multi-national operations;
- multiple and potentially conflicting laws, regulations and policies that are subject to change;
- limitations on its ability to enforce legal rights and remedies; and
- potentially adverse tax consequences.

The global geopolitical and trade environment has resulted in raw material inflation and potential for increased escalation of domestic and international tariffs and retaliatory trade policies. Further changes in U.S. trade policy (including new or additional increases in duties or tariffs) and retaliatory actions by U.S. trade partners could result in a worsening of economic conditions. If the Company is unable to successfully manage the risks associated with managing and expanding its international businesses, the Company's business, results of operations or financial condition may be adversely impacted.

A significant fluctuation between the U.S. Dollar and other currencies could adversely impact the Company's operating income.

Although the Company's financial results are reported in U.S. Dollars, a significant portion of its sales and operating costs are realized in other currencies, with the largest concentration of foreign sales occurring in Europe. The Company's profitability is affected by movements of the U.S. Dollar against the Euro and other foreign currencies in which it generates revenues and incurs expenses. Significant long-term fluctuations in relative currency values, and in particular, an increase in the value of the U.S. Dollar against foreign currencies, has had and could have an adverse effect on profitability and financial condition.

Business and Operational Risks

The benefits from the Company's enterprise strategy may not be as expected and the Company's financial results could be adversely impacted, or the Company may not meet its long-term financial performance targets.

As the Company continues to execute on its enterprise strategy initiatives, it remains focused on the core principles of portfolio discipline, 80/20 Front-to-Back practice excellence, and organic growth. Product line and customer base simplification activities, which are core elements of the Company's 80/20 Front-to-Back process, continue to be applied by the Company's operating divisions and are active elements of the enterprise strategy. Although these activities are expected to improve future operating margins and organic revenue growth, they are also expected to have a negative impact on the Company's overall organic revenue growth in the short term. Additionally, other core activities of the enterprise strategy related to portfolio discipline and organic growth, including customer-back innovation and strategic sales excellence, may not have the desired impact on future operating results. If the Company is unable to realize the expected benefits from its enterprise strategy initiatives, the Company's financial results could be adversely impacted, or the Company may not meet its long-term financial performance targets.

The timing and amount of the Company's share repurchases are subject to a number of uncertainties.

Share repurchases constitute a significant component of the Company's capital allocation strategy. The Company has historically funded its share repurchases with free cash flow and short-term borrowings. The amount and timing of share repurchases will be based on a variety of factors. Important factors that could cause the Company to limit, suspend or delay its share repurchases include unfavorable trading market conditions, the price of the Company's common stock, the nature of other investment opportunities presented to the Company from time to time, regulatory developments relating to share repurchase programs, the ability to obtain financing at attractive rates and the availability of U.S. cash.

If the Company is unable to successfully introduce new products, its future growth may be adversely affected.

The Company's ability to develop new products based on innovation can affect its competitive position and sometimes requires the investment of significant time and resources. Difficulties or delays in research, development, production or commercialization of new products and services may reduce future revenues and adversely affect the Company's competitive position. If the Company is unable to create sustainable product differentiation, its organic growth may be adversely affected.

If the Company is unable to adequately protect its intellectual property, its competitive position and results of operations may be adversely impacted.

Protecting the Company's intellectual property is critical to its innovation efforts. The Company owns patents, trade secrets, copyrights, trademarks and/or other intellectual property rights related to many of its products, and also has exclusive and non-exclusive license rights under intellectual property owned by others. The Company's intellectual property rights may be challenged or the Company may be unable to maintain, renew or enter into new license agreements with third-party owners of intellectual property on reasonable terms. Unauthorized use of the Company's intellectual property rights by third parties, particularly in countries where property rights are not highly developed or protected, or inability to preserve existing intellectual property rights could adversely impact the Company's competitive position and results of operations.

The Company has significant goodwill and other intangible assets, and future impairment of these assets could have a material adverse impact on the Company's financial results.

The Company has recorded significant goodwill and other identifiable intangible assets on its balance sheet as a result of acquisitions, including the acquisition of the MTS Test & Simulation business in 2021. A number of factors may result in impairments to goodwill and other intangible assets, including significant negative industry or economic trends, disruptions to our business, increased competition and significant changes in the use of the assets. Impairment charges could adversely affect the Company's financial condition or results of operations in the periods recognized.

Raw material price increases and supply shortages could adversely affect results.

The supply of raw materials to the Company and to its component parts suppliers could be interrupted for a variety of reasons, including availability and pricing. The Company has experienced supply chain disruptions related to the COVID-19 pandemic, and continued disruptions to the supply chain could adversely affect the Company's ability to meet commitments to customers. Prices for raw materials necessary for production have fluctuated significantly in the past and the Company is currently experiencing upward pricing pressure on raw materials such as steel, resins and chemicals. Significant price increases could adversely affect the Company's results of operations and operating margins. In particular, inflation, changes in trade policies, the imposition of duties and tariffs, potential retaliatory countermeasures, public health crises (such as the COVID-19 pandemic) and severe weather events could adversely impact the price or availability of raw materials. The Company may not be able to pass along increased raw material and components parts prices to its customers in the form of price increases or its ability to do so could be delayed. Consequently, its results of operations and financial condition may be adversely affected.

The Company's defined benefit pension plans are subject to financial market risks that could adversely affect its results of operations and cash flows.

The performance of financial markets and interest rates impact the Company's funding obligations under its defined benefit pension plans. Significant changes in market interest rates, decreases in the fair value of plan assets and investment losses on plan assets may increase the Company's funding obligations and adversely impact its results of operations and cash flows.

If the Company is unable to protect its information technology infrastructure against service interruptions, data corruption, cyber-based attacks or network security breaches, or if there is a violation of data privacy laws, there could be a negative impact on operating results or the Company may suffer financial or reputational damage.

The Company relies on information technology networks and systems, including the Internet, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including procurement, manufacturing, distribution, invoicing and collection. These technology networks and systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components; power outages; hardware failures; computer viruses; employee error or malfeasance; and attacks by computer hackers, which have continued to increase on a global scale in both magnitude and frequency, taken on novel and unprecedented forms and become more difficult to detect. Minor security breaches have occurred from time to time and are expected to occur in the future. Although the cyber-attacks experienced to date have not had a material impact, future security breaches could result in unauthorized disclosure of confidential information or personal data belonging to our employees, partners, customers or suppliers, which could cause reputational and legal harm as we are subject to data privacy laws, including the EU General Data Protection Regulation, in the various countries in which we operate. If our information technology systems suffer severe damage, disruption, or shutdown, and business continuity plans do not effectively resolve the issues in a timely manner, or if we violate data privacy laws, there could be a negative impact on operating results or the Company may suffer financial or reputational damage.

Strategic Transaction Risks

The Company's acquisition of businesses could negatively impact its profitability and returns.

The Company has engaged in various acquisitions in the past, such as the recently completed acquisition of the MTS Test & Simulation business, and could choose to acquire additional businesses in the future. Acquisitions involve a number of risks and financial, accounting, managerial and operational challenges, including the following, any of which could adversely affect the Company's profitability and returns:

- The acquired business' inability to adapt to the ITW Business Model or otherwise perform in accordance with the Company's anticipated results or timetable, could cause it to under-perform relative to the Company's expectations and the price paid for it.
- The acquired business could cause the Company's financial results to differ from expectations in any given fiscal period, or over the long term.
- Acquisition-related earnings charges could adversely impact operating results.
- The acquired business could place unanticipated demands on the Company's management, operational resources and financial and internal control systems.
- The Company may assume unknown liabilities, known contingent liabilities that become realized or known liabilities that prove greater than anticipated, internal control deficiencies or exposure to regulatory sanctions resulting from the activities of the acquired business. The realization of any of these liabilities or deficiencies may increase the Company's expenses, adversely affect its financial position or cause noncompliance with its financial reporting obligations.
- As a result of acquisitions, the Company has in the past recorded significant goodwill and other identifiable intangible assets on its balance sheet. If the Company is not able to realize the value of these assets, it may recognize charges relating to the impairment of these assets.

Divestitures pose the risk of retained liabilities that could adversely affect the Company's financial results.

The Company has had significant divestiture activity in the past in accordance with its portfolio management initiative, and it continues portfolio refinements to maintain portfolio discipline. The Company has retained certain liabilities directly or through indemnifications made to the buyers against known and unknown contingent liabilities such as lawsuits, tax liabilities, product liability claims and environmental matters, which could adversely affect the Company's financial results.

Tax, Legal and Regulatory Risks

Unfavorable tax law changes and tax authority rulings may adversely affect results.

The Company is subject to income taxes in the U.S. and in various foreign jurisdictions. Domestic and international tax liabilities are based on the income and expenses in various tax jurisdictions. The Company's effective tax rate could be adversely affected by changes in the mix of earnings among countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets or changes in tax laws. The amount of income taxes is subject to ongoing audits by U.S. federal, state and local tax authorities and by non-U.S. authorities. If these audits result in assessments different from amounts recorded, future financial results may include unfavorable tax adjustments.

Adverse outcomes in legal proceedings or enforcement actions may adversely affect results.

The Company's businesses expose it to potential costs and adverse rulings associated with commercial, intellectual property, toxic tort and other product liability claims. The Company's global operations also subject it to government investigations in numerous countries. We cannot predict the outcome of claims, investigations and lawsuits and we may incur costs, judgments or fines or enter into settlements that could adversely impact our businesses, reputation or future financial results. The Company currently maintains insurance programs consisting of self-insurance up to certain limits and excess insurance coverage for claims over established limits. There can be no assurance that the Company will be able to obtain insurance on acceptable terms or that its insurance programs will provide adequate protection against actual losses. In addition, the Company is subject to the risk that one or more of its insurers may become insolvent and become unable to pay claims that may be made in the future. Even if it maintains adequate insurance programs, claims, judgements, fines or settlements could have a material adverse effect on the Company's financial condition, liquidity and results of operations and on its ability to obtain suitable, adequate or cost-effective insurance in the future.

Uncertainty related to environmental regulation and industry standards, as well as physical risks of climate change, could impact the Company's results of operations and financial position.

Increased public awareness and concern regarding environmental risks, including global climate change, may result in more international, regional and/or federal requirements or industry standards to reduce or mitigate global warming and other environmental risks. These regulations or standards could mandate even more restrictive requirements, such as stricter limits on greenhouse gas emissions and production of single use plastics, than the voluntary commitments that the Company has made or require such changes on a more accelerated time frame. There continues to be a lack of consistent climate legislation, which creates economic and regulatory uncertainty. In addition, the physical risks of climate change may impact the availability and cost of materials and natural resources, sources and supply of energy, product demand and manufacturing and could increase insurance and other operating costs, including, potentially, to repair damage incurred as a result of extreme weather events or to renovate or retrofit facilities to better withstand extreme weather events. If environmental laws or regulations or industry standards are either changed or adopted and impose significant operational restrictions and compliance requirements upon the Company or its products, or the Company's operations are disrupted due to physical impacts of climate change, the Company's business, capital expenditures, results of operations, financial condition and competitive position could be negatively impacted.

The Company may incur fines or penalties, damage to its reputation or other adverse consequences if its employees, agents or business partners violate anti-bribery, competition, export and import, environmental, human rights or other laws.

The Company has a decentralized operating structure under which its individual businesses are allowed significant decision-making autonomy within the Company's strategic framework and internal financial and compliance controls. The Company cannot ensure that its internal controls will always protect against reckless or criminal acts committed by its employees, agents or business partners that might violate U.S. and/or non-U.S. laws, including anti-bribery, competition, export and import, environmental and human rights laws. As recent years have seen a substantial increase in the global enforcement of anti-corruption laws and adoption of new human rights laws, any such improper actions could subject the Company to civil or criminal investigations, could lead to substantial civil or criminal monetary and non-monetary penalties against the Company or its subsidiaries, or could damage its reputation.

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as "believe," "expect," "plans," "intend," "may," "strategy," "prospects," "estimate," "will," "should," "could," "project," "target," "anticipate," "guidance," "forecast," and other similar words, and may include, without limitation, statements regarding the duration and potential effects of the COVID-19 pandemic and global supply chain challenges, related government actions and the Company's strategy in response thereto on the Company's business, future financial and operating performance, free cash flow, economic and regulatory conditions in various geographic regions, the impact of foreign currency fluctuations, the timing and amount of benefits from the Company's enterprise strategy initiatives, the timing and amount of dividends and share repurchases, the protection of the Company's intellectual property, the likelihood of future goodwill or intangible asset impairment charges, the impact of adopting new accounting pronouncements, the adequacy of internally generated funds and credit facilities to service debt and finance the Company's capital allocation priorities, the sufficiency of U.S. generated cash to fund cash requirements in the U.S., the cost and availability of additional financing, the availability of raw materials and energy and the impact of raw material cost inflation, enterprise initiatives, the Company's portion of future benefit payments related to pension and postretirement benefits, the Company's information technology infrastructure, potential acquisitions and divestitures and the expected performance of acquired businesses and impact of divested businesses, the impact of U.S. and global tax legislation and the estimated timing and amount related to the resolution of tax matters, the cost of compliance with environmental regulations, the impact of failure of the Company's employees to comply with applicable laws and regulations, and the outcome of outstanding legal proceedings. These statements are subject to certain risks, uncertainties, and other factors, which could cause actual results to differ materially from those anticipated. Important risks that may influence future results include those risks described above. These risks are not all inclusive and given these and other possible risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

Any forward-looking statements made by ITW speak only as of the date on which they are made. ITW is under no obligation to, and expressly disclaims any obligation to, update or alter its forward-looking statements, whether as a result of new information, subsequent events or otherwise.

ITW practices fair disclosure for all interested parties. Investors should be aware that while ITW regularly communicates with securities analysts and other investment professionals, it is against ITW's policy to disclose to them any material non-public information or other confidential commercial information. Investors should not assume that ITW agrees with any statement or report issued by any analyst irrespective of the content of the statement or report.

ITEM 1B. *Unresolved Staff Comments*

None.

ITEM 2. *Properties*

Due to the Company's decentralized operating structure and global operations, the Company operates out of a large number of facilities worldwide, none of which are individually significant to the Company or its segments. As of December 31, 2021, the Company operated approximately 460 plants and office facilities, excluding regional sales offices and warehouse facilities. Approximately 300 of the facilities were located outside of the United States. Principal foreign countries include Germany, China, France, and the United Kingdom.

The Company's properties are well suited for the purposes for which they were designed and are maintained in good operating condition. Production capacity, in general, currently exceeds operating levels. Capacity levels are somewhat flexible based on the number of shifts operated and on the number of overtime hours worked. The Company adds production capacity from time to time as required by increased demand. Additions to capacity can be made within a reasonable period of time due to the nature of the Company's businesses.

ITEM 3. *Legal Proceedings*

None. The Company's threshold for disclosing environmental legal proceedings involving a governmental authority where potential monetary sanctions are involved is $1 million.

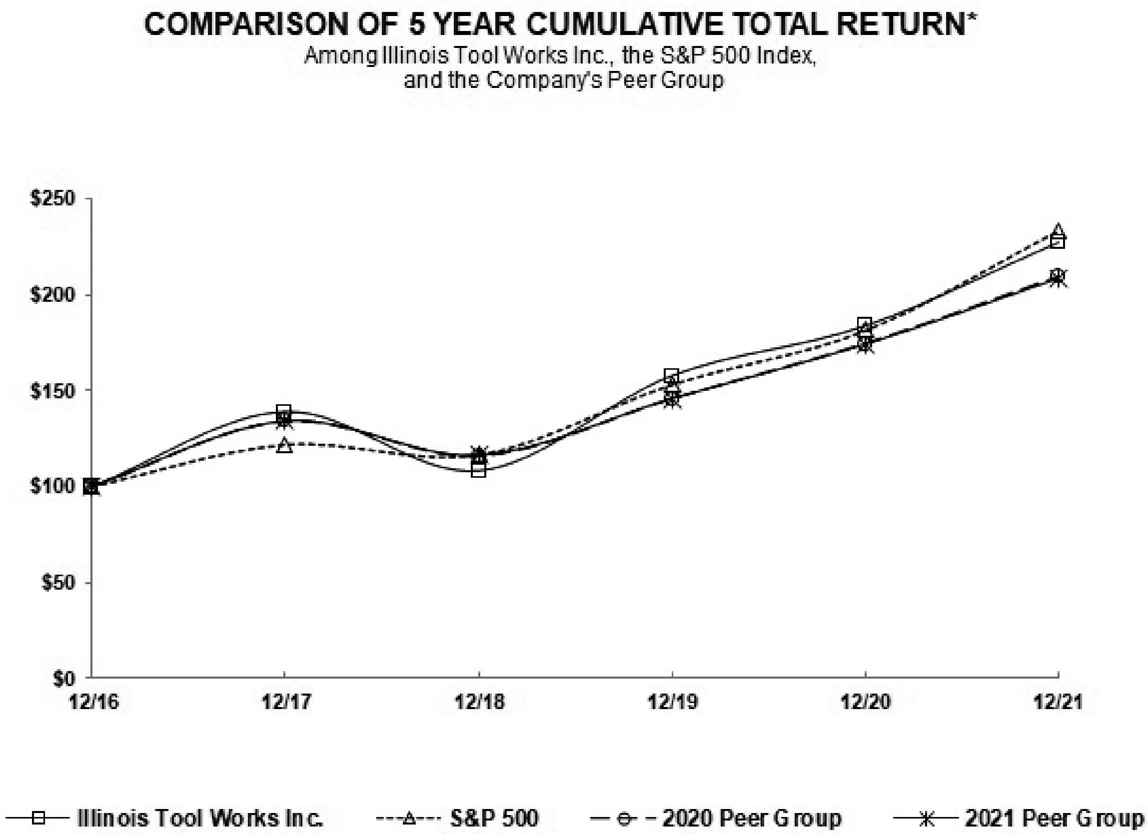
ITEM 4. *Mine Safety Disclosures*

None.

PART II

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

Common Stock Data— The Company's common stock is listed on the New York Stock Exchange. There were approximately 4,967 holders of record of common stock as of January 31, 2022. This number does not include beneficial owners of the Company's securities held in the name of nominees.



*Assumes $100 invested on 12/31/16 in stock or index, including reinvestment of dividends. Fiscal years ended December 31.

The 2021 Peer Group consists of the following 17 public companies:

3M Company	Ecolab Inc.	Parker-Hannifin Corporation
Caterpillar Inc.	Emerson Electric Co.	PPG Industries, Inc.
Cummins Inc.	Fortive Corporation	Rockwell Automation, Inc.
Deere & Company	General Dynamics Corporation	Stanley Black & Decker, Inc.
Dover Corporation	Honeywell International Inc.	Trane Technologies plc
Eaton Corporation plc	Johnson Controls International plc	

The Compensation Committee of the Board of Directors of the Company reviews the peer group annually and from time to time changes the composition of the peer group where changes are appropriate. The 2021 Peer Group is consistent with the 2020 Peer Group. Fortive Corporation was added to the Company's peer group in 2017 and was excluded from the 2020 Peer Group five-year cumulative total return as there was insufficient historical data due to its spin-off from Danaher Corporation in 2016. For the 2021 Peer Group, Fortive Corporation was included in the five-year cumulative total return above.

Repurchases of Common Stock— On August 3, 2018, the Company's Board of Directors authorized a stock repurchase program which provides for the repurchase of up to $3.0 billion of the Company's common stock over an open-ended period of time (the "2018 Program"). As of December 31, 2021, there were approximately $240 million of authorized repurchases remaining under the 2018 Program.

On May 7, 2021, the Company's Board of Directors authorized a new stock repurchase program which provides for the repurchase of up to an additional $3.0 billion of the Company's common stock over an open-ended period of time (the "2021 Program"). As of December 31, 2021, there were $3.0 billion of authorized repurchases remaining under the 2021 Program.

Share repurchase activity under the Company's share repurchase programs for the fourth quarter of 2021 was as follows:

In millions except per share amounts

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Maximum Value of Shares That May Yet Be Purchased Under Programs
October 2021	—	$ 227.47	—	$ 3,480
November 2021	0.7	$ 236.12	0.7	$ 3,336
December 2021	0.4	$ 239.66	0.4	$ 3,240
Total	1.1		1.1	

ITEM 6. ***[Reserved]***

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

INTRODUCTION

Illinois Tool Works Inc. (the "Company" or "ITW") is a global manufacturer of a diversified range of industrial products and equipment with 83 divisions in 52 countries. As of December 31, 2021, the Company employed approximately 45,000 people.

The Company's operations are organized and managed based on similar product offerings and end markets, and are reported to senior management as the following seven segments: Automotive OEM; Food Equipment; Test & Measurement and Electronics; Welding; Polymers & Fluids; Construction Products; and Specialty Products.

Due to the large number of diverse businesses and the Company's decentralized operating structure, the Company does not require its businesses to provide detailed information on operating results. Instead, the Company's corporate management collects data on several key measurements: operating revenue, operating income, operating margin, overhead costs, number of months on hand in inventory, days sales outstanding in accounts receivable, past due receivables and return on invested capital. These key measures are monitored by management and significant changes in operating results versus current trends in end markets and variances from forecasts are discussed with operating unit management.

THE ITW BUSINESS MODEL

The powerful and highly differentiated ITW Business Model is the Company's core source of value creation. The ITW Business Model is the Company's competitive advantage and defines how ITW creates value for its shareholders. It is comprised of three unique elements:

- ITW's **80/20 Front-to-Back** process is the operating system that is applied in every ITW business. Initially introduced as a manufacturing efficiency tool in the 1980s, ITW has continually refined, improved and expanded 80/20 into a proprietary, holistic business management process that generates significant value for the Company and its customers. Through the application of data driven insights generated by 80/20 practice, ITW focuses on its largest and best opportunities (the "80") and eliminates cost, complexity and distractions associated with the less profitable opportunities (the "20"). 80/20 enables ITW businesses to consistently achieve world-class operational excellence in product availability, quality, and innovation, while generating superior financial performance;

- **Customer-back Innovation** has fueled decades of profitable growth at ITW. The Company's unique innovation approach is built on insight gathered from the 80/20 Front-to-Back process. Working from the customer back, ITW businesses position themselves as the go-to problem solver for their "80" customers. ITW's innovation efforts are focused on understanding customer needs, particularly those in "80" markets with solid long-term growth fundamentals, and creating unique solutions to address those needs. These customer insights and learnings drive innovation at ITW and have contributed to a portfolio of approximately 19,300 granted and pending patents;

- ITW's **Decentralized, Entrepreneurial Culture** enables ITW businesses to be fast, focused, and responsive. ITW businesses have significant flexibility within the framework of the ITW Business Model to customize their approach in order to best serve their specific customers' needs. ITW colleagues recognize their unique responsibilities to execute the Company's strategy and values. As a result, the Company maintains a focused and simple organizational structure that, combined with outstanding execution, delivers best-in-class services and solutions adapted to each business' customers and end markets.

ENTERPRISE STRATEGY

In late 2012, ITW began its strategic framework transitioning the Company on its current path to fully leverage the compelling performance potential of the ITW Business Model. The Company undertook a complete review of its performance, focusing on its businesses delivering consistent above-market growth with best-in-class margins and returns, and developing a strategy to replicate that performance across its operations.

ITW determined that solid and consistent above-market organic growth is the core growth engine to deliver world-class financial performance and compelling long-term returns for its shareholders. To shift its primary growth engine to organic, the Company began executing a multi-step approach.

- The first step was to narrow the focus and improve the quality of ITW's business portfolio. As part of the Portfolio Management initiative, ITW exited businesses that were operating in commoditized market spaces and prioritized sustainable differentiation as a must-have requirement for all ITW businesses. This process included both divesting entire businesses and exiting commoditized product lines and customers inside otherwise highly differentiated ITW divisions.

  As a result of this work, ITW's business portfolio now has significantly higher organic growth potential. ITW segments and divisions now possess attractive and differentiated product lines and end markets as they continue to improve operating margins and generate price/cost increases. The Company achieved this through product line simplification, or eliminating the complexity and overhead costs associated with smaller product lines and customers, while supporting and growing the businesses' largest / most profitable customers and product lines.

- Step two, Business Structure Simplification, was implemented to simplify and scale up ITW's operating structure to support increased engineering, marketing, and sales resources, and improve global reach and competitiveness, all of which were critical to driving accelerated organic growth. ITW now has 83 scaled-up divisions with significantly enhanced focus on growth investments, core customers and products, and customer-back innovation.

- The Strategic Sourcing initiative established sourcing as a core strategic and operational capability at ITW, delivering an average of one percent reduction in spend each year from 2013 through 2021 and continues to be a key contributor to the Company's ongoing enterprise strategy.

- With the initial portfolio realignment and scale-up work largely complete, the Company shifted its focus to preparing for and accelerating organic growth, reapplying the 80/20 Front-to-Back process to optimize its newly scaled-up divisions for growth, first, to build a foundation of operational excellence, and second, to identify the best opportunities to drive organic growth.

ITW has clearly demonstrated superior 80/20 management, resulting in meaningful incremental improvement in margins and returns as evidenced by the Company's operating margin and after-tax return on invested capital. At the same time, these 80/20 initiatives can also result in restructuring initiatives that reduce costs and improve profitability and returns.

PATH TO FULL POTENTIAL

Since the launch of the enterprise strategy, the Company has made considerable progress to position itself to reach full potential. The ITW Business Model and unique set of capabilities are a source of strong and enduring competitive advantage, but for the Company to truly reach its full potential, every one of its divisions must also be operating at its full potential. To do so, the Company remains focused on its core principles to position ITW to perform to its full potential:

- Portfolio discipline
- 80/20 Front-to-Back practice excellence
- Full-potential organic growth

Portfolio Discipline

The Company only operates in industries where it can generate significant, long-term competitive advantage from the ITW Business Model. ITW businesses have the right "raw material" in terms of market and business attributes that best fit the ITW Business Model and have significant potential to drive above-market organic growth over the long-term.

The Company focuses on high-quality businesses, ensuring it operates in markets with positive long-term macro fundamentals and with customers that have critical needs and value ITW's differentiated products, services and solutions. ITW's portfolio operates in highly diverse end markets and geographies which makes the Company more resilient in the face of uncertain or volatile market environments.

The Company routinely evaluates its portfolio to ensure it delivers sustainable differentiation and drives consistent long-term performance. This includes both implementing portfolio refinements and assessing selective high-quality acquisitions to supplement ITW's long-term growth potential.

The Company previously communicated its intent to explore options, including potential divestitures, for certain businesses with revenues totaling up to $1 billion. In the fourth quarter of 2019, the Company completed the divestitures of three businesses and continues to evaluate options for certain other businesses. However, due to the COVID-19 pandemic, the Company deferred any further significant divestiture activity until 2022 or later. The Company intends to reinitiate the divestiture process in 2022 for certain businesses with combined annual revenues of approximately $0.5 billion. Refer to Note 4. Divestitures in Item 8. Financial Statements and Supplementary Data for further information regarding divestiture activity.

80/20 Front-to-Back Practice Excellence

The 80/20 Front-to-Back process is a rigorous, iterative and highly data-driven approach to identify where the Company has true differentiation and the ability to drive sustainable, high-quality organic growth. The Company simplifies and eliminates complexity and redesigns every aspect of its business to ensure focused execution on key opportunities, markets, customers, and products.

ITW will continue to drive 80/20 Front-to-Back practice excellence in every division in the Company, every day. Driving strong operational excellence in the quality of 80/20 Front-to-Back practice across the Company, division by division, will produce further customer-facing performance improvement in a number of divisions and additional structural margin expansion at the enterprise level.

Near-term Priorities

While it was the challenges brought about by the COVID-19 pandemic that dominated the Company's attention starting in 2020, it was the collection of capabilities and competitive advantages that have been built and honed over the past nine years through the execution of ITW's enterprise strategy that provided the Company with the options to respond. This, coupled with the proprietary and powerful ITW Business Model, diversified high-quality business portfolio and diligent execution put the Company in a position of strength in dealing with the global pandemic.

As the global pandemic continues, the Company continues to focus its efforts on (1) protecting the health and support the well-being of ITW's colleagues; (2) serving the Company's customers with excellence; (3) maintain financial strength, liquidity and strategic optionality; and (4) leverage the Company's strengths to position it to fully participate in the recovery.

"Win the Recovery" is an execution component of the Company's enterprise strategy, not a separate initiative, with every one of the Company's divisions identifying specific opportunities presented by the pandemic to capture sustainable share gains that are aligned with the ITW long-term enterprise strategy. The Company expects these efforts to contribute meaningfully to accelerate its progress toward full-potential organic growth. The Company continues to focus on delivering strong results in any environment while executing its long-term strategy to achieve and sustain ITW's full potential performance.

Full-Potential Organic Growth

Reaching full potential means that every division is positioned for sustainable, high-quality organic growth. The Company has clearly defined action plans aimed at leveraging the performance power of the ITW Business Model to achieve full-potential organic growth in every division, with specific focus on:

- "80" focused Market Penetration - fully leveraging the considerable growth potential that resides in the Company's largest and most differentiated product offerings and customer relationships
- Customer-back Innovation - strengthening the Company's commitment to serial innovation and delivering a continuous flow of differentiated new products to its key customers
- Strategic Sales Excellence - deploying a high-performance sales function in every division

As the Company continues to make progress toward its full potential, the Company will explore opportunities to reinforce or further expand the long-term organic growth potential of ITW through the addition of selective high-quality acquisitions, such as the acquisition of the Test & Simulation business of MTS Systems Corporation ("MTS") from Amphenol Corporation on December 1, 2021. The operating results of the MTS Test & Simulation business were reported within the Company's Test & Measurement and Electronics segment. Refer to Note 3. Acquisitions in Item 8. Financial Statements and Supplementary Data for further information regarding this acquisition.

TERMS USED BY ITW

Management uses the following terms to describe the financial results of operations of the Company:

- **Organic business** - acquired businesses that have been included in the Company's results of operations for more than 12 months on a constant currency basis.
- **Operating leverage** - the estimated effect of the organic revenue volume changes on organic operating income, assuming variable margins remain the same as the prior period.
- **Price/cost** - represents the estimated net impact of increases or decreases in the cost of materials used in the Company's products versus changes in the selling price to the Company's customers.
- **Product line simplification (PLS)** - focuses businesses on eliminating the complexity and overhead costs associated with smaller product lines and customers, and focuses businesses on supporting and growing their largest customers and product lines. In the short-term, PLS may result in a decrease in revenue and overhead costs while improving operating margin. In the long-term, PLS is expected to result in growth in revenue, profitability, and returns.

Unless otherwise stated, the changes in financial results in the consolidated results of operations and the results of operations by segment represent the current year period versus the comparable period in the prior year.

CONSOLIDATED RESULTS OF OPERATIONS

In early 2020, an outbreak of a novel strain of coronavirus (COVID-19) occurred in China and other jurisdictions. The COVID-19 outbreak was subsequently declared a global pandemic by the World Health Organization on March 11, 2020. In response to the outbreak, governments around the globe have taken various actions to reduce its spread, including travel restrictions, shutdowns of businesses deemed nonessential, and stay-at-home or similar orders. The COVID-19 pandemic and the measures taken globally to reduce its spread have negatively impacted the global economy, causing significant disruptions in the Company's global operations starting primarily in the latter part of the first quarter of 2020 as COVID-19 continued to spread and impact the countries in which the Company operates and the markets the Company serves.

For the duration of the COVID-19 pandemic, the Company is focusing on the following priorities: (1) protect the health and support the well-being of ITW's colleagues; (2) continue to serve the Company's customers with excellence to the best of its ability; (3) maintain financial strength, liquidity and strategic optionality; and (4) leverage the Company's strengths to position it to fully participate in the recovery. To support ITW's colleagues, among its many actions and initiatives, the Company redesigned production processes to ensure proper social distancing practices, adjusted shift schedules and assignments to help colleagues who have child and elder care needs, and implemented aggressive new workplace sanitation practices and a coordinated response to ensure access to personal protective equipment to minimize infection risk. To support its customers, the Company has worked diligently to keep its facilities open and operating safely. The Company has adapted customer service systems and practices to seamlessly serve its customers under "work from home" requirements in many parts of the world.

In areas around the world where governments issued stay-at-home or similar orders, the vast majority of ITW's businesses were designated as critical or essential businesses and, as such, they remained open and operational. In some cases, this is because the Company's products directly impact the COVID-19 response effort. In other cases, the Company's businesses are designated as critical because they play a vital role in serving and supporting industries that are deemed essential to the physical and economic health of our communities.

While the vast majority of the Company's facilities have remained open and operational during the pandemic, many of these facilities were operating at a reduced capacity at various times since the outset of the pandemic. The full extent of the COVID-19 outbreak and its impact on the markets served by the Company and on the Company's operations and financial position continues to be highly uncertain as conditions continue to fluctuate around the world, with vaccine administration rising in certain regions and spikes in infections (including the spread of variants) also being experienced. A prolonged outbreak could continue to interrupt the operations of the Company and its customers and suppliers. A description of the risks relating to the impact of the COVID-19 outbreak on the Company's business, operations and financial condition is contained in Part I, Item 1A. Risk Factors.

Separately, the Company does not believe that tariffs imposed in recent years have had a material impact on its operating results. As the global trade environment, including the regulatory environment, continues to evolve, the Company will continue to evaluate the impact of enacted and proposed tariffs on its businesses, as well as pricing actions to mitigate the impact of any raw material cost increases resulting from these tariffs.

The Company delivered strong financial results in 2021 primarily due to the continued successful execution of enterprise initiatives, including the "Win the Recovery" actions initiated over the course of the past year, and continued focus on the highly differentiated ITW Business Model. Despite rising raw material costs and a challenging global supply chain environment, the Company generated operating revenue growth of 15.0 percent and organic revenue growth of 12.3 percent, as all segments had organic revenue growth in 2021. Organic revenue for the Automotive OEM segment grew mid-single digits, but was adversely impacted by auto production reductions associated with the supply chain challenges affecting its customers, especially during the second half of 2021. Operating income grew 20.6 percent in 2021. Operating margin was 24.1 percent in 2021 as all segments achieved margin expansion compared to the prior year period.

On December 1, 2021, the Company completed the acquisition of the MTS Test & Simulation business for a purchase price of $750 million, subject to certain closing adjustments. The MTS Test & Simulation business had operating revenue of $46 million for the one month ended December 31, 2021. The Company expects the MTS Test & Simulation business to be neutral to diluted earnings per share in the next twelve months, but expects improved earnings and operating margin performance in later years through the application of the Company's 80/20 Front-to-Back process. The operating results of the MTS Test & Simulation business were reported within the Test & Measurement and Electronics segment. The acquisition of the MTS Test & Simulation business did not have a material impact on the Company's results of operations or financial position for any period presented. Refer to Note 3. Acquisitions in Item 8. Financial Statements and Supplementary Data for further information.

The Company's consolidated results of operations for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$14,455	$12,574	15.0 %	12.3 %	0.4 %	— %	2.3 %	15.0 %
Operating income	$ 3,477	$ 2,882	20.6 %	17.0 %	0.2 %	0.8 %	2.6 %	20.6 %
Operating margin %	24.1 %	22.9 %	120 bps	100 bps	—	20 bps	—	120 bps

- Operating revenue increased due to higher organic and acquisition revenue and the favorable effect of foreign currency translation.

- Organic revenue increased 12.3% as the Company saw continued improvement in both the breadth and pace of the recovery. Additionally, product line simplification activities reduced organic revenue by 20 basis points.
  - North American organic revenue increased 13.5% due to growth in all segments, primarily driven by the Welding, Test & Measurement and Electronics and Food Equipment segments.
  - Europe, Middle East and Africa organic revenue increased 8.7% due to growth in six segments, primarily driven by the Food Equipment and Construction Products segments. The Automotive OEM segment was essentially flat.
  - Asia Pacific organic revenue increased 13.5% due to growth in all segments. China organic revenue grew 15.1% with growth in six segments, partially offset by a decline in the Construction Products segment.
- Operating income of $3.5 billion increased 20.6% primarily due to higher organic revenue.
- Operating margin of 24.1% increased 120 basis points primarily due to positive operating leverage of 250 basis points and benefits from the Company's enterprise initiatives of 110 basis points, partially offset by unfavorable price/cost of 150 basis points and higher overhead expenses, including employee-related expenses.
- The Company's effective tax rate was 19.0% in 2021 compared to 22.0% in 2020. The 2021 effective tax rate benefited from a discrete income tax benefit of $21 million in the third quarter related to the utilization of capital losses and a discrete income tax benefit of $112 million in the second quarter of 2021 related to the remeasurement of net deferred tax assets due to the enactment of the U.K. Finance Bill 2021, which increases the U.K. income tax rate from 19% to 25% effective April 1, 2023. Additionally, the effective tax rate included discrete income tax benefits related to excess tax benefits from stock-based compensation of $17 million and $27 million for 2021 and 2020, respectively.
- Diluted earnings per share (EPS) of $8.51 increased 28.4%. Excluding the favorable impact of the $21 million discrete income tax benefit in the third quarter of 2021 and the $112 million discrete income tax benefit in the second quarter of 2021, EPS increased 22.0%.
- Operating cash flow was $2.6 billion and free cash flow was $2.3 billion for 2021. Refer to the Cash Flow section of Liquidity and Capital Resources for a reconciliation of free cash flow, which is a non-GAAP measure.
- The Company repurchased approximately 4.4 million shares of its common stock in 2021 for approximately $1.0 billion.
- The Company increased the quarterly dividend on common stock from $1.14 to $1.22 per share in 2021, or from $4.56 to $4.88 per share on an annualized basis. Total cash dividends of approximately $1.5 billion were paid in 2021.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$12,574	$14,109	(10.9)%	(9.8)%	(0.9)%	— %	(0.2)%	(10.9)%
Operating income	$ 2,882	$ 3,402	(15.3)%	(16.0)%	(0.3)%	1.1 %	(0.1)%	(15.3)%
Operating margin %	22.9 %	24.1 %	(120) bps	(160) bps	10 bps	30 bps	—	(120) bps

- Operating revenue decreased due to lower organic revenue, the impact of 2019 divestitures and the unfavorable effect of foreign currency translation.
- Organic revenue decreased 9.8% primarily due to disruptions in the Company's global operations resulting from the COVID-19 pandemic as organic revenue declined in six of the seven segments. The Food Equipment, Automotive OEM and Welding segments had more pronounced unfavorable impacts from the COVID-19 pandemic in 2020. The Construction Products segment grew 1.5% primarily due to growth in North America. Product line simplification activities reduced the Company's organic revenue by 30 basis points.
  - North American organic revenue decreased 9.7% as a decline in six segments, primarily driven by the Automotive OEM, Food Equipment and Welding segments, was partially offset by growth in the Construction Products segment.
  - Europe, Middle East and Africa organic revenue decreased 13.8% as all seven segments had a decline in organic revenue primarily driven by the Automotive OEM and Food Equipment segments.
  - Asia Pacific organic revenue decreased 2.0% as a decline in the Food Equipment, Welding, Specialty Products and Construction Products segments was offset by growth in the Automotive OEM, Test & Measurement and Electronics and Polymers & Fluids segments. China organic revenue grew 0.3% as an increase in the Automotive OEM, Polymers & Fluids and Test & Measurement and Electronics segments was partially offset by a decline in the Food Equipment, Welding, Specialty Products and Construction Products segments.

- Operating income of $2.9 billion decreased 15.3% primarily due to lower organic revenue. Additionally, operating income for 2019 included $11.8 million related to the businesses divested in 2019.
- Operating margin of 22.9% decreased 120 basis points primarily driven by negative operating leverage of 230 basis points and product mix, partially offset by benefits from the Company's enterprise initiatives of 120 basis points and lower overhead expenses, such as travel and bonuses, and lower restructuring expenses.
- The effective tax rate was 22.0% in 2020 compared to 23.3% in 2019. The 2019 effective tax rate benefited from a discrete tax benefit of $21 million in the third quarter for the U.S. federal provision to return adjustment resulting primarily from changes in estimates related to the "Tax Cuts and Jobs Act." Additionally, the effective tax rates for 2020 and 2019 included $27 million and $28 million, respectively, related to excess tax benefits from stock-based compensation. Refer to Note 7. Income Taxes in Item 8. Financial Statements and Supplementary Data for further information.
- Diluted earnings per share (EPS) were $6.63 for 2020.
- Operating cash flow was $2.8 billion and free cash flow was $2.6 billion for 2020. Refer to the Cash Flow section of Liquidity and Capital Resources for a reconciliation of free cash flow, which is a non-GAAP measure.
- The Company repurchased approximately 4.2 million shares of its common stock in 2020 for approximately $706 million. The Company temporarily suspended its share repurchase program starting in March 2020 due to the COVID-19 pandemic, and resumed share repurchases in 2021.
- The Company increased the quarterly dividend on common stock from $1.07 to $1.14 per share in 2020, or from $4.28 to $4.56 per share on an annualized basis. Total cash dividends of approximately $1.4 billion were paid in 2020.

RESULTS OF OPERATIONS BY SEGMENT

The reconciliation of segment operating revenue and operating income to total operating revenue and operating income is as follows:

	Operating Revenue		
In millions	**2021**	**2020**	**2019**
Automotive OEM	$ 2,800	$ 2,571	$ 3,063
Food Equipment	2,078	1,739	2,188
Test & Measurement and Electronics	2,346	1,963	2,121
Welding	1,650	1,384	1,638
Polymers & Fluids	1,804	1,622	1,669
Construction Products	1,945	1,652	1,625
Specialty Products	1,854	1,660	1,825
Intersegment revenue	(22)	(17)	(20)
Total	$ 14,455	$ 12,574	$ 14,109

	Operating Income		
In millions	**2021**	**2020**	**2019**
Automotive OEM	$ 545	$ 457	$ 659
Food Equipment	469	342	578
Test & Measurement and Electronics	643	507	542
Welding	490	376	453
Polymers & Fluids	457	402	381
Construction Products	530	421	383
Specialty Products	504	432	472
Total Segments	3,638	2,937	3,468
Unallocated	(161)	(55)	(66)
Total	$ 3,477	$ 2,882	$ 3,402

Segments are allocated a fixed overhead charge based on the segment's revenue. Expenses not charged to the segments are reported separately as Unallocated. Because the Unallocated category includes a variety of items, it is subject to fluctuations on a quarterly and annual basis. Unallocated expenses in 2021 are higher primarily due to higher employee-related expenses and transaction costs related to the previously discussed acquisition of the MTS Test & Simulation business.

AUTOMOTIVE OEM

This segment is a global, niche supplier to top tier OEMs, providing unique innovation to address pain points for sophisticated customers with complex problems. Businesses in this segment produce components and fasteners for automotive-related applications. This segment primarily serves the automotive original equipment manufacturers and tiers market. Products in this segment include:

- plastic and metal components, fasteners and assemblies for automobiles, light trucks and other industrial uses.

The results of operations for the Automotive OEM segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 2,800	$ 2,571	8.9 %	5.8 %	— %	— %	3.1 %	8.9 %
Operating income	$ 545	$ 457	19.3 %	13.0 %	— %	3.0 %	3.3 %	19.3 %
Operating margin %	19.5 %	17.8 %	170 bps	120 bps	—	50 bps	—	170 bps

- Operating revenue increased due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue increased 5.8%. The impact of Automotive OEM customers adjusting production schedules to account for the shortage of semiconductor chips and other components negatively impacted organic revenue in 2021, especially during the second half of the year. Worldwide auto builds increased 2%. Auto builds for North America, Europe and China, where the Company has a higher concentration of revenue as compared to the other geographic regions, were flat.
  - North American organic revenue increased 5.3% compared to North American auto builds which were flat. Auto builds for the Detroit 3, where the Company has higher content, decreased 5%.
  - European organic revenue was essentially flat compared to European auto builds which declined 5%.
  - Asia Pacific organic revenue increased 17.2%. China organic revenue grew 13.9% versus China auto builds which increased 4%. Auto builds of foreign automotive manufacturers in China, where the Company has higher content, declined 8%.
- Operating margin was 19.5%. The increase of 170 basis points was primarily driven by positive operating leverage of 120 basis points, the net benefits from the Company's enterprise initiatives and cost management, and lower restructuring expenses, partially offset by unfavorable price/cost of 250 basis points.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 2,571	$ 3,063	(16.1)%	(16.0)%	— %	— %	(0.1)%	(16.1)%
Operating income	$ 457	$ 659	(30.6)%	(32.3)%	— %	1.5 %	0.2 %	(30.6)%
Operating margin %	17.8 %	21.5 %	(370) bps	(420) bps	—	40 bps	10 bps	(370) bps

- Operating revenue declined due to lower organic revenue.
- Organic revenue declined 16.0% versus worldwide auto builds which decreased 16%. Product line simplification activities reduced organic revenue by 80 basis points.
  - North American organic revenue decreased 22.3% compared to North American auto builds which declined 20% due to customer mix. Auto builds for the Detroit 3, where the Company has higher content, decreased 23%.

- European organic revenue was down 16.8% compared to European auto builds which decreased 22%.
- Asia Pacific organic revenue increased 0.7%. China organic revenue grew 6.1% versus China auto builds which decreased 4%. Auto builds of foreign automotive manufacturers in China, where the Company has higher content, decreased 8%.

- Operating margin of 17.8% in 2020 decreased 370 basis points primarily due to negative operating leverage of 330 basis points, product mix and unfavorable price/cost of 20 basis points, partially offset by benefits from the Company's enterprise initiatives and lower restructuring expenses.

FOOD EQUIPMENT

This segment is a highly focused and branded industry leader in commercial food equipment differentiated by innovation and integrated service offerings. This segment primarily serves the food service, food retail and food institutional/restaurant markets. Products in this segment include:

- warewashing equipment;
- cooking equipment, including ovens, ranges and broilers;
- refrigeration equipment, including refrigerators, freezers and prep tables;
- food processing equipment, including slicers, mixers and scales;
- kitchen exhaust, ventilation and pollution control systems; and
- food equipment service, maintenance and repair.

The results of operations for the Food Equipment segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 2,078	$ 1,739	19.5 %	16.7 %	— %	— %	2.8 %	19.5 %
Operating income	$ 469	$ 342	37.4 %	31.7 %	— %	2.4 %	3.3 %	37.4 %
Operating margin %	22.6 %	19.6 %	300 bps	260 bps	—	40 bps	—	300 bps

- Operating revenue grew due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue increased 16.7% as equipment and service organic revenue grew 21.4% and 8.5%, respectively.
  - North American organic revenue increased 16.2%. Equipment organic revenue grew 20.1% primarily due to growth in the restaurant and institutional end markets, partially offset by a decline in the food retail end markets. Service organic revenue increased 10.3%.
  - International organic revenue increased 17.4%. Equipment organic revenue grew 22.9% primarily due to higher demand in the European warewash, refrigeration and cooking end markets. Service organic revenue increased 5.5%.
- Operating margin was 22.6%. The increase of 300 basis points was primarily driven by positive operating leverage of 370 basis points, benefits from the Company's enterprise initiatives and lower restructuring expenses, partially offset by unfavorable price/cost of 90 basis points and higher overhead expenses.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,739	$ 2,188	(20.5)%	(20.6)%	— %	— %	0.1 %	(20.5)%
Operating income	$ 342	$ 578	(40.9)%	(41.1)%	— %	(0.1)%	0.3 %	(40.9)%
Operating margin %	19.6 %	26.4 %	(680) bps	(680) bps	—	—	—	(680) bps

- Operating revenue declined due to lower organic revenue.

- Organic revenue declined 20.6% as equipment and service organic revenue decreased 21.8% and 18.5%, respectively.
  - North American organic revenue declined 19.2% as equipment organic revenue decreased 20.4%, primarily driven by lower demand in the restaurant and institutional end markets, partially offset by growth in the food retail end markets. Service organic revenue decreased 17.3%.
  - International organic revenue decreased 22.5%. Equipment organic revenue declined 23.5% primarily due to lower demand in the European warewash, cooking and refrigeration end markets and lower demand in Asia. Service organic revenue decreased 20.4%.
- Operating margin of 19.6% in 2020 decreased 680 basis points primarily due to negative operating leverage of 540 basis points and product mix, partially offset by benefits from the Company's enterprise initiatives and favorable price/cost of 50 basis points.

TEST & MEASUREMENT AND ELECTRONICS

This segment is a branded and innovative producer of test and measurement and electronic manufacturing and maintenance, repair, and operations, or "MRO" solutions that improve efficiency and quality for customers in diverse end markets. Businesses in this segment produce equipment, consumables, and related software for testing and measuring of materials and structures, as well as equipment and consumables used in the production of electronic subassemblies and microelectronics. This segment primarily serves the electronics, general industrial, automotive original equipment manufacturers and tiers, industrial capital goods, energy and consumer durables markets. Products in this segment include:

- equipment, consumables, and related software for testing and measuring of materials, structures, gases and fluids;
- electronic assembly equipment;
- electronic components and component packaging;
- static control equipment and consumables used for contamination control in clean room environments; and
- pressure sensitive adhesives and components for electronics, medical, transportation and telecommunications applications.

The results of operations for the Test & Measurement and Electronics segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 2,346	$ 1,963	19.5 %	15.3 %	2.3 %	— %	1.9 %	19.5 %
Operating income	$ 643	$ 507	26.9 %	23.1 %	0.9 %	0.8 %	2.1 %	26.9 %
Operating margin %	27.4 %	25.8 %	160 bps	180 bps	(40) bps	20 bps	—	160 bps

- Operating revenue grew due to higher organic revenue, the MTS Test & Simulation acquisition and the favorable effect of foreign currency translation.
- Organic revenue increased 15.3%.
  - Organic revenue for the test and measurement businesses increased 14.8% primarily driven by higher semiconductor demand in North America, the impact of a stronger capital spending environment, and higher demand in the oil and gas end markets in North America. Instron, where demand is more closely tied to the capital spending environment, had organic revenue growth of 14.0%.
  - Electronics organic revenue increased 15.9% driven by higher demand in consumer electronics, automotive applications and semiconductor end markets. The electronics assembly businesses grew 26.6% primarily due to higher demand in North America and Asia Pacific. The other electronics businesses, which include the contamination control, static control and pressure sensitive adhesives businesses, increased 10.8% with growth in all major regions.
- On December 1, 2021, the Company completed the acquisition of the MTS Test & Simulation business, which had operating revenue of $46 million for the one month ended December 31, 2021 and increased Test & Measurement and Electronics operating revenue by 2.3%.
- Operating margin was 27.4%. The increase of 160 basis points was primarily driven by positive operating leverage of 340 basis points and benefits from the Company's enterprise initiatives, partially offset by unfavorable price/cost of 40 basis points, the dilutive impact from the MTS acquisition, higher overhead expenses and higher freight costs.

Additionally, the prior year included the recapture of amortization and depreciation expense related to a business previously classified as held for sale.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,963	$ 2,121	(7.4)%	(4.9)%	(2.8)%	— %	0.3 %	(7.4)%
Operating income	$ 507	$ 542	(6.5)%	(5.2)%	(1.3)%	(0.2)%	0.2 %	(6.5)%
Operating margin %	25.8 %	25.6 %	20 bps	(10) bps	40 bps	(10) bps	—	20 bps

- Operating revenue declined due to lower organic revenue and the impact of a 2019 divestiture, partially offset by the favorable effect of foreign currency translation.
- Organic revenue decreased 4.9% in 2020.
    - Organic revenue for the test and measurement businesses decreased 7.2% primarily driven by the impact of a soft capital spending environment in North America and Europe, partially offset by higher semi-conductor demand in North America. Instron, where demand is more closely tied to the capital spending environment, had an organic revenue decline of 14.1% in 2020.
    - Electronics organic revenue declined 2.1%. The electronics assembly businesses decreased 6.9% primarily due to lower demand in North America. The other electronics businesses, which include the contamination control, static control and pressure sensitive adhesives businesses, grew 0.9% primarily due to an increase in North America, partially offset by a decrease in Europe and Asia Pacific.
- Operating margin of 25.8% in 2020 increased 20 basis points primarily due to the net benefits from the Company's enterprise initiatives and cost management, the impact of a 2019 divestiture and favorable price/cost of 30 basis points, partially offset by negative operating leverage of 130 basis points and the recapture of amortization and depreciation expense related to a business previously classified as held for sale.

WELDING

This segment is a branded value-added equipment and specialty consumable manufacturer with innovative and leading technology. Businesses in this segment produce arc welding equipment, consumables and accessories for a wide array of industrial and commercial applications. This segment primarily serves the general industrial market, which includes fabrication, shipbuilding and other general industrial markets, and energy, construction, MRO, automotive original equipment manufacturers and tiers, and industrial capital goods markets. Products in this segment include:

- arc welding equipment; and
- metal arc welding consumables and related accessories.

The results of operations for the Welding segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,650	$ 1,384	19.2 %	18.1 %	— %	— %	1.1 %	19.2 %
Operating income	$ 490	$ 376	30.5 %	29.8 %	— %	(0.2)%	0.9 %	30.5 %
Operating margin %	29.7 %	27.1 %	260 bps	270 bps	—	—	(10) bps	260 bps

- Operating revenue grew due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue grew 18.1% as equipment increased 20.5% and consumables increased 14.3% primarily due to higher demand in the industrial end markets related to heavy equipment for agriculture, infrastructure and mining and in the commercial end markets related to construction, light fabrication and farm and ranch customers.

- North American organic revenue increased 19.6% primarily driven by growth in the industrial and commercial end markets of 22.6% and 17.0%, respectively.
- International organic revenue grew 10.7% primarily due to higher equipment demand in the oil and gas end markets in Europe and Asia.
- Operating margin was 29.7%. The increase of 260 basis points was primarily driven by positive operating leverage of 260 basis points and benefits from the Company's enterprise initiatives, partially offset by higher overhead expenses.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,384	$ 1,638	(15.5)%	(11.8)%	(3.7)%	— %	— %	(15.5)%
Operating income	$ 376	$ 453	(17.1)%	(16.8)%	(1.6)%	1.4 %	(0.1)%	(17.1)%
Operating margin %	27.1 %	27.7 %	(60) bps	(160) bps	60 bps	40 bps	—	(60) bps

- Operating revenue decreased due to lower organic revenue and the impact of a 2019 divestiture.
- Organic revenue declined 11.8% driven by decreases in equipment of 12.2% and consumables of 11.2%, primarily due to lower demand in the industrial end markets.
  - North American organic revenue decreased 10.8% primarily due to a decline in the industrial end markets of 19.8%, partially offset by growth in the commercial end markets of 2.1%.
  - International organic revenue decreased 16.4% primarily due to a decline in the European oil and gas end markets.
- Operating margin of 27.1% in 2020 decreased 60 basis points primarily driven by negative operating leverage of 220 basis points and product mix, partially offset by benefits from the Company's enterprise initiatives, the impact of a 2019 divestiture and lower restructuring expenses.

POLYMERS & FLUIDS

This segment is a branded supplier to niche markets that require value-added, differentiated products. Businesses in this segment produce engineered adhesives, sealants, lubrication and cutting fluids, and fluids and polymers for auto aftermarket maintenance and appearance. This segment primarily serves the automotive aftermarket, general industrial, MRO and construction markets. Products in this segment include:

- adhesives for industrial, construction and consumer purposes;
- chemical fluids which clean or add lubrication to machines;
- epoxy and resin-based coating products for industrial applications;
- hand wipes and cleaners for industrial applications;
- fluids, polymers and other supplies for auto aftermarket maintenance and appearance;
- fillers and putties for auto body repair; and
- polyester coatings and patch and repair products for the marine industry.

The results of operations for the Polymers & Fluids segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2021	2020	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,804	$ 1,622	11.2 %	10.0 %	— %	— %	1.2 %	11.2 %
Operating income	$ 457	$ 402	13.7 %	12.2 %	— %	0.3 %	1.2 %	13.7 %
Operating margin %	25.4 %	24.8 %	60 bps	50 bps	—	10 bps	—	60 bps

- Operating revenue grew due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue increased 10.0% driven by higher demand across all major regions. Additionally, product line simplification activities reduced organic revenue by 80 basis points.
    - Organic revenue for the automotive aftermarket businesses increased 11.4% primarily driven by growth in the car care, body repair and tire repair businesses in North America and growth in the European additives and tire repair businesses.
    - Organic revenue for the polymers businesses increased 15.5% with growth across all major regions and end markets.
    - Organic revenue for the fluids businesses decreased 1.0% primarily due to a decline in the industrial maintenance, repair and operations end markets in North America.
- Operating margin was 25.4%. The increase of 60 basis points was primarily due to positive operating leverage of 200 basis points, benefits from the Company's enterprise initiatives and lower intangible asset amortization expense, partially offset by unfavorable price/cost of 200 basis points, higher overhead expenses and higher freight costs.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31,			Components of Increase (Decrease)				
	2020	2019	Inc (Dec)	Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,622	$ 1,669	(2.8)%	(1.4)%	— %	— %	(1.4)%	(2.8)%
Operating income	$ 402	$ 381	5.6 %	5.2 %	— %	1.5 %	(1.1)%	5.6 %
Operating margin %	24.8 %	22.8 %	200 bps	150 bps	—	40 bps	10 bps	200 bps

- Operating revenue decreased due to lower organic revenue and the unfavorable effect of foreign currency translation.
- Organic revenue declined 1.4% in 2020. Product line simplification activities reduced organic revenue by 50 basis points.
    - Organic revenue for the polymers businesses decreased 5.3% primarily driven by a decline in the heavy industrial end markets in North America and Europe.
    - Organic revenue for the automotive aftermarket businesses declined 0.5% primarily driven by a decrease in the car care and body repair businesses in North America and the additives businesses in Europe, partially offset by growth in the tire and engine repair businesses in North America.
    - Organic revenue for the fluids businesses grew 3.3% primarily due to an increase in the industrial maintenance, repair, and operations end markets in Europe and North America.
- Operating margin of 24.8% in 2020 increased 200 basis points primarily due to the net benefits from the Company's enterprise initiatives and cost management, favorable price/cost of 50 basis points and lower restructuring expenses, partially offset by negative operating leverage of 30 basis points.

CONSTRUCTION PRODUCTS

This segment is a branded supplier of innovative engineered fastening systems and solutions. This segment primarily serves the residential construction, renovation/remodel and commercial construction markets. Products in this segment include:

- fasteners and related fastening tools for wood and metal applications;
- anchors, fasteners and related tools for concrete applications;
- metal plate truss components and related equipment and software; and
- packaged hardware, fasteners, anchors and other products for retail.

The results of operations for the Construction Products segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31, 2021	For the Years Ended December 31, 2020	Inc (Dec)	Components of Increase (Decrease): Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,945	$ 1,652	17.7 %	13.6 %	(0.1)%	— %	4.2 %	17.7 %
Operating income	$ 530	$ 421	25.7 %	20.9 %	— %	0.2 %	4.6 %	25.7 %
Operating margin %	27.2 %	25.5 %	170 bps	160 bps	—	10 bps	—	170 bps

- Operating revenue grew primarily due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue increased 13.6% with growth across all major regions. Additionally, product line simplification activities reduced organic revenue by 40 basis points.
  - North American organic revenue grew 13.6% due to higher demand in the United States residential and commercial end markets of 12.7% and 14.7%, respectively, and growth in Canada.
  - International organic revenue increased 13.6%. European organic revenue grew 19.4% primarily driven by higher demand in the commercial and residential end markets. Asia Pacific organic revenue increased 7.3% primarily due to higher demand in Australia and New Zealand in the residential end markets.
- Operating margin was 27.2%. The increase of 170 basis points was primarily due to positive operating leverage of 240 basis points and the net benefits from the Company's enterprise initiatives and cost management, partially offset by unfavorable price/cost of 250 basis points.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31, 2020	For the Years Ended December 31, 2019	Inc (Dec)	Components of Increase (Decrease): Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,652	$ 1,625	1.7 %	1.5 %	— %	— %	0.2 %	1.7 %
Operating income	$ 421	$ 383	10.0 %	8.4 %	— %	1.5 %	0.1 %	10.0 %
Operating margin %	25.5 %	23.6 %	190 bps	160 bps	—	30 bps	—	190 bps

- Operating revenue increased due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue grew 1.5% as an increase in North America was partially offset by declines in Europe and Asia Pacific.
  - North American organic revenue grew 7.8% as increases of 11.4% in the United States residential end markets and 13.0% in Canada were partially offset by a decrease of 11.4% in the commercial end markets.
  - International organic revenue decreased 3.3% in 2020. Asia Pacific organic revenue decreased 0.7% primarily due to a decline in the commercial end markets in Australia and New Zealand. European organic revenue decreased 5.5% driven by a decline in continental Europe and the United Kingdom.
- Operating margin of 25.5% in 2020 increased 190 basis points primarily driven by the net benefits from the Company's enterprise initiatives and cost management, positive operating leverage of 30 basis points and lower restructuring expenses, partially offset by unfavorable price/cost of 50 basis points.

SPECIALTY PRODUCTS

This segment is focused on diversified niche market opportunities with substantial patent protection producing beverage packaging equipment and consumables, product coding and marking equipment and consumables, and appliance components and fasteners. This segment primarily serves the food and beverage, consumer durables, general industrial, industrial capital goods and printing and publishing markets. Products in this segment include:

- line integration, conveyor systems and line automation for the food and beverage industries;
- plastic consumables that multi-pack cans and bottles and related equipment;

- foil, film and related equipment used to decorate consumer products;
- product coding and marking equipment and related consumables;
- plastic and metal closures and components for appliances;
- airport ground support equipment; and
- components for medical devices.

The results of operations for the Specialty Products segment for 2021, 2020 and 2019 were as follows:

2021 compared to 2020

Dollars in millions	For the Years Ended December 31, 2021	2020	Inc (Dec)	Components of Increase (Decrease) Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,854	$ 1,660	11.7 %	9.8 %	— %	— %	1.9 %	11.7 %
Operating income	$ 504	$ 432	16.6 %	15.6 %	— %	(1.0)%	2.0 %	16.6 %
Operating margin %	27.2 %	26.0 %	120 bps	140 bps	—	(20) bps	—	120 bps

- Operating revenue grew due to higher organic revenue and the favorable effect of foreign currency translation.
- Organic revenue increased 9.8% as consumables increased 10.8% and equipment increased 6.4% primarily due to higher demand in North America. Additionally, product line simplification activities reduced organic revenue by 20 basis points.
  - North American organic revenue increased 11.2% primarily driven by growth in the consumer packaging, strength film, appliance, filter medical, and product coding and marking businesses.
  - International organic revenue increased 6.8% primarily due to growth in the appliance businesses in Europe and Asia Pacific and the ground support equipment businesses in Europe, partially offset by a decline in the consumer packaging businesses in Europe and the strength film businesses in Asia Pacific.
- Operating margin was 27.2%. The increase of 120 basis points was primarily due to positive operating leverage of 190 basis points and benefits from the Company's enterprise initiatives, partially offset by unfavorable price/cost of 200 basis points, higher overhead expenses and higher freight costs. Additionally, the prior year included an unfavorable impact of a one-time customer cost-sharing settlement.

2020 compared to 2019

Dollars in millions	For the Years Ended December 31, 2020	2019	Inc (Dec)	Components of Increase (Decrease) Organic	Acquisition/ Divestiture	Restructuring	Foreign Currency	Total
Operating revenue	$ 1,660	$ 1,825	(9.1)%	(8.2)%	(0.8)%	— %	(0.1)%	(9.1)%
Operating income	$ 432	$ 472	(8.5)%	(11.2)%	0.7 %	2.2 %	(0.2)%	(8.5)%
Operating margin %	26.0 %	25.9 %	10 bps	(90) bps	40 bps	60 bps	—	10 bps

- Operating revenue decreased primarily due to lower organic revenue and the impact of 2019 divestitures.
- Organic revenue decreased 8.2% as equipment sales declined 17.7% and consumables declined 5.2%. Additionally, product line simplification activities reduced organic revenue by 30 basis points.
  - North American organic revenue decreased 7.3% primarily due to a decline in the ground support equipment, appliance and specialty films businesses, partially offset by an increase in the consumer packaging businesses.
  - International organic revenue decreased 10.0% primarily due to a decline in the consumer packaging, ground support equipment, appliance, specialty films and marking coding businesses in Europe.
- Operating margin of 26.0% in 2020 increased 10 basis points primarily due to benefits from the Company's enterprise initiatives, lower restructuring expenses and the impact of 2019 divestitures, partially offset by negative operating leverage of 180 basis points, unfavorable price/cost of 60 basis points and the unfavorable impact of a one-time customer cost-sharing settlement.

OTHER FINANCIAL HIGHLIGHTS

- Interest expense was $202 million in 2021, $206 million in 2020 and $221 million in 2019. Interest expense in 2020 was $15 million lower than 2019 primarily driven by the repayment of the $700 million notes due April 1, 2019 and the $650 million notes due March 1, 2019, and outstanding commercial paper in 2019, partially offset by the issuance of the €1.6 billion Euro notes in June of 2019.
- Other income (expense) was income of $51 million in 2021, $28 million in 2020 and $107 million in 2019. The income in 2021 increased $23 million compared to 2020 primarily due to higher investment income and higher other net periodic benefit income in 2021. The income in 2020 decreased $79 million compared to 2019 primarily due to the net pre-tax gain on the disposal of operations and affiliates of $44 million in 2019, lower interest and investment income, and lower other net periodic benefit income.
- The Company's effective tax rate for 2021, 2020 and 2019 was 19.0%, 22.0% and 23.3%, respectively. The 2021 effective tax rate benefited from discrete income tax benefits of $21 million in the third quarter of 2021 related to the utilization of capital losses and $112 million in the second quarter of 2021 related to the remeasurement of net deferred tax assets due to the enactment of the U.K. Finance Bill 2021, which increases the U.K. income tax rate from 19% to 25% effective April 1, 2023. The 2019 effective tax rate benefited from a discrete income tax benefit of $21 million in the third quarter for the U.S. federal provision to return adjustment. Additionally, the effective tax rates for 2021, 2020 and 2019 included discrete income tax benefits of $17 million, $27 million and $28 million, respectively, related to excess tax benefits from stock-based compensation. Refer to Note 7. Income Taxes in Item 8. Financial Statements and Supplementary Data for further information.
- The impact of the Euro and other foreign currencies against the U.S. Dollar in 2021 versus 2020 increased operating revenue and income before taxes by approximately $301 million and $77 million, respectively. The impact of the Euro and other foreign currencies against the U.S. Dollar in 2020 versus 2019 decreased operating revenue and income before taxes by approximately $20 million and $3 million, respectively.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1. Description of Business and Summary of Significant Accounting Policies in Item 8. Financial Statements and Supplementary Data.

LIQUIDITY AND CAPITAL RESOURCES

The Company's primary sources of liquidity are free cash flow and short-term credit facilities. As of December 31, 2021, the Company had $1.5 billion of cash and equivalents on hand and no outstanding borrowings under its $2.5 billion revolving credit facility. The Company also has maintained strong access to public debt markets. Management believes that these sources are sufficient to service debt and to finance the Company's capital allocation priorities, which include:

- internal investments to support organic growth and sustain core businesses;
- payment of an attractive dividend to shareholders; and
- external investments in selective strategic acquisitions that support the Company's organic growth focus, such as the recently completed acquisition of the MTS Test & Simulation business, and an active share repurchase program. Refer to Note 3. Acquisitions in Item 8. Financial Statements and Supplementary Data for further information regarding this acquisition.

The Company believes that, based on its operating revenue, operating margin, free cash flow, and credit ratings, it could readily obtain additional financing, if necessary. A description of the risks related to the impact of the COVID-19 outbreak on the financial and capital markets and the related potential risks to the Company is contained in Part I, Item 1A. Risk Factors.

The Company has certain contractual obligations, primarily noncurrent income taxes payable, operating leases and long-term debt. Refer to Note 7. Income Taxes, Note 10. Leases and Note 11. Debt in Item 8. Financial Statements and Supplementary Data for details related to the Company's contractual obligations. The Company did not have any significant off-balance sheet commitments as of December 31, 2021.

Cash Flow

The Company uses free cash flow to measure cash flow generated by operations that is available for dividends, share repurchases, acquisitions and debt repayment. The Company believes this non-GAAP financial measure is useful to investors in evaluating the Company's financial performance and measures the Company's ability to generate cash internally to fund

Company initiatives. Free cash flow represents net cash provided by operating activities less additions to plant and equipment. Free cash flow is a measurement that is not the same as net cash flow from operating activities per the statement of cash flows and may not be consistent with similarly titled measures used by other companies. Summarized cash flow information for the years ended December 31, 2021, 2020 and 2019 was as follows:

In millions	2021	2020	2019
Net cash provided by operating activities	$ 2,557	$ 2,807	$ 2,995
Additions to plant and equipment	(296)	(236)	(326)
Free cash flow	$ 2,261	$ 2,571	$ 2,669
Cash dividends paid	$ (1,463)	$ (1,379)	$ (1,321)
Repurchases of common stock	(1,000)	(706)	(1,500)
Acquisition of businesses (excluding cash and equivalents)	(731)	—	(4)
Proceeds from sale of operations and affiliates	—	1	120
Net proceeds from (repayments of) debt	(141)	(4)	422
Other	83	61	100
Effect of exchange rate changes on cash and equivalents	(46)	39	(9)
Net increase (decrease) in cash and equivalents	$ (1,037)	$ 583	$ 477

Free cash flow decreased in 2021 due to higher working capital investments to support revenue growth, including increased inventory levels to help mitigate supply chain risk and sustain customer service levels.

Stock Repurchase Programs

On February 13, 2015, the Company's Board of Directors authorized a stock repurchase program which provided for the repurchase of up to $6.0 billion of the Company's common stock over an open-ended period of time (the "2015 Program"). Under the 2015 Program, the Company repurchased approximately 6.1 million shares of its common stock at an average price of $91.78 per share during 2015, approximately 18.7 million shares of its common stock at an average price of $107.17 per share during 2016, approximately 7.1 million shares of its common stock at an average price of $140.56 per share during 2017, approximately 13.9 million shares of its common stock at an average price of $143.66 per share during 2018 and approximately 3.1 million shares of its common stock at an average price of $143.23 per share during 2019. The 2015 Program was completed in the second quarter of 2019.

On August 3, 2018, the Company's Board of Directors authorized a new stock repurchase program which provides for the repurchase of up to an additional $3.0 billion of the Company's common stock over an open-ended period of time (the "2018 Program"). Under the 2018 Program, the Company repurchased approximately 6.7 million shares of its common stock at an average price of $158.11 per share during 2019, approximately 4.2 million shares of its common stock at an average price of $167.69 per share during 2020 and repurchased approximately 4.4 million shares of its common stock at an average price of $227.29 per share during 2021. As of December 31, 2021, there were approximately $240 million of authorized repurchases remaining under the 2018 Program.

On May 7, 2021, the Company's Board of Directors authorized a new stock repurchase program which provides for the repurchase of up to an additional $3.0 billion of the Company's common stock over an open-ended period of time (the "2021 Program"). As of December 31, 2021, there were $3.0 billion of authorized repurchases remaining under the 2021 Program.

After-tax Return on Average Invested Capital

The Company uses after-tax return on average invested capital ("After-tax ROIC") to measure the effectiveness of its operations' use of invested capital to generate profits. After-tax ROIC is not defined under U.S. generally accepted accounting principles ("GAAP"). After-tax ROIC is a non-GAAP financial measure that the Company believes is a meaningful metric to investors in evaluating the Company's ability to generate returns from cash invested in its operations and may be different than the method used by other companies to calculate After-tax ROIC. The Company defines After-tax ROIC as operating income after taxes divided by average invested capital, which is annualized when presented in interim periods. Operating income after taxes is a non-GAAP measure consisting of net income before interest expense and other income (expense), on an after-tax basis, which are excluded as they do not represent returns generated by the Company's operations. For comparability, the Company also excluded the discrete tax benefit of $21 million in the third quarter of 2021 and the discrete tax benefit of $112 million in the second quarter of 2021 from net income and the effective tax rate for the year ended December 31, 2021. Additionally, for comparability, the Company excluded the discrete tax benefit of $21 million in the third quarter of 2019 from net income and the effective tax rate for the year ended December 31, 2019. Total invested capital represents the net assets of the Company, other than cash and equivalents and outstanding debt which do not represent capital investment in the Company's operations. The most comparable GAAP measure to operating income after taxes is net income. Net income to average invested capital and After-tax ROIC for the years ended December 31, 2021, 2020, and 2019 were as follows:

Dollars in millions	2021	2020	2019
Numerator:			
Net income	$ 2,694	$ 2,109	$ 2,521
Discrete tax benefit related to the third quarter 2021	(21)	—	—
Discrete tax benefit related to the second quarter 2021	(112)	—	—
Discrete tax benefit related to the third quarter 2019	—	—	(21)
Interest expense, net of tax [(1)]	157	162	168
Other (income) expense, net of tax [(1)]	(40)	(22)	(81)
Operating income after taxes	$ 2,678	$ 2,249	$ 2,587
Denominator:			
Invested capital:			
Cash and equivalents	$ 1,527	$ 2,564	$ 1,981
Trade receivables	2,840	2,506	2,461
Inventories	1,694	1,189	1,164
Net assets held for sale	—	—	280
Net plant and equipment	1,809	1,777	1,729
Goodwill and intangible assets	5,937	5,471	5,343
Accounts payable and accrued expenses	(2,233)	(1,818)	(1,689)
Debt	(7,687)	(8,122)	(7,758)
Other, net	(261)	(385)	(481)
Total net assets (stockholders' equity)	3,626	3,182	3,030
Cash and equivalents	(1,527)	(2,564)	(1,981)
Debt	7,687	8,122	7,758
Total invested capital	$ 9,786	$ 8,740	$ 8,807
Average invested capital [(2)]	$ 9,087	$ 8,576	$ 9,028
Net income to average invested capital	29.6 %	24.6 %	27.9 %
After-tax return on average invested capital	29.5 %	26.2 %	28.7 %

[(1)] Effective tax rate used for interest expense and other (income) expense for the years ended December 31, 2021, 2020, and 2019 was 23.0%, 22.0% and 24.0%, respectively.

[(2)] Average invested capital is calculated using the total invested capital balances at the start of the period and at the end of each quarter within each of the periods presented.

After-tax ROIC increased 330 basis points for the twelve month period ended December 31, 2021 compared to the prior year period as a result of a 19.1% increase in after-tax operating income versus a 5.9% increase in average invested capital. After-tax ROIC decreased 250 basis points for the twelve month period ended December 31, 2020 compared to the prior year period as a result of a 13.1% decrease in after-tax operating income versus a 5.0% decrease in average invested capital.

A reconciliation of the 2021 effective tax rate excluding the third quarter 2021 discrete tax benefit of $21 million related to the utilization of capital losses and the second quarter 2021 discrete tax benefit of $112 million related to a change in the U.K. income tax rate is as follows:

	Twelve Months Ended December 31, 2021	
Dollars in millions	**Income Taxes**	**Tax Rate**
As reported	$ 632	19.0 %
Discrete tax benefit related to the third quarter 2021	21	0.6 %
Discrete tax benefit related to the second quarter 2021	112	3.4 %
As adjusted	$ 765	23.0 %

A reconciliation of the 2019 effective tax rate excluding the third quarter 2019 discrete tax benefit of $21 million for the U.S. federal provision to return adjustment is as follows:

	Twelve Months Ended December 31, 2019	
Dollars in millions	**Income Taxes**	**Tax Rate**
As reported	$ 767	23.3 %
Discrete tax benefit related to the third quarter 2019	21	0.7 %
As adjusted	$ 788	24.0 %

Refer to Note 7. Income Taxes in Item 8. Financial Statements and Supplementary Data for further information regarding the discrete tax items noted above.

Working Capital

Management uses working capital as a measurement of the short-term liquidity of the Company. Net working capital as of December 31, 2021 and 2020 is summarized as follows:

In millions	**2021**	**2020**	**Increase (Decrease)**
Current Assets:			
Cash and equivalents	$ 1,527	$ 2,564	$ (1,037)
Trade receivables	2,840	2,506	334
Inventories	1,694	1,189	505
Prepaid expenses and other current assets	313	264	49
	6,374	6,523	(149)
Current Liabilities:			
Short-term debt	778	350	428
Accounts payable and accrued expenses	2,233	1,818	415
Other	459	421	38
	3,470	2,589	881
Net Working Capital	$ 2,904	$ 3,934	$ (1,030)

As of December 31, 2021, a significant portion of the Company's cash and equivalents was held by international subsidiaries. Cash and equivalents held internationally may be subject to foreign withholding taxes if repatriated to the U.S. Cash and equivalents held internationally are typically used for international operating needs or reinvested to fund expansion of existing international businesses. International funds may also be used to fund international acquisitions or, if not considered permanently invested, may be repatriated to the U.S. The Company has accrued for foreign withholding taxes related to foreign held cash and equivalents that are not permanently invested.

In the U.S., the Company utilizes cash flows from operations to fund domestic cash needs and the Company's capital allocation priorities. This includes operating needs of the U.S. businesses, dividend payments, share repurchases, acquisitions, servicing of domestic debt obligations, reinvesting to fund expansion of existing U.S. businesses and general corporate needs. The Company may also use its commercial paper program, which is backed by a long-term credit facility, for short-term liquidity needs. The Company believes cash generated by operations and liquidity provided by the Company's commercial paper program will continue to be sufficient to fund cash requirements in the U.S.

Debt

Total debt as of December 31, 2021 and 2020 was as follows:

In millions	2021	2020	Increase (Decrease)
Short-term debt	$ 778	$ 350	$ 428
Long-term debt	6,909	7,772	(863)
Total debt	$ 7,687	$ 8,122	$ (435)

As of December 31, 2021, short-term debt included $568 million related to the 1.75% Euro notes due May 20, 2022, which the Company intends to redeem in full in February 2022, and commercial paper of $210 million. As of December 31, 2020, short-term debt included $350 million related to the 3.375% notes due September 15, 2021, which were redeemed in full on June 15, 2021. There was no commercial paper outstanding as of December 31, 2020.

The Company may issue commercial paper to fund general corporate needs, share repurchases, and small and medium-sized acquisitions. During the third quarter of 2019, the Company entered into a $2.5 billion, five-year revolving credit facility with a termination date of September 27, 2024, which is available to provide additional liquidity, including to support the potential issuances of commercial paper. On September 22, 2021, due to the anticipated LIBOR transition, the Company agreed to suspend its right to borrow in Euro, British Pounds Sterling and Japanese Yen currencies under the revolving credit facility, effective December 31, 2021. The Company may continue to borrow in U.S. Dollars under the credit facility. This change is not expected to have a significant impact on the Company's liquidity or its commercial paper program. No amounts were outstanding under the revolving credit facility at December 31, 2021. The maximum outstanding commercial paper balance during 2021 was $300 million, while the average daily balance was $49 million.

As of December 31, 2021, the Company had unused capacity of approximately $201 million under international debt facilities. In the ordinary course of business, the Company also had approximately $210 million outstanding in guarantees, letters of credit and other similar arrangements with financial institutions as of December 31, 2021. Refer to Note 11. Debt in Item 8. Financial Statements and Supplementary Data for additional details regarding the Company's outstanding debt obligations.

Total Debt to EBITDA

The Company uses the ratio of total debt to EBITDA as a measure of its ability to repay its outstanding debt obligations. EBITDA and the ratio of total debt to EBITDA are non-GAAP financial measures. The Company believes that total debt to EBITDA is a meaningful metric to investors in evaluating the Company's long term financial liquidity and may be different than the method used by other companies to calculate total debt to EBITDA. The ratio of total debt to EBITDA represents total debt divided by net income before interest expense, other income (expense), income taxes, depreciation, and amortization and impairment of intangible assets on a trailing twelve month basis. Total debt to EBITDA for the years ended December 31, 2021, 2020 and 2019 was as follows:

Dollars in millions	**2021**	**2020**	**2019**
Total debt	$ 7,687	$ 8,122	$ 7,758
Net income	$ 2,694	$ 2,109	$ 2,521
Add:			
Interest expense	202	206	221
Other (income) expense	(51)	(28)	(107)
Income taxes	632	595	767
Depreciation	277	273	267
Amortization and impairment of intangible assets	133	154	159
EBITDA	$ 3,887	$ 3,309	$ 3,828
Total debt to EBITDA ratio	2.0	2.5	2.0

Stockholders' Equity

The changes to stockholders' equity during 2021 and 2020 were as follows:

In millions	**2021**	**2020**
Beginning balance	$ 3,182	$ 3,030
Net income	2,694	2,109
Cash dividends declared	(1,483)	(1,398)
Repurchases of common stock	(1,000)	(706)
Other comprehensive income (loss)	140	63
Other	93	84
Ending balance	$ 3,626	$ 3,182

CRITICAL ACCOUNTING ESTIMATES

The Company has three accounting estimates that it believes are most important to the Company's financial condition and results of operations, and which require the Company to make judgments about matters that are inherently uncertain. Management bases its estimates on historical experience, and in some cases on observable market information. Various assumptions are also used that are believed to be reasonable under the circumstances and form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Company's critical accounting estimates are as follows:

Income Taxes— The Company provides deferred income tax assets and liabilities based on the estimated future tax effects of differences between the financial and tax bases of assets and liabilities based on currently enacted tax laws. The Company's deferred and other tax balances are based on management's interpretation of the tax regulations and rulings in numerous taxing jurisdictions. Income tax expense, assets and liabilities recognized by the Company also reflect its best estimates and assumptions regarding, among other things, the level of future taxable income, the effect of the Company's various tax planning strategies and uncertain tax positions. Future tax authority rulings and changes in tax laws, changes in projected levels of taxable income and future tax planning strategies could affect the actual effective tax rate and tax balances recorded by the Company.

Goodwill and Intangible Assets— The Company's business acquisitions typically result in recording goodwill and other intangible assets, which are a significant portion of the Company's total assets and affect the amount of amortization expense and impairment charges that the Company could incur in future periods. The Company follows the guidance prescribed in the accounting standards to test goodwill and intangible assets for impairment. On an annual basis, or more frequently if triggering events occur, the Company compares the estimated fair value of its reporting units to the carrying value of each reporting unit to determine if a potential goodwill impairment exists. If the fair value of a reporting unit is less than its carrying value, a goodwill impairment loss is recorded for the difference. In calculating the fair value of the reporting units or specific intangible assets, management relies on a number of factors, including business plans, economic projections, anticipated future cash flows, comparable transactions and other market data. There are inherent uncertainties related to these factors and management's judgment in applying them in the impairment tests of goodwill and other intangible assets.

As of December 31, 2021, the Company had total goodwill and intangible assets of approximately $5.9 billion allocated to its reporting units. Although there can be no assurance that the Company will not incur additional impairment charges related to its goodwill and other intangible assets, the Company generally believes the risk of significant impairment charges is lessened by the number of diversified businesses and end markets represented by its reporting units that have goodwill and other intangible assets. In addition, the individual businesses in many of the reporting units have been acquired over a long period of time, and in many cases have been able to improve their performance, primarily as a result of the application of the Company's 80/20 Front-to-Back process. The amount of goodwill and other intangible assets allocated to individual reporting units ranges from approximately $222 million to $1.4 billion, with the average amount equal to $588 million. Fair value determinations require considerable judgment and are sensitive to changes in the factors described above. Due to the inherent uncertainties associated with these factors and economic conditions in the Company's global end markets, impairment charges related to one or more reporting units could occur in future periods.

Pension and Other Postretirement Benefits— The Company has various company-sponsored defined benefit retirement plans covering a number of U.S. employees and many employees outside the U.S. Pension and other postretirement benefit expense and obligations are determined based on actuarial valuations. Pension benefit obligations are generally based on each participant's years of service, future compensation, and age at retirement or termination. Important assumptions in determining pension and postretirement expense and obligations are the discount rate, the expected long-term return on plan assets, life expectancy, and health care cost trend rates. Future changes in any of these assumptions could materially affect the amounts recorded related to the Company's pension and other postretirement benefit plans. See Note 12. Pension and Other Postretirement Benefits in Item 8. Financial Statements and Supplementary Data for additional discussion of actuarial assumptions used in determining pension and postretirement health care liabilities and expenses.

The Company determines the discount rate used to measure plan liabilities as of the year-end measurement date for the U.S. primary pension plan. The discount rate reflects the current rate at which the associated liabilities could theoretically be effectively settled at the end of the year. In estimating this rate, the Company looks at rates of return on high-quality fixed income investments, with similar duration to the liabilities in the plan. A 25 basis point decrease in the discount rate would increase the present value of the U.S. primary pension plan obligation by approximately $37 million. The Company estimates the service and interest cost components of net periodic benefit cost by applying specific spot rates along the yield curve to the projected cash flows rather than a single weighted-average rate. See Note 12. Pension and Other Postretirement Benefits in Item 8. Financial Statements and Supplementary Data for information on the Company's pension and other postretirement benefit plans and related assumptions.

The expected long-term return on plan assets is based on historical and expected long-term returns for similar investment allocations among asset classes. For the U.S. primary pension plan, a 25 basis point decrease in the expected return on plan assets would increase the annual pension expense by approximately $4 million.

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

MARKET RISK

The Company is exposed to certain market risks that exist as part of its ongoing business operations, including fluctuations in currency exchange rates, price volatility for certain commodities and changes in interest rates. The Company does not engage in speculative or leveraged transactions and does not hold or issue financial instruments for trading purposes.

Interest Rate Risk

The Company's exposure to market risk for changes in interest rates relates primarily to the fair value of the Company's fixed rate debt. Refer to Note 11. Debt in Item 8. Financial Statements and Supplemental Data for details related to the fair value of the Company's debt instruments.

Foreign Currency Risk

The Company operates in the U.S. and 51 foreign countries. The funding for the foreign manufacturing operations is provided primarily through the permanent investment of equity capital. The Company's products are typically manufactured and sold within the same country or economic union. Therefore, the Company's manufacturing operations generally do not have significant assets or liabilities denominated in currencies other than their functional currencies.

The Company designated the €1.0 billion of Euro notes issued in May 2014, the €1.0 billion of Euro notes issued in May 2015 and the €1.6 billion of Euro notes issued in June 2019 as hedges of a portion of its net investment in Euro-denominated foreign operations to reduce foreign currency risk associated with the investment in these operations. Changes in the value of this debt resulting from fluctuations in the Euro to U.S. Dollar exchange rate have been recorded as foreign currency translation adjustments within Accumulated other comprehensive income (loss). The cumulative unrealized pre-tax gain (loss) recorded in Accumulated other comprehensive income (loss) related to the net investment hedge was a gain of $183 million as of December 31, 2021 and a loss of $120 million as of December 31, 2020.

ITEM 8. ***Financial Statements and Supplementary Data***

MANAGEMENT REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Illinois Tool Works Inc. (the "Company" or "ITW") is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). ITW's internal control system was designed to provide reasonable assurance to the Company's management and Board of Directors regarding the preparation and fair presentation of published financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

ITW management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2021. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control—Integrated Framework (2013). Based on our assessment we believe that, as of December 31, 2021, the Company's internal control over financial reporting is effective based on those criteria.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2021 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report herein.

/s/ E. Scott Santi
E. Scott Santi
Chairman & Chief Executive Officer
February 11, 2022

/s/ Michael M. Larsen
Michael M. Larsen
Senior Vice President & Chief Financial Officer
February 11, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Illinois Tool Works Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of Illinois Tool Works Inc. and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 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 December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 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 December 31, 2021, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

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 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.

Income Taxes — Refer to Note 7 to the financial statements

Critical Audit Matter Description

The Company's income tax expense is recognized and measured based on management's interpretation of the tax regulations and rulings in numerous taxing jurisdictions, which requires significant judgment. When calculating income tax expense management makes estimates and assumptions, including determination of the completeness of book income in each jurisdiction, calculation of taxable income through identification and classification of book to tax differences (either temporary or permanent items), consideration of applicable tax deductions or credits, and the identification of uncertain tax positions.

The evaluation of each uncertain tax position requires management to apply specialized skill and knowledge related to the identified position. Management evaluates uncertain tax positions identified and a liability is established for unrecognized tax benefits when there is a more than 50% likelihood that its tax position will not be sustained upon examination by taxing authorities. There is additional judgment to determine the amount of the liability for the underlying tax position. The Company's income tax expense for 2021 was $632 million and the liability recorded for unrecognized tax benefits as of December 31, 2021, was $360 million.

Given the number of taxing jurisdictions and the complex and subjective nature of the associated tax regulations and rulings, certain audit matters required a high degree of auditor judgment and increased extent of effort, including the need to involve our income tax specialists. These matters included the auditing of income tax expense, identification of uncertain tax positions, measurement of unrecognized tax benefits, and certain planning transactions with income tax expense implications.

How the Critical Audit Matter Was Addressed in the Audit

With the assistance of our income tax specialists, our principal audit procedures related to income tax expense included the following, among others:

- We tested the effectiveness of management's controls over income taxes, including those over income tax expense, unrecognized tax benefits, and certain planning transactions with income tax expense implications.
- We evaluated management's significant estimates and judgments incorporated into the calculation of income tax expense by:
    - Selecting a sample of book to tax differences (temporary and permanent) and testing the accuracy, completeness, and classification of the selections, including evaluating that all impacts of significant transactions with income tax expense implications are considered.
    - Developing an expectation over the foreign income tax expense by jurisdiction and comparing it to the recorded balance.
    - Testing the accuracy of the income tax expense calculation.
- We evaluated management's significant judgments regarding the identification of uncertain tax positions by:
    - Evaluating the reasonableness of a selection of certain planning transactions with income tax expense implications, including the completeness and accuracy of the underlying data supporting the transactions.
    - Assessing management's methods and assumptions used in identifying uncertain tax positions.
    - Comparing results of prior tax audits to ongoing and anticipated tax audits by tax authorities.
    - Evaluating external information including applicable tax law, new interpretations, and related changes to assess the completeness and reasonableness of management's considerations.
    - Determining if there was additional information not considered in management's assessment.
- We evaluated a sample of the liabilities recorded for unrecognized tax benefits to assess the establishment and amount of the liability for the specific underlying tax position.

/s/ DELOITTE & TOUCHE LLP
Chicago, Illinois
February 11, 2022

We have served as the Company's auditor since 2002.

Statement of Income
Illinois Tool Works Inc. and Subsidiaries

In millions except per share amounts	For the Years Ended December 31 2021	2020	2019
Operating Revenue	$ 14,455	$ 12,574	$ 14,109
Cost of revenue	8,489	7,375	8,187
Selling, administrative, and research and development expenses	2,356	2,163	2,361
Amortization and impairment of intangible assets	133	154	159
Operating Income	3,477	2,882	3,402
Interest expense	(202)	(206)	(221)
Other income (expense)	51	28	107
Income Before Taxes	3,326	2,704	3,288
Income taxes	632	595	767
Net Income	$ 2,694	$ 2,109	$ 2,521
Net Income Per Share:			
Basic	$ 8.55	$ 6.66	$ 7.78
Diluted	$ 8.51	$ 6.63	$ 7.74

The Notes to Financial Statements are an integral part of this statement.

Statement of Comprehensive Income
Illinois Tool Works Inc. and Subsidiaries

In millions	For the Years Ended December 31		
	2021	2020	2019
Net Income	$ 2,694	$ 2,109	$ 2,521
Foreign currency translation adjustments, net of tax	5	4	(2)
Pension and other postretirement benefit adjustments, net of tax	135	59	(26)
Other comprehensive income (loss)	140	63	(28)
Comprehensive Income	$ 2,834	$ 2,172	$ 2,493

The Notes to Financial Statements are an integral part of this statement.

Statement of Financial Position
Illinois Tool Works Inc. and Subsidiaries

In millions except per share amounts	December 31 2021	December 31 2020
Assets		
Current Assets:		
Cash and equivalents	$ 1,527	$ 2,564
Trade receivables	2,840	2,506
Inventories	1,694	1,189
Prepaid expenses and other current assets	313	264
Total current assets	6,374	6,523
Net plant and equipment	1,809	1,777
Goodwill	4,965	4,690
Intangible assets	972	781
Deferred income taxes	552	533
Other assets	1,405	1,308
	$ 16,077	$ 15,612
Liabilities and Stockholders' Equity		
Current Liabilities:		
Short-term debt	$ 778	$ 350
Accounts payable	585	534
Accrued expenses	1,648	1,284
Cash dividends payable	382	361
Income taxes payable	77	60
Total current liabilities	3,470	2,589
Noncurrent Liabilities:		
Long-term debt	6,909	7,772
Deferred income taxes	654	588
Noncurrent income taxes payable	365	413
Other liabilities	1,053	1,068
Total noncurrent liabilities	8,981	9,841
Stockholders' Equity:		
Common stock (par value of $0.01 per share):		
Issued- 550.0 shares in 2021 and 2020 Outstanding- 312.9 shares in 2021 and 316.7 shares in 2020	6	6
Additional paid-in-capital	1,432	1,362
Retained earnings	24,325	23,114
Common stock held in treasury	(20,636)	(19,659)
Accumulated other comprehensive income (loss)	(1,502)	(1,642)
Noncontrolling interest	1	1
Total stockholders' equity	3,626	3,182
	$ 16,077	$ 15,612

The Notes to Financial Statements are an integral part of this statement.

Statement of Changes in Stockholders' Equity
Illinois Tool Works Inc. and Subsidiaries

In millions except per share amounts	Common Stock	Additional Paid-in Capital	Retained Earnings	Common Stock Held in Treasury	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interest	Total
Balance as of December 31, 2018	$ 6	$ 1,253	$ 21,217	$ (17,545)	$ (1,677)	$ 4	$ 3,258
Net income	—	—	2,521	—	—	—	2,521
Common stock issued for stock-based compensation	—	11	—	63	—	—	74
Stock-based compensation expense	—	41	—	—	—	—	41
Repurchases of common stock	—	—	—	(1,500)	—	—	(1,500)
Dividends declared ($4.14 per share)	—	—	(1,335)	—	—	—	(1,335)
Other comprehensive income (loss)	—	—	—	—	(28)	—	(28)
Noncontrolling interest	—	(1)	—	—	—	—	(1)
Balance as of December 31, 2019	6	1,304	22,403	(18,982)	(1,705)	4	3,030
Net income	—	—	2,109	—	—	—	2,109
Common stock issued for stock-based compensation	—	17	—	29	—	—	46
Stock-based compensation expense	—	42	—	—	—	—	42
Repurchases of common stock	—	—	—	(706)	—	—	(706)
Dividends declared ($4.42 per share)	—	—	(1,398)	—	—	—	(1,398)
Other comprehensive income (loss)	—	—	—	—	63	—	63
Noncontrolling interest	—	(1)	—	—	—	(3)	(4)
Balance as of December 31, 2020	6	1,362	23,114	(19,659)	(1,642)	1	3,182
Net income	—	—	2,694	—	—	—	2,694
Common stock issued for stock-based compensation	—	17	—	23	—	—	40
Stock-based compensation expense	—	53	—	—	—	—	53
Repurchases of common stock	—	—	—	(1,000)	—	—	(1,000)
Dividends declared ($4.72 per share)	—	—	(1,483)	—	—	—	(1,483)
Other comprehensive income (loss)	—	—	—	—	140	—	140
Balance as of December 31, 2021	$ 6	$ 1,432	$ 24,325	$ (20,636)	$ (1,502)	$ 1	$ 3,626

The Notes to Financial Statements are an integral part of this statement.

Statement of Cash Flows
Illinois Tool Works Inc. and Subsidiaries

In millions	For the Years Ended December 31 2021	2020	2019
Cash Provided by (Used for) Operating Activities:			
Net income	$ 2,694	$ 2,109	$ 2,521
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation	277	273	267
Amortization and impairment of intangible assets	133	154	159
Change in deferred income taxes	(148)	(30)	32
Provision for uncollectible accounts	3	7	6
(Income) loss from investments	(29)	(8)	(15)
(Gain) loss on sale of plant and equipment	—	2	(9)
(Gain) loss on sale of operations and affiliates	—	—	(44)
Stock-based compensation expense	53	42	41
Other non-cash items, net	13	8	9
Change in assets and liabilities, net of acquisitions and divestitures:			
(Increase) decrease in—			
Trade receivables	(240)	95	40
Inventories	(450)	43	98
Prepaid expenses and other assets	(36)	41	11
Increase (decrease) in—			
Accounts payable	37	19	(16)
Accrued expenses and other liabilities	202	17	(95)
Income taxes	49	34	(7)
Other, net	(1)	1	(3)
Net cash provided by operating activities	2,557	2,807	2,995
Cash Provided by (Used for) Investing Activities:			
Acquisition of businesses (excluding cash and equivalents)	(731)	—	(4)
Additions to plant and equipment	(296)	(236)	(326)
Proceeds from investments	38	14	20
Proceeds from sale of plant and equipment	8	10	25
Proceeds from sale of operations and affiliates	—	1	120
Other, net	(3)	(3)	(18)
Net cash provided by (used for) investing activities	(984)	(214)	(183)
Cash Provided by (Used for) Financing Activities:			
Cash dividends paid	(1,463)	(1,379)	(1,321)
Issuance of common stock	50	66	85
Repurchases of common stock	(1,000)	(706)	(1,500)
Net proceeds from (repayments of) debt with original maturities of three months or less	120	—	(1)
Proceeds from debt with original maturities of more than three months	90	—	1,774
Repayments of debt with original maturities of more than three months	(351)	(4)	(1,351)
Other, net	(10)	(26)	(12)
Net cash provided by (used for) financing activities	(2,564)	(2,049)	(2,326)
Effect of Exchange Rate Changes on Cash and Equivalents	(46)	39	(9)
Cash and Equivalents:			
Increase (decrease) during the year	(1,037)	583	477
Beginning of year	2,564	1,981	1,504
End of year	$ 1,527	$ 2,564	$ 1,981
Supplementary Cash Flow Information:			
Cash Paid During the Year for Interest	$ 197	$ 194	$ 223
Cash Paid During the Year for Income Taxes, Net of Refunds	$ 731	$ 591	$ 742

The Notes to Financial Statements are an integral part of this statement.

Notes to Financial Statements

(1) Description of Business and Summary of Significant Accounting Policies

Description of business— Illinois Tool Works Inc. (the "Company" or "ITW") is a global manufacturer of a diversified range of industrial products and equipment with approximately 83 divisions in 52 countries. The Company's operations are organized and managed based on similar product offerings and end markets, and are reported to senior management as the following seven segments: Automotive OEM; Food Equipment; Test & Measurement and Electronics; Welding; Polymers & Fluids; Construction Products; and Specialty Products.

Consolidation and translation— The financial statements include the Company and its majority-owned subsidiaries. The Company follows the equity method of accounting for investments where the Company has a significant influence but not a controlling interest. Intercompany transactions are eliminated from the financial statements. Foreign subsidiaries' assets and liabilities are translated to U.S. dollars at end-of-period exchange rates. Revenues and expenses are translated at average rates for the period. Translation adjustments are reported as a component of accumulated other comprehensive income (loss) in stockholders' equity.

Reclassifications— Certain reclassifications of prior year data have been made to conform to current year reporting.

Use of estimates— The preparation of the Company's financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the notes to financial statements. Actual results could differ from those estimates.

Acquisitions— The Company accounts for acquisitions under the acquisition method, in which assets acquired and liabilities assumed are recorded at fair value as of the date of acquisition. The operating results of the acquired companies are included in the Company's consolidated financial statements from the date of acquisition. Refer to Note 3. Acquisitions for additional information regarding the Company's acquisitions.

Operating revenue— Operating revenue is recognized at the time a good or service is transferred to a customer and the customer obtains control of that good or receives the service performed. The Company's sales arrangements with customers are predominantly short-term in nature involving a single performance obligation related to the delivery of products and generally provide for transfer of control at the time of shipment. In limited circumstances, there may be significant obligations to the customer that are unfulfilled at the time of shipment, typically involving installation of equipment and customer acceptance. In these circumstances, operating revenue may be deferred until all significant obligations have been completed. In other limited arrangements, the Company may recognize revenue over time. This may include arrangements for service performed over time where operating revenue is recognized over time as the service is provided to the customer. It may also include the sale of highly specialized systems that include a high degree of customization and installation at the customer site which are recognized over time if the product does not have an alternative use and the Company has an enforceable right to payment for work performed to date. Revenue for transactions meeting these criteria is recognized over time as work is performed based on the costs incurred to date relative to the total estimated costs at completion. The amount of operating revenue recorded reflects the consideration to which the Company expects to be entitled in exchange for goods or services and may include adjustments for customer allowances and rebates. Customer allowances and rebates consist primarily of volume discounts and other short-term incentive programs, which are estimated at the time of sale based on historical experience and anticipated trends. Shipping and handling charges billed to customers are included in revenue and are recognized along with the related product revenue as they are considered a fulfillment cost. Sales commissions are expensed when incurred, which is generally at the time of revenue recognition. Contract liabilities associated with sales arrangements primarily relate to deferred revenue on equipment sales and prepaid service contracts. Total deferred revenue and customer deposits were $394 million and $222 million as of December 31, 2021 and 2020, respectively, and are short-term in nature. The deferred revenue and customer deposits as of December 31, 2021 included $108 million related to the MTS Test & Simulation business, which was acquired on December 1, 2021. Refer to Note 3. Acquisitions for additional information regarding this acquisition. Refer to Note 5. Operating Revenue for additional information regarding the Company's operating revenue.

Research and development expenses— Research and development expenses are recorded as expense in the year incurred. These costs were $239 million, $214 million and $221 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Advertising expenses— Advertising expenses are recorded as expense in the year incurred. These costs were $50 million, $43 million and $48 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Income taxes— The Company utilizes the asset and liability method of accounting for income taxes. Deferred income taxes are determined based on the estimated future tax effects of differences between the financial and tax bases of assets and liabilities given the provisions of the enacted tax laws. Valuation allowances are established when it is estimated that it is more likely than not that the tax benefit of the deferred tax asset will not be realized.

Cash and equivalents— Cash and equivalents include cash on hand and instruments having original maturities of three months or less. Cash and equivalents are stated at cost, which approximates fair value.

Trade receivables— Trade receivables are net of allowances for doubtful accounts. The changes in the allowance for doubtful accounts for the years ended December 31, 2021, 2020 and 2019 were as follows:

In millions	2021	2020	2019
Beginning balance	$ 29	$ 20	$ 21
Provision charged to expense	3	7	6
Acquisitions and divestitures	2	—	—
Write-offs, net of recoveries	(5)	(4)	(4)
Transfer (to)/from assets held for sale	—	2	(2)
Foreign currency translation/other	(1)	4	(1)
Ending balance	$ 28	$ 29	$ 20

Inventories— Inventories are stated at the lower of cost or net realizable value and include material, labor and factory overhead. The last-in, first-out ("LIFO") method is used to determine the cost of inventories at certain U.S. businesses. The first-in, first-out ("FIFO") method, which approximates current cost, is used for all other inventories. Inventories priced at LIFO were approximately 19% of total inventories as of both December 31, 2021 and 2020. If the FIFO method was used for all inventories, total inventories would have been approximately $118 million and $82 million higher than reported at December 31, 2021 and 2020, respectively. The major classes of inventory at December 31, 2021 and 2020 were as follows:

In millions	2021	2020
Raw material	$ 716	$ 454
Work-in-process	208	136
Finished goods	888	681
LIFO reserve	(118)	(82)
Total inventories	$ 1,694	$ 1,189

Net plant and equipment— Net plant and equipment are stated at cost, less accumulated depreciation. Renewals and improvements that increase the useful life of plant and equipment are capitalized. Maintenance and repairs are charged to expense as incurred. Net plant and equipment consisted of the following at December 31, 2021 and 2020:

In millions	2021	2020
Land	$ 198	$ 204
Buildings and improvements	1,462	1,432
Machinery and equipment	3,898	3,824
Construction in progress	142	133
Gross plant and equipment	5,700	5,593
Accumulated depreciation	(3,891)	(3,816)
Net plant and equipment	$ 1,809	$ 1,777

The Company's U.S. businesses primarily compute depreciation on an accelerated basis. The majority of the Company's international businesses compute depreciation on a straight-line basis. The ranges of useful lives used to depreciate plant and equipment are as follows:

Buildings and improvements	5—50 years
Machinery and equipment	3—12 years

Depreciation was $277 million, $273 million and $267 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Goodwill and intangible assets— Goodwill represents the excess cost over fair value of the net assets of acquired businesses. The Company does not amortize goodwill and intangible assets that have indefinite lives. Amortizable intangible assets are being amortized on a straight-line basis over their estimated useful lives of 3 to 20 years.

The Company performs an impairment assessment of goodwill and intangible assets with indefinite lives annually, or more frequently if triggering events occur, based on the estimated fair value of the related reporting unit or intangible asset. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants.

When performing its annual impairment assessment, the Company evaluates the goodwill assigned to each of its reporting units for potential impairment by comparing the estimated fair value of the relevant reporting unit to the carrying value. The Company uses various Level 2 and Level 3 valuation techniques to determine the fair value of its reporting units, including discounting estimated future cash flows based on a cash flow forecast prepared by the relevant reporting unit and market multiples of relevant public companies. If the fair value of a reporting unit is less than its carrying value, a goodwill impairment loss is recorded for the difference.

The Company's indefinite-lived intangible assets consist of trademarks and brands. The estimated fair values of these intangible assets are determined based on a Level 3 valuation method using a relief-from-royalty income approach derived from internally forecasted revenues of the related products. If the fair value of the trademark or brand is less than its carrying value, an impairment loss is recorded for the difference between the estimated fair value and carrying value of the intangible asset.

Leases— The Company recognizes a lease liability and corresponding right-of-use asset for all operating leases with a noncancellable lease term of greater than one year. Rental expense for operating leases is recognized on a straight-line basis over the noncancellable lease term based on the minimum lease payments at lease inception. Changes in rent subsequent to commencement that were not included in minimum lease payments at inception are recognized as variable rent in the period incurred. Refer to Note 10. Leases for additional information regarding the Company's operating leases.

Accrued warranties— The Company accrues for product warranties based on historical experience. The changes in accrued warranties for the years ended December 31, 2021, 2020 and 2019 were as follows:

In millions	**2021**	**2020**	**2019**
Beginning balance	$ 45	$ 45	$ 45
Charges	(34)	(34)	(44)
Provision charged to expense	34	33	44
Acquisitions and divestitures	5	—	—
Foreign currency translation/other	(4)	1	—
Ending balance	$ 46	$ 45	$ 45

New Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board (the "FASB") issued authoritative guidance which changes the methodology used to measure credit losses for certain financial instruments. Under prior guidance, credit loss reserves were estimated based on historical information. The new guidance requires credit loss reserves to reflect the estimated credit losses expected to be incurred over the life of the financial asset. The Company adopted this new guidance effective January 1, 2020 and applied it prospectively, which did not have a material impact on the Company's results of operations or financial position.

In January 2017, the FASB issued authoritative guidance which simplifies the assessment of goodwill for impairment. Under prior guidance, when the estimated fair value of a reporting unit was less than its carrying value, the fair value of the goodwill was determined by valuing the other assets and liabilities of the reporting unit. Under the new guidance, the requirement to determine the fair value of goodwill has been eliminated, and an impairment charge is recognized for the amount that the carrying value of the reporting unit exceeds its fair value. Effective January 1, 2020, the Company adopted the new guidance prospectively and applied the new guidance during its annual assessment of goodwill in the third quarter of 2020 and 2021. The adoption of this new accounting guidance had no impact on the Company's results of operations or financial position. Refer to Note 9. Goodwill and Intangible Assets for additional information regarding the Company's annual assessment of goodwill.

In December 2019, the FASB issued authoritative guidance which simplifies certain aspects of the accounting for income taxes, including the elimination of an exception to the methodology for calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated full year loss. The Company early adopted this new guidance effective January 1, 2020 and applied it prospectively, which did not have a material impact on the Company's results of operations or financial position.

In October 2021, the FASB issued authoritative guidance which improves the accounting for acquired revenue contracts with customers in a business combination. The new guidance provides an exception to measure contract assets and contract liabilities acquired in a business combination in accordance with existing revenue recognition guidance rather than at fair value. The Company early adopted this new guidance in the fourth quarter of 2021. The new guidance is effective prospectively upon adoption and must also be applied retrospectively to all interim periods in the year of adoption. The adoption of this new accounting guidance did not have a material impact on the Company's results of operations or financial position. Refer to Note 3. Acquisitions for additional information regarding the Company's acquisitions.

(2) Novel Coronavirus (COVID-19)

In early 2020, an outbreak of a novel strain of coronavirus ("COVID-19") occurred in China and other jurisdictions. The COVID-19 outbreak was subsequently declared a global pandemic by the World Health Organization on March 11, 2020. In response to the outbreak, governments around the globe have taken various actions to reduce its spread, including travel restrictions, shutdowns of businesses deemed nonessential, and stay-at-home or similar orders. The COVID-19 pandemic and the measures taken globally to reduce its spread have negatively impacted the global economy, causing significant disruptions in the Company's global operations starting primarily in the latter part of the first quarter of 2020 as COVID-19 continued to spread and impact the countries in which the Company operates and the markets the Company serves. During 2021, the Company experienced solid recovery progress in many of its end markets; however, the disruptions caused by the COVID-19 pandemic continue to have an adverse impact on the Company's global operations. The full extent of the COVID-19 outbreak and its impact on the markets served by the Company and on the Company's operations continues to be highly uncertain as conditions continue to fluctuate around the world, with vaccine administration rising in certain regions and spikes in infections (including the spread of variants) also being experienced. A prolonged outbreak could continue to interrupt the operations of the Company and its customers and suppliers.

(3) Acquisitions

Net cash paid for acquisitions during 2021 and 2019 was $731 million and $4 million, respectively. There were no acquisitions in 2020. The cash paid in 2021 related to the acquisition of the Test & Simulation business of MTS Systems Corporation ("MTS") from Amphenol Corporation ("Amphenol"), as discussed below. Acquisitions, individually and in the aggregate, did not materially affect the Company's results of operations or financial position for any period presented.

On December 1, 2021, the Company completed the acquisition of the MTS Test & Simulation business for a purchase price of $750 million, subject to certain closing adjustments. The MTS Test & Simulation business is a leading global supplier of high-performance testing and simulation systems and is highly complementary to the Company's existing Test & Measurement and Electronics segment. The operating results of the MTS Test & Simulation business were reported within the Test & Measurement and Electronics segment from the date of acquisition, with operating revenue of $46 million for the one month ended December 31, 2021. The Company is in process of allocating the purchase price to the acquired assets and liabilities as of the acquisition date, including intangible assets and goodwill. Based on its initial allocation, the Company recorded goodwill of $371 million and intangible assets of $321 million. The intangible assets included $93 million related to indefinite-lived trademarks and brands and $228 million related to amortizable intangible assets that are expected to be amortized on a straight-line basis over estimated useful lives ranging from 0.3 to 12 years, with a weighted-average life of 10 years. The Company does not expect any of the goodwill related to the transaction to be tax deductible. The fair values of the intangible assets were estimated based on discounted cash flow and market-based valuation models using Level 2 and Level 3 inputs and assumptions. Subsequent acquisition accounting adjustments may change the initial amounts recorded, including goodwill and intangible assets, primarily due to the completion of valuations. The allocation of purchase price will be completed as soon as practicable, but no later than one year from the acquisition date.

(4) Divestitures

The Company routinely reviews its portfolio of businesses relative to its business portfolio criteria and evaluates if further portfolio refinements may be needed. The Company previously communicated its intent to explore options, including potential divestitures, for certain businesses with annual revenues totaling up to $1 billion. As such, the Company may commit to a plan to exit or dispose of certain businesses and present them as held for sale in periods prior to the sale of the business.

In the second quarter of 2019, the Company approved plans to divest six businesses, including two businesses in the Test & Measurement and Electronics segment, one business in the Automotive OEM segment, one business in the Welding segment, and two businesses in the Specialty Products segment. These six businesses were classified as held for sale beginning in the second quarter of 2019. In the fourth quarter of 2019, the Company divested three of the held for sale businesses which included one business in the Test & Measurement and Electronics segment, one business in the Welding segment, and one business in the Specialty Products segment.

For the twelve months ended December 31, 2019, the Company recorded net pre-tax gains on disposal of businesses of $44 million ($30 million after-tax, or $0.09 per diluted share) which was primarily due to the three divestitures of held for sale businesses discussed above. The net pre-tax gain was included in Other income (expense) in the Statement of Income.

Operating revenue related to businesses divested in 2019 that was included in the Company's results of operations for the twelve months ended December 31, 2019 was $134 million. The operating revenue for the twelve months ended December 31, 2019 of $134 million related to the businesses divested in 2019 included $62 million in the Welding segment, $58 million in the Test & Measurement and Electronics segment, and $14 million in the Specialty Products segment.

As of December 31, 2019, three of the businesses discussed above continued to be held for sale, including one business in the Test & Measurement and Electronics segment, one business in the Automotive OEM segment, and one business in the Specialty Products segment.

During 2020, the sales of the three remaining businesses held for sale were determined to no longer be probable of being completed within one year, primarily due to the disruptions and economic uncertainty resulting from the COVID-19 pandemic. Accordingly, these businesses were no longer presented as held for sale.

(5) Operating Revenue

The Company's 83 diversified operating divisions are organized and managed based on similar product offerings and end markets, and are reported to senior management as the following seven segments: Automotive OEM; Food Equipment; Test & Measurement and Electronics; Welding; Polymers & Fluids; Construction Products; and Specialty Products. Operating revenue by product category, which is consistent with the Company's segment presentation, for the twelve months ended December 31, 2021, 2020 and 2019 was as follows:

In millions	2021	2020	2019
Automotive OEM	$ 2,800	$ 2,571	$ 3,063
Food Equipment	2,078	1,739	2,188
Test & Measurement and Electronics	2,346	1,963	2,121
Welding	1,650	1,384	1,638
Polymers & Fluids	1,804	1,622	1,669
Construction Products	1,945	1,652	1,625
Specialty Products	1,854	1,660	1,825
Intersegment revenue	(22)	(17)	(20)
Total	$ 14,455	$ 12,574	$ 14,109

The following is a description of the product offerings, end markets and typical revenue transactions for each of the Company's seven segments:

Automotive OEM— This segment is a global, niche supplier to top tier OEMs, providing unique innovation to address pain points for sophisticated customers with complex problems. Businesses in this segment produce components and fasteners for automotive-related applications. This segment primarily serves the automotive original equipment manufacturers and tiers market. Products in this segment include:

- plastic and metal components, fasteners and assemblies for automobiles, light trucks and other industrial uses.

Products sold in this segment are primarily manufactured to the customer's specifications and are sold under long-term supply agreements with OEM auto manufacturers and other top tier auto parts suppliers. The Company typically recognizes revenue for products in this segment at the time of shipment. Certain products may be produced utilizing tooling that is owned by the customer that the Company developed and is reimbursed by the customer for the associated cost. In these arrangements, the Company typically retains a contractual right to use the customer-owned tooling for the purpose of fulfilling its obligations under the supply agreement. The Company records reimbursements for the cost of customer-owned tooling as a cost offset rather than operating revenue as tooling is not considered a product offering central to the Company's operations.

Food Equipment— This segment is a highly focused and branded industry leader in commercial food equipment differentiated by innovation and integrated service offerings. This segment primarily serves the food service, food retail and food institutional/restaurant markets. Products in this segment include:

- warewashing equipment;
- cooking equipment, including ovens, ranges and broilers;
- refrigeration equipment, including refrigerators, freezers and prep tables;
- food processing equipment, including slicers, mixers and scales;
- kitchen exhaust, ventilation and pollution control systems; and
- food equipment service, maintenance and repair.

Revenue for equipment sold in this segment is typically recognized at the time of product shipment. In limited circumstances involving installation of equipment and customer acceptance, the Company may recognize revenue upon completion of installation and acceptance by the customer. Annual service contracts are typically sold separate from equipment and the related revenue is recognized on a straight-line basis over the annual service period. Operating revenue for on-demand service repairs and parts is recorded upon completion and customer acceptance of the work performed.

Test & Measurement and Electronics— This segment is a branded and innovative producer of test and measurement and electronic manufacturing and maintenance, repair, and operations, or "MRO" solutions that improve efficiency and quality for customers in diverse end markets. Businesses in this segment produce equipment, consumables, and related software for testing and measuring of materials and structures, as well as equipment and consumables used in the production of electronic subassemblies and microelectronics. This segment primarily serves the electronics, general industrial, automotive original equipment manufacturers and tiers, industrial capital goods, energy and consumer durables markets. Products in this segment include:

- equipment, consumables, and related software for testing and measuring of materials, structures, gases and fluids;
- electronic assembly equipment;
- electronic components and component packaging;
- static control equipment and consumables used for contamination control in clean room environments; and
- pressure sensitive adhesives and components for electronics, medical, transportation and telecommunications applications.

Revenue for products sold in this segment is typically recognized at the time of shipment. In limited circumstances where significant obligations to the customer are unfulfilled at the time of shipment, typically involving installation of equipment and customer acceptance, revenue recognition is deferred until such obligations have been completed. In other limited arrangements involving the sale of highly specialized systems that include a high degree of customization and installation at the customer site, revenue is recognized over time if the product does not have an alternative use, and the Company has an enforceable right to payment for work performed to date. Revenue for transactions meeting these criteria is recognized over time as work is performed based on the costs incurred to date relative to the total estimated costs at completion.

Welding— This segment is a branded value-added equipment and specialty consumable manufacturer with innovative and leading technology. Businesses in this segment produce arc welding equipment, consumables and accessories for a wide array of industrial and commercial applications. This segment primarily serves the general industrial market, which includes fabrication, shipbuilding and other general industrial markets, and energy, construction, MRO, automotive original equipment manufacturers and tiers, and industrial capital goods markets. Products in this segment include:

- arc welding equipment; and
- metal arc welding consumables and related accessories.

Products in this segment are primarily manufactured to meet anticipated customer demand. The Company typically recognizes revenue for these products at the time of product shipment.

Polymers & Fluids— This segment is a branded supplier to niche markets that require value-added, differentiated products. Businesses in this segment produce engineered adhesives, sealants, lubrication and cutting fluids, and fluids and polymers for auto aftermarket maintenance and appearance. This segment primarily serves the automotive aftermarket, general industrial, MRO and construction markets. Products in this segment include:

- adhesives for industrial, construction and consumer purposes;
- chemical fluids which clean or add lubrication to machines;
- epoxy and resin-based coating products for industrial applications;
- hand wipes and cleaners for industrial applications;
- fluids, polymers and other supplies for auto aftermarket maintenance and appearance;
- fillers and putties for auto body repair; and
- polyester coatings and patch and repair products for the marine industry.

Products in this segment are primarily manufactured to meet anticipated customer demand. The Company typically recognizes revenue for these products at the time of product shipment.

Construction Products— This segment is a branded supplier of innovative engineered fastening systems and solutions. This segment primarily serves the residential construction, renovation/remodel and commercial construction markets. Products in this segment include:

- fasteners and related fastening tools for wood and metal applications;
- anchors, fasteners and related tools for concrete applications;
- metal plate truss components and related equipment and software; and
- packaged hardware, fasteners, anchors and other products for retail.

Products in this segment are primarily manufactured to meet anticipated customer demand. The Company typically recognizes revenue for these products at the time of product shipment.

***Specialty Products*—** This segment is focused on diversified niche market opportunities with substantial patent protection producing beverage packaging equipment and consumables, product coding and marking equipment and consumables, and appliance components and fasteners. This segment primarily serves the food and beverage, consumer durables, general industrial, industrial capital goods and printing and publishing markets. Products in this segment include:

- line integration, conveyor systems and line automation for the food and beverage industries;
- plastic consumables that multi-pack cans and bottles and related equipment;
- foil, film and related equipment used to decorate consumer products;
- product coding and marking equipment and related consumables;
- plastic and metal closures and components for appliances;
- airport ground support equipment; and
- components for medical devices.

Products in this segment are primarily manufactured to meet anticipated customer demand. The Company typically recognizes revenue for these products at the time of product shipment. In limited circumstances where significant obligations to the customer are unfulfilled at the time of shipment, typically involving installation of equipment and customer acceptance, revenue is recognized when such obligations have been completed.

(6) Other Income (Expense)

Other income (expense) for the twelve months ended December 31, 2021, 2020 and 2019 consisted of the following:

In millions	2021	2020	2019
Interest income	$ 12	$ 17	$ 29
Other net periodic benefit income	23	13	24
Income (loss) from investments	29	8	15
Gain (loss) on disposal of operations and affiliates	—	—	44
Equity income in Wilsonart	—	—	—
Gain (loss) on foreign currency transactions, net	(9)	(5)	(10)
Other, net	(4)	(5)	5
Total other income (expense)	$ 51	$ 28	$ 107

Refer to Note 4. Divestitures for further information regarding the Gain (loss) on disposal of operations and affiliates of $44 million for the twelve months ended December 31, 2019.

In the fourth quarter of 2012, the Company divested a 51% majority interest in its former Decorative Surfaces segment to certain funds managed by Clayton, Dubilier & Rice, LLC ("CD&R"). As a result of the transaction, the Company owns common units (the "Common Units") of Wilsonart International Holdings LLC ("Wilsonart") initially representing approximately 49% (on an as-converted basis) of the total outstanding equity. CD&R owns cumulative convertible participating preferred units (the "Preferred Units") of Wilsonart representing approximately 51% (on an as-converted basis) of the total outstanding equity. The Preferred Units rank senior to the Common Units as to dividends and liquidation preference, and accrue dividends at a rate of 10% per annum. The ownership interest in Wilsonart is reported using the equity method of accounting. The Company's proportionate share in the income (loss) of Wilsonart is reported in Other income (expense) in the Statement of Income. As the Company's investment in Wilsonart is structured as a partnership for U.S. tax purposes, U.S. taxes are recorded separately from the equity investment. In 2016, the Company received a $167 million dividend distribution from Wilsonart which exceeded the Company's equity investment balance and resulted in a $54 million pre-tax gain in 2016. As a result of the dividend distribution, the equity investment balance in Wilsonart was reduced to zero and any subsequent equity investment income will not be recognized until the gain is recaptured.

(7) Income Taxes

Noncurrent income taxes payable— On December 22, 2017, the "Tax Cuts and Jobs Act" (the "Act") was enacted in the United States. The provisions of the Act significantly revised the U.S. corporate income tax rules. In connection with the enactment of the Act, the Company recorded a one-time additional income tax expense of $676 million in the fourth quarter of 2017 related to a one-time repatriation tax on the deemed repatriation of post-1986 undistributed earnings of foreign subsidiaries. A portion of the resulting income taxes payable can be paid in installments over eight years. The noncurrent income taxes payable related to the one-time repatriation tax was $365 million and $413 million as of December 31, 2021 and 2020, respectively.

Provision for income taxes— The components of the provision for income taxes for the twelve months ended December 31, 2021, 2020 and 2019 were as follows:

In millions	2021	2020	2019
U.S. federal income taxes:			
Current	$ 399	$ 301	$ 356
Deferred	(95)	(54)	(26)
Total U.S. federal income taxes	304	247	330
Foreign income taxes:			
Current	302	276	302
Deferred	(57)	15	53
Total foreign income taxes	245	291	355
State income taxes:			
Current	79	48	77
Deferred	4	9	5
Total state income taxes	83	57	82
Total provision for income taxes	$ 632	$ 595	$ 767

Income before taxes for domestic and foreign operations for the twelve months ended December 31, 2021, 2020 and 2019 was as follows:

In millions	2021	2020	2019
Domestic	$ 1,667	$ 1,419	$ 1,774
Foreign	1,659	1,285	1,514
Total income before taxes	$ 3,326	$ 2,704	$ 3,288

The reconciliation between the U.S. federal statutory tax rate and the effective tax rate for the twelve months ended December 31, 2021, 2020 and 2019 was as follows:

	2021	2020	2019
U.S. federal statutory tax rate	21.0 %	21.0 %	21.0 %
U.S. tax effect of foreign earnings	1.2	1.0	1.1
Changes in tax law	(3.4)	(1.5)	—
State income taxes, net of U.S. federal tax benefit	2.1	1.9	1.7
Differences between U.S. federal statutory and foreign tax rates	1.9	2.0	2.0
Nontaxable foreign interest income	(1.6)	(2.0)	(1.4)
Tax effect of foreign dividends	0.6	1.6	0.2
Foreign derived intangible income	(1.3)	(1.3)	(0.1)
Excess tax benefits from stock-based compensation	(0.5)	(1.0)	(0.9)
Other, net	(1.0)	0.3	(0.3)
Effective tax rate	19.0 %	22.0 %	23.3 %

The Company's effective tax rate for the twelve months ended December 31, 2021, 2020 and 2019 was 19.0%, 22.0% and 23.3%, respectively. The 2021 effective tax rate benefited from discrete income tax benefits of $21 million in the third quarter of 2021 related to the utilization of capital losses and $112 million in the second quarter of 2021 related to the remeasurement of net deferred tax assets due to the enactment of the U.K. Finance Bill 2021, which increases the U.K. income tax rate from 19% to 25% effective April 1, 2023. The 2019 effective tax rate benefited from a discrete income tax benefit of $21 million in the third quarter for the U.S. federal provision to return adjustment resulting primarily from changes in estimates related to the Act. Additionally, the effective tax rates for 2021, 2020 and 2019 included discrete income tax benefits of $17 million, $27 million and $28 million, respectively, related to excess tax benefits from stock-based compensation.

Upon repatriation of foreign earnings to the U.S., the Company may be subject to foreign withholding taxes. The accrual for foreign withholding taxes related to the expected repatriation of foreign held cash and equivalents as of December 31, 2021 and 2020 was $48 million and $55 million, respectively.

Deferred foreign withholding taxes have not been provided on undistributed earnings considered permanently invested. As of December 31, 2021, undistributed earnings of certain international subsidiaries that are considered permanently invested were approximately $6 billion. Determination of the related deferred tax liability is not practicable because of the complexities associated with the hypothetical calculation.

Deferred tax assets and liabilities— The components of deferred income tax assets and liabilities as of December 31, 2021 and 2020 were as follows:

	2021		2020	
In millions	**Asset**	**Liability**	**Asset**	**Liability**
Goodwill and intangible assets	$ 431	$ (534)	$ 292	$ (476)
Inventory reserves, capitalized tax cost and LIFO inventory	39	(3)	31	(3)
Investments	17	(146)	10	(156)
Plant and equipment	17	(103)	16	(91)
Accrued expenses and reserves	39	—	37	—
Employee benefit accruals	170	—	168	—
Foreign tax credit carryforwards	11	—	12	—
Net operating loss carryforwards	456	—	418	—
Capital loss carryforwards	236	—	88	—
Allowances for uncollectible accounts	11	—	10	—
Pension liabilities	—	(65)	—	(27)
Unrealized loss (gain) on foreign debt instruments	—	(44)	29	—
Operating leases	49	(49)	48	(48)
Other	52	(42)	32	(18)
Gross deferred income tax assets (liabilities)	1,528	(986)	1,191	(819)
Valuation allowances	(644)	—	(427)	—
Total deferred income tax assets (liabilities)	$ 884	$ (986)	$ 764	$ (819)

The valuation allowances recorded as of December 31, 2021 and 2020 related primarily to certain net operating loss carryforwards and capital loss carryforwards. As of December 31, 2021, the Company had utilized all realizable foreign tax credit carryforwards.

As of December 31, 2021, the Company had net operating loss carryforwards available to offset future taxable income in the U.S. and certain foreign jurisdictions, which expire as follows:

In millions	Gross Carryforwards Related to Net Operating Losses
2022	$ 19
2023	5
2024	9
2025	2
2026	9
2027-2047	574
Do not expire	1,116
Total gross carryforwards related to net operating losses	$ 1,734

Unrecognized tax benefits— The changes in the amount of unrecognized tax benefits for the twelve months ended December 31, 2021, 2020 and 2019 were as follows:

In millions	2021	2020	2019
Beginning balance	$ 346	$ 296	$ 297
Additions based on tax positions related to the current year	11	74	6
Additions for tax positions of prior years	23	39	13
Reductions for tax positions of prior years	(12)	(47)	(14)
Settlements	—	(23)	(5)
Foreign currency translation	(8)	7	(1)
Ending balance	$ 360	$ 346	$ 296

Included in the balance as of December 31, 2021 were approximately $320 million of unrecognized tax benefits that, if recognized, would impact the Company's effective tax rate.

The Company and its subsidiaries file tax returns in the U.S. and various state, local and foreign jurisdictions. These tax returns are routinely audited by the tax authorities in these jurisdictions including the Internal Revenue Service, Her Majesty's Revenue and Customs, German Fiscal Authority, French Fiscal Authority, and Australian Tax Office, and a number of these audits are currently ongoing, which may increase the amount of the unrecognized tax benefits in future periods. The Company believes it is reasonably possible that within the next twelve months the amount of the Company's unrecognized tax benefits may be decreased by approximately $51 million related predominantly to the potential resolution of federal, state and foreign examinations. The Company has recorded its best estimate of the potential exposure for these issues. The following table summarizes the open tax years for the Company's major jurisdictions:

Jurisdiction	Open Tax Years
United States – Federal	2017-2021
United Kingdom	2017-2021
Germany	2015-2021
France	2017-2021
Australia	2013-2021

The Company recognizes interest and penalties related to income tax matters in income tax expense. The accrual for interest and penalties as of December 31, 2021 and 2020 was $40 million and $34 million, respectively.

(8) Net Income Per Share

Net income per basic share is computed by dividing net income by the weighted-average number of shares outstanding for the period. Net income per diluted share is computed by dividing net income by the weighted-average number of shares assuming dilution for stock options and restricted stock units. Dilutive shares reflect the potential additional shares that would be outstanding if the dilutive stock options outstanding were exercised and the unvested restricted stock units vested during the period. The computation of net income per share for the twelve months ended December 31, 2021, 2020 and 2019 was as follows:

In millions except per share amounts	2021	2020	2019
Net Income	$ 2,694	$ 2,109	$ 2,521
Net income per share—Basic:			
Weighted-average common shares	315.1	316.9	323.9
Net income per share—Basic	$ 8.55	$ 6.66	$ 7.78
Net income per share—Diluted:			
Weighted-average common shares	315.1	316.9	323.9
Effect of dilutive stock options and restricted stock units	1.3	1.4	1.7
Weighted-average common shares assuming dilution	316.4	318.3	325.6
Net income per share—Diluted	$ 8.51	$ 6.63	$ 7.74

Options that were considered antidilutive were not included in the computation of diluted net income per share. There were 0.4 million, 0.5 million and 0.9 million antidilutive options outstanding for the twelve months ended December 31, 2021, 2020 and 2019, respectively.

(9) Goodwill and Intangible Assets

The changes in the carrying amount of goodwill for the twelve months ended December 31, 2021 and 2020 were as follows:

In millions	Automotive OEM	Test & Measurement and Electronics	Food Equipment	Polymers & Fluids	Welding	Construction Products	Specialty Products	Total
Balance, December 31, 2019	$ 466	$ 1,245	$ 256	$ 887	$ 258	$ 512	$ 868	$ 4,492
Transfer from assets held for sale	5	83	—	—	—	—	7	95
Foreign currency translation	20	19	15	6	9	19	15	103
Balance, December 31, 2020	491	1,347	271	893	267	531	890	4,690
Acquisitions	—	371	—	—	—	—	—	371
Foreign currency translation	(16)	(11)	(6)	(20)	(9)	(13)	(21)	(96)
Balance, December 31, 2021	$ 475	$ 1,707	$ 265	$ 873	$ 258	$ 518	$ 869	$ 4,965
Cumulative goodwill impairment charges, December 31, 2021	$ 24	$ 83	$ 60	$ 15	$ 5	$ 7	$ 46	$ 240

Intangible assets as of December 31, 2021 and 2020 were as follows:

	2021			2020		
In millions	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Amortizable intangible assets:						
Customer lists and relationships	$ 1,849	$ (1,474)	$ 375	$ 1,692	$ (1,396)	$ 296
Trademarks and brands	732	(527)	205	742	(505)	237
Patents and proprietary technology	640	(563)	77	606	(542)	64
Other	533	(471)	62	487	(463)	24
Total amortizable intangible assets	3,754	(3,035)	719	3,527	(2,906)	621
Indefinite-lived intangible assets:						
Trademarks and brands	253	—	253	160	—	160
Total intangible assets	$ 4,007	$ (3,035)	$ 972	$ 3,687	$ (2,906)	$ 781

On December 1, 2021, the Company completed the acquisition of the MTS Test & Simulation business for a purchase price of $750 million, subject to certain closing adjustments, which was reported within the Test & Measurement and Electronics segment. The Company is in process of allocating the purchase price to the acquired assets and liabilities as of the acquisition date, including intangible assets and goodwill. Based on its initial allocation, the Company recorded goodwill of $371 million and intangible assets of $321 million. The intangible assets included $93 million related to indefinite-lived trademarks and brands and $228 million related to amortizable intangible assets. Refer to Note 3. Acquisitions for additional information regarding this acquisition.

The Company performed its annual impairment assessment of goodwill and indefinite-lived intangible assets in the third quarter of 2021, 2020 and 2019. There were no impairment charges as a result of these assessments.

For the twelve months ended December 31, 2021, 2020 and 2019, amortization and impairment of intangible assets was $133 million, $154 million and $159 million, respectively.

As of December 31, 2021, the estimated future amortization expense of intangible assets for the twelve months ending December 31 was as follows:

In millions		
2022	$	137
2023		118
2024		101
2025		78
2026		59

(10) Leases

The Company's lease transactions are primarily for the use of facilities, vehicles and office equipment under operating lease arrangements. Total rental expense for operating leases for the twelve months ended December 31, 2021, 2020 and 2019 was $118 million, $113 million and $113 million, respectively. Total rental expense for the twelve months ended December 31, 2021, 2020 and 2019 included $47 million, $48 million and $44 million, respectively, related to short-term operating leases and variable lease payments. Short-term operating leases have original terms of one year or less, or can be terminated at the Company's option with a short notice period and without significant penalty, and are not capitalized.

The following table summarizes information related to the Company's capitalized operating leases for the twelve months ended December 31, 2021 and 2020:

Dollars in millions	**2021**	**2020**
Right-of-use assets	$ 222	$ 216
Current portion of operating lease liabilities	$ 61	$ 55
Long-term portion of operating lease liabilities	133	133
Operating lease liabilities	$ 194	$ 188
Rental expense related to capitalized operating leases	$ 71	$ 65
Cash paid related to maturities of operating lease liabilities	$ 70	$ 64
Operating lease right-of-use assets obtained in exchange for operating lease liabilities	$ 71	$ 65
Weighted-average remaining lease term	4.4 years	4.1 years
Weighted-average discount rate	1.98 %	2.34 %

The right-of-use assets related to operating leases and the current and long-term portions of operating lease liabilities were included in Other assets, Accrued expenses and Other liabilities, respectively, in the Statement of Financial Position. The weighted-average discount rate was based on the incremental borrowing rate of the Company and its subsidiaries. As of December 31, 2021, future maturities of operating lease liabilities for the twelve months ending December 31 were as follows:

In millions	
2022	$ 64
2023	51
2024	36
2025	20
2026	13
2027 and future years	19
Total future minimum lease payments	203
Less: Imputed interest	(9)
Operating lease liabilities	$ 194

(11) Debt

Total debt as of December 31, 2021 and 2020 was as follows:

In millions	**2021**	**2020**
Short-term debt	$ 778	$ 350
Long-term debt	6,909	7,772
Total debt	$ 7,687	$ 8,122

Short-term debt— Short-term debt represents obligations with a maturity date of one year or less and is stated at cost which approximates fair value. Short-term debt also includes current maturities of long-term debt that have been reclassified to short-term. Short-term debt as of December 31, 2021 and 2020 consisted of the following:

In millions	**2021**	**2020**
Current maturities of long-term debt	$ 568	$ 350
Commercial paper	210	—
Total short-term debt	$ 778	$ 350

As of December 31, 2021, short-term debt included $568 million related to the 1.75% Euro notes due May 20, 2022 and commercial paper of $210 million. As of December 31, 2020, short-term debt included $350 million related to the 3.375% notes due September 15, 2021, which were redeemed in full on June 15, 2021. There was no commercial paper outstanding as of December 31, 2020.

The Company may issue commercial paper to fund general corporate needs, share repurchases, and small and medium-sized acquisitions. During the third quarter of 2019, the Company entered into a $2.5 billion, five-year revolving credit facility with a termination date of September 27, 2024, which is available to provide additional liquidity, including to support the potential issuances of commercial paper. On September 22, 2021, due to the anticipated LIBOR transition, the Company agreed to suspend its right to borrow in Euro, British Pounds Sterling and Japanese Yen currencies under the revolving credit facility, effective December 31, 2021. The Company may continue to borrow in U.S. Dollars under the credit facility. This change is not expected to have a significant impact on the Company's liquidity or its commercial paper program. No amounts were outstanding under the revolving credit facility as of December 31, 2021. The Company was also in compliance with the financial covenants of the revolving credit facility as of December 31, 2021, which included a minimum interest coverage ratio. The weighted-average interest rate on commercial paper was 0.1% for the twelve months ended December 31, 2021. The Company did not have any commercial paper outstanding during 2020.

As of December 31, 2021, the Company had unused capacity of approximately $201 million under international debt facilities. In the ordinary course of business, the Company also had approximately $210 million outstanding in guarantees, letters of credit and other similar arrangements with financial institutions as of December 31, 2021.

Long-term debt— Long-term debt represents obligations with a maturity date greater than one year, and excludes current maturities that have been reclassified to short-term debt. Long-term debt at carrying value and fair value as of December 31, 2021 and 2020 consisted of the following:

		2021		2020	
In millions	Effective Interest Rate	Carrying Value	Fair Value	Carrying Value	Fair Value
3.375% notes due September 15, 2021	3.43%	$ —	$ —	$ 350	$ 355
1.75% Euro notes due May 20, 2022	1.86%	568	570	609	625
1.25% Euro notes due May 22, 2023	1.35%	567	578	609	631
3.50% notes due March 1, 2024	3.54%	699	734	698	764
0.25% Euro notes due December 5, 2024	0.31%	679	688	729	745
2.65% notes due November 15, 2026	2.69%	995	1,053	994	1,108
0.625% Euro notes due December 5, 2027	0.71%	564	577	605	639
2.125% Euro notes due May 22, 2030	2.18%	564	641	606	732
1.00% Euro notes due June 5, 2031	1.09%	561	587	602	671
3.00% Euro notes due May 19, 2034	3.13%	557	711	598	830
4.875% notes due September 15, 2041	4.97%	637	863	637	912
3.90% notes due September 1, 2042	3.96%	1,083	1,291	1,082	1,397
Other borrowings		3	3	3	3
Total		$ 7,477	$ 8,296	$ 8,122	$ 9,412
Less: Current maturities of long-term debt		(568)		(350)	
Total long-term debt		$ 6,909		$ 7,772	

The approximate fair values of the Company's long-term debt, including current maturities, were based on a valuation model using Level 2 observable inputs, which included market rates for comparable instruments for the respective periods.

In 2005, the Company issued $54 million of 4.88% notes due through December 31, 2020 at 100% of face value, which were fully repaid by the due date.

In 2009, the Company issued $700 million of 6.25% redeemable notes due April 1, 2019 at 99.98% of face value, which were repaid on the due date.

In 2011, the Company issued $350 million of 3.375% notes due September 15, 2021 at 99.552% of face value, which were redeemed in full on June 15, 2021, and $650 million of 4.875% notes due September 15, 2041 at 98.539% of face value.

In 2012, the Company issued $1.1 billion of 3.9% notes due September 1, 2042 at 99.038% of face value.

In February 2014, the Company issued $650 million of 1.95% notes due March 1, 2019 at 99.871% of face value and $700 million of 3.5% notes due March 1, 2024 at 99.648% of face value. The $650 million of 1.95% notes due March 1, 2019 were repaid on the due date.

In May 2014, the Company issued €500 million of 1.75% Euro notes due May 20, 2022 at 99.16% of face value and €500 million of 3.0% Euro notes due May 19, 2034 at 98.089% of face value.

In May 2015, the Company issued €500 million of 1.25% Euro notes due May 22, 2023 at 99.239% of face value and €500 million of 2.125% Euro notes due May 22, 2030 at 99.303% of face value. Net proceeds from the May 2015 debt issuances were used to repay commercial paper and for general corporate purposes.

In November 2016, the Company issued $1.0 billion of 2.65% notes due November 15, 2026 at 99.685% of face value. Net proceeds from the November 2016 debt issuance were used to repay commercial paper and for general corporate purposes.

In June 2019, the Company issued €600 million of 0.25% Euro notes due December 5, 2024 at 99.662% of face value, €500 million of 0.625% Euro notes due December 5, 2027 at 99.343% of face value and €500 million of 1.00% Euro notes due June 5, 2031 at 98.982% of face value. Net proceeds from the issuances were used to repay commercial paper and for general corporate purposes.

The Company designated the €1.0 billion of Euro notes issued in May 2014, the €1.0 billion of Euro notes issued in May 2015 and the €1.6 billion of Euro notes issued in June 2019 as hedges of a portion of its net investment in Euro-denominated foreign operations to reduce foreign currency risk associated with the investment in these operations. Refer to Note 14. Stockholders' Equity for additional information regarding the net investment hedge.

All of the Company's notes listed above represent senior unsecured obligations ranking equal in right of payment. As of December 31, 2021, scheduled future maturities of long-term debt, including current maturities of long-term debt, for the twelve months ending December 31 were as follows:

In millions	
2022	$ 568
2023	567
2024	1,378
2025	—
2026	995
2027 and future years	3,969
Total	$ 7,477

(12) Pension and Other Postretirement Benefits

The Company has both funded and unfunded defined benefit pension and other postretirement benefit plans, predominately in the U.S. The U.S. primary pension plan provides benefits based on years of service and final average salary. The U.S. primary postretirement health care plan is contributory with the participants' contributions adjusted annually. The U.S. primary postretirement life insurance plan is noncontributory. Beginning January 1, 2007, the U.S. primary pension and other postretirement benefit plans were closed to new participants. Newly hired employees and employees from acquired businesses that are not participating in these plans are eligible for additional Company contributions under the existing U.S. primary defined contribution retirement plans. The Company's expense related to defined contribution plans was $88 million in 2021, $85 million in 2020, and $86 million in 2019. In addition to the U.S. plans, the Company also has defined benefit pension plans in certain other countries, mainly the United Kingdom, Canada, Germany and Switzerland.

Summarized information regarding net periodic benefit cost included in the Statement of Income related to the Company's significant defined benefit pension and other postretirement benefit plans for the twelve months ended December 31, 2021, 2020 and 2019 is as follows:

	Pension			Other Postretirement Benefits		
In millions	2021	2020	2019	2021	2020	2019
Components of net periodic benefit cost:						
Service cost	$ 53	$ 55	$ 52	$ 7	$ 8	$ 7
Interest cost	39	60	78	11	16	20
Expected return on plan assets	(101)	(113)	(121)	(25)	(24)	(22)
Amortization of actuarial (gain) loss	53	47	21	—	(1)	(1)
Amortization of prior service cost	1	2	1	—	—	—
Total net periodic benefit cost	$ 45	$ 51	$ 31	$ (7)	$ (1)	$ 4

The service cost component of net periodic benefit cost is presented within Cost of revenue and Selling, administrative, and research and development expenses in the Statement of Income while the other components of net periodic benefit cost are presented within Other income (expense).

The Company used the updated mortality improvement scales from the Society of Actuaries, MP-2021 and MP-2020, to measure its U.S. pension and other postretirement benefit obligations as of December 31, 2021 and 2020, respectively, which did not have a significant impact in either period.

The following table provides a rollforward of the plan benefit obligations for the twelve months ended December 31, 2021 and 2020:

	Pension		Other Postretirement Benefits	
In millions	**2021**	**2020**	**2021**	**2020**
Change in benefit obligation:				
Beginning balance	$ 2,939	$ 2,731	$ 591	$ 570
Service cost	53	55	7	8
Interest cost	39	60	11	16
Plan participants' contributions	2	1	10	10
Amendments	—	1	—	—
Actuarial (gain) loss	(131)	205	2	26
Acquisitions	40	—	—	—
Benefits paid	(161)	(160)	(42)	(41)
Medicare subsidy received	—	—	1	2
Foreign currency translation	(16)	46	—	—
Ending balance	$ 2,765	$ 2,939	$ 580	$ 591
Accumulated benefit obligation as of December 31	$ 2,642	$ 2,792		

For the years ended December 31, 2021 and 2020, the actuarial (gain) loss related to the Company's pension and other postretirement benefit obligations was primarily related to changes in discount rates. Refer to the Assumptions section below for further details related to the discount rates used in the valuations of pension and other postretirement benefit obligations.

The following table provides a rollforward of the plan assets and a reconciliation of funded status for the twelve months ended December 31, 2021 and 2020:

	Pension		Other Postretirement Benefits	
In millions	**2021**	**2020**	**2021**	**2020**
Change in plan assets:				
Beginning balance	$ 3,096	$ 2,844	$ 402	$ 374
Actual return on plan assets	63	343	59	55
Company contributions	25	26	5	4
Plan participants' contributions	2	1	10	10
Acquisitions	28	—	—	—
Benefits paid	(161)	(160)	(42)	(41)
Foreign currency translation	(12)	42	—	—
Ending balance	$ 3,041	$ 3,096	$ 434	$ 402
Reconciliation of funded status:				
Funded status	$ 276	$ 157	$ (146)	$ (189)
Other immaterial plans	(57)	(54)	(5)	(5)
Net asset (liability) as of December 31	$ 219	$ 103	$ (151)	$ (194)
The amounts recognized in the Statement of Financial Position as of December 31 consist of:				
Other assets	$ 465	$ 355	$ —	$ —
Accrued expenses	(11)	(11)	(3)	(3)
Other noncurrent liabilities	(235)	(241)	(148)	(191)
Net asset (liability) as of December 31	$ 219	$ 103	$ (151)	$ (194)
The pre-tax amounts recognized in accumulated other comprehensive (income) loss consist of:				
Net actuarial (gain) loss	$ 349	$ 495	$ (71)	$ (39)
Prior service cost	5	6	—	—
Pre-tax accumulated other comprehensive (income) loss as of December 31	$ 354	$ 501	$ (71)	$ (39)

As of December 31, 2021 and 2020, pension plans with projected benefit obligations in excess of plan assets had projected benefit obligations of $232 million and $212 million, respectively, and plan assets of $59 million and $32 million, respectively. As of December 31, 2021 and 2020, pension plans with accumulated benefit obligations in excess of plan assets had accumulated benefit obligations of $223 million and $205 million, respectively, and plan assets of $59 million and $32 million, respectively.

Assumptions— The weighted-average assumptions used in the valuations of pension and other postretirement benefits were as follows:

	Pension			Other Postretirement Benefits		
	2021	2020	2019	2021	2020	2019
Assumptions used to determine benefit obligations as of December 31:						
Discount rate	2.33 %	1.89 %	2.61 %	2.92 %	2.59 %	3.29 %
Rate of compensation increases	3.40 %	3.24 %	3.44 %			
Interest crediting rate - U.S. cash balance plan	3.75 %	3.75 %	4.00 %			
Assumptions used to determine net periodic benefit cost for the twelve months ended December 31:						
Discount rate	1.89 %	2.61 %	3.66 %	2.59 %	3.29 %	4.40 %
Expected return on plan assets	3.67 %	4.33 %	4.71 %	6.65 %	6.70 %	6.70 %
Rate of compensation increases	3.24 %	3.44 %	3.52 %			
Interest crediting rate - U.S. cash balance plan	3.75 %	4.00 %	4.00 %			

The expected long-term rates of return for pension and other postretirement benefit plans were developed using historical asset class returns while factoring in current market conditions such as inflation, interest rates and asset class performance.

The discount rate reflects the current rate at which the associated liabilities could theoretically be effectively settled at the end of the year. In estimating this rate, the Company looks at rates of return on high-quality fixed income investments, with similar duration to the liabilities in the plan. The Company estimates the service and interest cost components of net periodic benefit cost by applying specific spot rates along the yield curve to the projected cash flows rather than a single weighted-average rate.

Assumed health care cost trend rates have an effect on the amounts reported for the postretirement health care benefit plans. The assumed health care cost trend rates used to determine the postretirement benefit obligation as of December 31 were as follows:

	2021	2020	2019
Health care cost trend rate assumed for the next year	7.00 %	7.00 %	6.70 %
Ultimate trend rate	4.50 %	4.50 %	4.50 %
Year the rate reaches the ultimate trend rate	2029	2027	2026

Plan assets— The Company's overall investment strategy for the assets in the pension funds is to achieve a balance between the goals of growing plan assets and keeping risk at a reasonable level over a long-term investment horizon. In order to reduce unnecessary risk, the pension funds are diversified across several asset classes, securities and investment managers. The target allocations for plan assets are 15% to 25% equity investments, 75% to 85% fixed income investments and 0% to 10% in other types of investments. The Company does not use derivatives for the purpose of speculation, leverage, circumventing investment guidelines or taking risks that are inconsistent with specified guidelines.

The assets in the Company's postretirement health care plan are primarily invested in life insurance policies. The Company's overall investment strategy for the assets in the postretirement health care fund is to invest in assets that provide a reasonable tax exempt rate of return while preserving capital.

The following tables present the fair value of the Company's pension and other postretirement benefit plan assets as of December 31, 2021 and 2020, by asset category and valuation methodology. Level 1 assets are valued using unadjusted quoted prices for identical assets in active markets. Level 2 assets are valued using quoted prices or other observable inputs for similar assets. Level 3 assets are valued using unobservable inputs, but reflect the assumptions market participants would be expected to use in pricing the assets. Each financial instrument's categorization is based on the lowest level of input that is significant to the fair value measurement.

In millions	2021 Total	Level 1	Level 2	Level 3
Pension Plan Assets:				
Cash and equivalents	$ 47	$ 43	$ 4	$ —
Fixed income securities:				
Government securities	370	—	370	—
Corporate debt securities	996	—	996	—
Investment contracts with insurance companies	1	—	—	1
Commingled funds:				
Mutual funds	28			
Collective trust funds	1,573			
Partnerships/private equity interests	21			
Other	5	—	5	—
Total fair value of pension plan assets	$ 3,041	$ 43	$ 1,375	$ 1
Other Postretirement Benefit Plan Assets:				
Life insurance policies	$ 434			
Total fair value of other postretirement benefit plan assets	$ 434	$ —	$ —	$ —

In millions	2020 Total	Level 1	Level 2	Level 3
Pension Plan Assets:				
Cash and equivalents	$ 75	$ 61	$ 14	$ —
Fixed income securities:				
Government securities	373	—	373	—
Corporate debt securities	1,043	—	1,043	—
Investment contracts with insurance companies	1	—	—	1
Commingled funds:				
Collective trust funds	1,577			
Partnerships/private equity interests	22			
Other	5	—	5	—
Total fair value of pension plan assets	$ 3,096	$ 61	$ 1,435	$ 1
Other Postretirement Benefit Plan Assets:				
Life insurance policies	$ 402			
Total fair value of other postretirement benefit plan assets	$ 402	$ —	$ —	$ —

Cash and equivalents include cash on hand and instruments with original maturities of three months or less and are valued at cost, which approximates fair value. Fixed income securities primarily consist of U.S. and foreign government bills, notes and bonds, corporate debt securities and investment contracts. The majority of the assets in this category are valued by evaluating bid prices provided by independent financial data services. For securities where market data is not readily available, unobservable market data is used to value the security.

Pension assets measured at net asset value include mutual funds, collective trust funds, partnerships/private equity interests and life insurance policies. Mutual funds and collective trust funds are funds that are valued based on the value of the underlying investments which can be redeemed on a daily basis. The underlying investments include both passively and actively managed U.S. and foreign large- and mid-cap equity funds and short-term investment funds. Partnerships/private equity interests are investments in partnerships where the benefit plan is a limited partner. The investments are valued by the investment managers on a periodic basis using pricing models that use market, income and cost valuation methods. Distributions are received from these funds on a periodic basis through the liquidation of the underlying assets of the fund. Life insurance policies are used to fund other postretirement benefits in order to obtain favorable tax treatment and are valued based on the cash surrender value of the underlying policies. The Company has selected the funds in which these assets are invested and may elect to withdraw funds with proper notice to the insurance company or maintain the policies and receive death benefits as determined by the contracts.

Cash flows— The Company generally funds its pension and other postretirement benefit plans as required by law or to the extent such contributions are tax deductible. The Company expects to contribute approximately $14 million to its pension plans and $4 million to its other postretirement benefit plans in 2022. As of December 31, 2021, the Company's portion of the future benefit payments that are expected to be paid during the twelve months ending December 31 is as follows:

In millions	Pension	Other Postretirement Benefits
2022	$ 163	$ 35
2023	169	36
2024	171	36
2025	173	36
2026	173	36
Years 2027-2031	843	176

(13) Commitments and Contingencies

The Company is subject to various legal proceedings and claims that arise in the ordinary course of business, including those involving environmental, product liability (including toxic tort) and general liability claims. The Company accrues for such liabilities when it is probable that future costs will be incurred and such costs can be reasonably estimated. Such accruals are based on developments to date, the Company's estimates of the outcomes of these matters and its experience in contesting, litigating and settling other similar matters. The Company believes resolution of these matters, individually and in the aggregate, will not have a material adverse effect on the Company's financial position, liquidity or future operations.

(14) Stockholders' Equity

Preferred stock— Preferred stock, without par value, of which 0.3 million shares are authorized and unissued, is issuable in series. The Board of Directors is authorized to fix by resolution the designation and characteristics of each series of preferred stock. The Company has no present commitment to issue its preferred stock.

Share repurchases— On February 13, 2015, the Company's Board of Directors authorized a stock repurchase program which provided for the repurchase of up to $6.0 billion of the Company's common stock over an open-ended period of time (the "2015 Program"). Under the 2015 Program, the Company repurchased approximately 6.1 million shares of its common stock at an average price of $91.78 per share during 2015, approximately 18.7 million shares of its common stock at an average price of $107.17 per share during 2016, approximately 7.1 million shares of its common stock at an average price of $140.56 per share during 2017, approximately 13.9 million shares of its common stock at an average price of $143.66 per share during 2018 and approximately 3.1 million shares of its common stock at an average price of $143.23 per share during 2019. The 2015 Program was completed in the second quarter of 2019.

On August 3, 2018, the Company's Board of Directors authorized a stock repurchase program which provides for the repurchase of up to an additional $3.0 billion of the Company's common stock over an open-ended period of time (the "2018 Program"). Under the 2018 Program, the Company repurchased approximately 6.7 million shares of its common stock at an average price of $158.11 per share during 2019, approximately 4.2 million shares of its common stock at an average price of $167.69 per share during 2020 and approximately 4.4 million shares of its common stock at an average price of $227.29 per share during 2021. As of December 31, 2021, there were approximately $240 million of authorized repurchases remaining under the 2018 Program.

On May 7, 2021, the Company's Board of Directors authorized a new stock repurchase program which provides for the repurchase of up to an additional $3.0 billion of the Company's common stock over an open-ended period of time (the "2021 Program"). As of December 31, 2021, there were $3.0 billion of authorized repurchases remaining under the 2021 Program.

Cash Dividends— Cash dividends declared were $4.72 per share in 2021, $4.42 per share in 2020 and $4.14 per share in 2019. Cash dividends paid were $4.64 per share in 2021, $4.35 per share in 2020 and $4.07 per share in 2019.

Accumulated other comprehensive income (loss)— The changes in accumulated other comprehensive income (loss) during 2021, 2020 and 2019 were as follows:

In millions	2021	2020	2019
Beginning balance	$ (1,642)	$ (1,705)	$ (1,677)
Foreign currency translation adjustments during the period	73	(82)	7
Foreign currency translation adjustments reclassified to income	5	—	—
Income taxes	(73)	86	(9)
Total foreign currency translation adjustments, net of tax	5	4	(2)
Pension and other postretirement benefit adjustments during the period	125	30	(54)
Pension and other postretirement benefit adjustments reclassified to income	54	48	21
Income taxes	(44)	(19)	7
Total pension and other postretirement benefit adjustments, net of tax	135	59	(26)
Ending balance	$ (1,502)	$ (1,642)	$ (1,705)

Foreign currency translation adjustments reclassified to income primarily relate to the exit of immaterial foreign operations. Pension and other postretirement benefit adjustments reclassified to income represent the amortization of actuarial gains and losses and prior service cost. Refer to Note 12. Pension and Other Postretirement Benefits for the amounts included in net periodic benefit cost.

The Company designated the €1.0 billion of Euro notes issued in May 2014, the €1.0 billion of Euro notes issued in May 2015 and the €1.6 billion of Euro notes issued in June 2019 as hedges of a portion of its net investment in Euro-denominated foreign operations to reduce foreign currency risk associated with the investment in these operations. Changes in the value of this debt resulting from fluctuations in the Euro to U.S. Dollar exchange rate have been recorded as foreign currency translation adjustments within Accumulated other comprehensive income (loss). The cumulative unrealized pre-tax gain (loss) recorded in Accumulated other comprehensive income (loss) related to the net investment hedge was a gain of $183 million as of December 31, 2021 and a loss of $120 million as of December 31, 2020.

As of December 31, 2021 and 2020, the ending balance of Accumulated other comprehensive income (loss) consisted of after-tax cumulative translation adjustment losses of $1.3 billion and $1.3 billion, respectively, and after-tax unrecognized pension and other postretirement benefits costs of $196 million and $331 million, respectively.

(15) Stock-Based Compensation

On May 8, 2015 (the "Effective Date"), the 2015 Long-Term Incentive Plan (the "2015 Plan") was approved by shareholders. As of the Effective Date, no additional awards will be granted to employees under the 2011 Long-Term Incentive Plan (the "2011 Plan"). The significant terms of stock options and restricted stock units ("RSUs") were not changed under the 2015 Plan. Stock options and RSUs are issued to officers and/or other management employees under these plans. Stock options generally vest over a four-year period and have an expiration of ten years from the issuance date. RSUs generally "cliff" vest after a three-year period and include units with and without performance criteria. RSUs with performance criteria provide for full "cliff" vesting after three years if the Compensation Committee certifies that the performance goals have been met. Upon vesting, the holder will receive one share of common stock of the Company for each vested restricted stock unit.

Commencing in February 2013, the Company began issuing shares from treasury stock to cover the exercised options and vested RSUs. Prior to February 2013, the Company generally issued new shares from its authorized but unissued share pool. As of December 31, 2021, approximately 10 million shares of ITW common stock were reserved for issuance under these plans.

The Company records compensation expense for the grant date fair value of stock awards over the remaining service periods of those awards. The following table summarizes the Company's stock-based compensation expense for the twelve months ended December 31, 2021, 2020 and 2019:

In millions	2021	2020	2019
Pre-tax stock-based compensation expense	$ 53	$ 42	$ 41
Tax benefit	(6)	(5)	(5)
Total stock-based compensation expense, net of tax	$ 47	$ 37	$ 36

The following table summarizes activity related to non-vested RSUs for the twelve months ended December 31, 2021:

Shares in millions	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested, January 1, 2021	0.5	$164.76
Granted	0.2	200.87
Vested	(0.1)	163.41
Unvested, December 31, 2021	0.6	178.60

The following table summarizes stock option activity for the twelve months ended December 31, 2021:

In millions except exercise price and contractual terms	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Under option, January 1, 2021	3.2	$128.81		
Granted	0.5	200.98		
Exercised	(0.5)	92.62		
Canceled or expired	(0.1)	181.06		
Under option, December 31, 2021	3.1	144.93	6.1	$312
Exercisable, December 31, 2021	1.9	123.58	4.9	$239

The fair value of RSUs is equal to the common stock fair market value on the date of the grant. RSUs provide for dividend equivalents payable in additional RSUs for dividends that would have been paid during the vesting period. Stock option exercise prices are equal to the common stock fair market value on the date of grant. The Company estimates forfeitures based on historical rates for awards with similar characteristics. The Company uses a binomial option pricing model to estimate the fair value of the stock options granted. The following summarizes the assumptions used in the option valuations for the twelve months ended December 31, 2021, 2020 and 2019:

	2021	2020	2019
Risk-free interest rate	0.04-1.38%	1.41-1.59%	2.50%-2.68%
Weighted-average volatility	24.0%	21.0%	22.0%
Dividend yield	2.50%	2.56%	2.20%
Expected years until exercise	8.9-9.4	9.1-9.6	8.7-9.0

Lattice-based option valuation models, such as the binomial option pricing model, incorporate ranges of assumptions for inputs. The risk-free rate of interest for periods within the contractual life of the option is based on a zero-coupon U.S. government instrument over the contractual term of the equity instrument. Expected volatility is based on implied volatility from traded options on the Company's stock and historical volatility of the Company's stock. The Company uses historical data to estimate option exercise timing and employee termination rates within the valuation model. The weighted-average dividend yield is based on historical information. The expected term of options granted is derived from the output of the option valuation model and represents the period of time that options granted are expected to be outstanding. The ranges presented result from separate groups of employees assumed to exhibit different exercise behavior.

The weighted-average grant-date fair value of stock options granted for the twelve months ended December 31, 2021, 2020 and 2019 was $40.90, $35.45 and $34.36 per share, respectively. The aggregate intrinsic value of stock options exercised during the twelve months ended December 31, 2021, 2020 and 2019 was $68 million, $114 million and $127 million, respectively. As of December 31, 2021, there was $9 million of total unrecognized compensation cost related to unvested stock options. That cost is expected to be recognized over a weighted-average period of 2 years. Exercise of stock options during the twelve months ended December 31, 2021, 2020 and 2019 resulted in cash receipts of $50 million, $66 million and $85 million, respectively. The total fair value of vested stock option awards during the twelve months ended December 31, 2021, 2020 and 2019 was $19 million, $16 million and $17 million, respectively.

As of December 31, 2021, there was $47 million of total unrecognized compensation cost related to unvested RSUs. That cost is expected to be recognized over a weighted-average remaining contractual life of 1.8 years. The total fair value of vested RSU awards during the twelve months ended December 31, 2021, 2020 and 2019 was $23 million, $25 million and $20 million, respectively.

(16) Other Balance Sheet Information

Other balance sheet information as of December 31, 2021 and 2020 was as follows:

In millions	2021	2020
Prepaid expenses and other current assets:		
Value-added-tax receivables	$ 84	$ 72
Vendor advances	71	30
Income tax refunds receivable	18	43
Other	140	119
Total prepaid expenses and other current assets	$ 313	$ 264
Other assets:		
Prepaid pension assets	$ 465	$ 355
Cash surrender value of life insurance policies	449	454
Operating lease right-of-use assets	222	216
Customer tooling	154	160
Other	115	123
Total other assets	$ 1,405	$ 1,308
Accrued expenses:		
Compensation and employee benefits	$ 460	$ 335
Deferred revenue and customer deposits	394	222
Rebates	209	171
Current portion of operating lease liabilities	61	55
Warranties	46	45
Current portion of pension and other postretirement benefit obligations	14	14
Other	464	442
Total accrued expenses	$ 1,648	$ 1,284
Other liabilities:		
Pension benefit obligation	$ 235	$ 241
Postretirement benefit obligation	148	191
Long-term portion of operating lease liabilities	133	133
Other	537	503
Total other liabilities	$ 1,053	$ 1,068

(17) Segment Information

The Company's operations are organized and managed based on similar product offerings and end markets, and are reported to senior management as the following seven segments: Automotive OEM; Food Equipment; Test & Measurement and Electronics; Welding; Polymers & Fluids; Construction Products; and Specialty Products. The following is a description of the Company's seven segments:

Automotive OEM— This segment is a global, niche supplier to top tier OEMs, providing unique innovation to address pain points for sophisticated customers with complex problems. Businesses in this segment produce components and fasteners for automotive-related applications.

Food Equipment— This segment is a highly focused and branded industry leader in commercial food equipment differentiated by innovation and integrated service offerings.

Test & Measurement and Electronics— This segment is a branded and innovative producer of test and measurement and electronic manufacturing and MRO solutions that improve efficiency and quality for customers in diverse end markets. Businesses in this segment produce equipment, consumables, and related software for testing and measuring of materials and structures, as well as equipment and consumables used in the production of electronic subassemblies and microelectronics.

Welding— This segment is a branded value-added equipment and specialty consumable manufacturer with innovative and leading technology. Businesses in this segment produce arc welding equipment, consumables and accessories for a wide array of industrial and commercial applications.

Polymers & Fluids— This segment is a branded supplier to niche markets that require value-added, differentiated products. Businesses in this segment produce engineered adhesives, sealants, lubrication and cutting fluids, and fluids and polymers for auto aftermarket maintenance and appearance.

Construction Products— This segment is a branded supplier of innovative engineered fastening systems and solutions.

Specialty Products— This segment is focused on diversified niche market opportunities with substantial patent protection producing beverage packaging equipment and consumables, product coding and marking equipment and consumables, and appliance components and fasteners.

Segments are allocated a fixed overhead charge based on the segment's revenue. Expenses not charged to the segments are reported separately as Unallocated. Because the Unallocated category includes a variety of items, it is subject to fluctuations on a quarterly and annual basis.

Segment information for 2021, 2020 and 2019 was as follows:

In millions	2021	2020	2019
Operating revenue:			
Automotive OEM	$ 2,800	$ 2,571	$ 3,063
Food Equipment	2,078	1,739	2,188
Test & Measurement and Electronics	2,346	1,963	2,121
Welding	1,650	1,384	1,638
Polymers & Fluids	1,804	1,622	1,669
Construction Products	1,945	1,652	1,625
Specialty Products	1,854	1,660	1,825
Intersegment revenue	(22)	(17)	(20)
Total	$ 14,455	$ 12,574	$ 14,109
Operating income:			
Automotive OEM	$ 545	$ 457	$ 659
Food Equipment	469	342	578
Test & Measurement and Electronics	643	507	542
Welding	490	376	453
Polymers & Fluids	457	402	381
Construction Products	530	421	383
Specialty Products	504	432	472
Total segments	3,638	2,937	3,468
Unallocated	(161)	(55)	(66)
Total	$ 3,477	$ 2,882	$ 3,402
Depreciation and amortization and impairment of intangible assets:			
Automotive OEM	$ 128	$ 131	$ 125
Food Equipment	42	41	41
Test & Measurement and Electronics	66	75	69
Welding	26	24	26
Polymers & Fluids	62	72	77
Construction Products	32	31	29
Specialty Products	54	53	59
Total	$ 410	$ 427	$ 426
Plant and equipment additions:			
Automotive OEM	$ 116	$ 79	$ 134
Food Equipment	30	34	35
Test & Measurement and Electronics	37	23	26
Welding	27	27	28
Polymers & Fluids	15	16	18
Construction Products	30	21	29
Specialty Products	41	36	56
Total	$ 296	$ 236	$ 326
Identifiable assets:			
Automotive OEM	$ 2,260	$ 2,302	$ 2,417
Food Equipment	1,052	983	1,042
Test & Measurement and Electronics	3,242	2,239	2,374
Welding	784	700	734
Polymers & Fluids	1,881	1,855	1,862
Construction Products	1,367	1,239	1,176
Specialty Products	1,682	1,635	1,656
Total segments	12,268	10,953	11,261
Corporate	3,809	4,659	3,807
Total	$ 16,077	$ 15,612	$ 15,068

Identifiable assets by segment are those assets that are specifically used in that segment. Corporate assets are principally cash and equivalents, investments and other general corporate assets.

Enterprise-wide information for the twelve months ended December 31, 2021, 2020 and 2019 was as follows:

In millions	**2021**	**2020**	**2019**
Operating Revenue by Geographic Region:			
United States	$ 6,578	$ 5,834	$ 6,507
Canada/Mexico	940	778	972
Total North America	7,518	6,612	7,479
Europe, Middle East and Africa	3,870	3,447	3,920
Asia Pacific	2,802	2,291	2,400
South America	265	224	310
Total operating revenue	$ 14,455	$ 12,574	$ 14,109

Operating revenue by geographic region is based on the customers' locations. As of December 31, 2021 and 2020, the Company had approximately 45% and 42%, respectively, of its total net plant and equipment in the United States. Countries where the Company had 10% or more of its total net plant and equipment included China as of December 31, 2021, with approximately 11%, and both China and Germany as December 31, 2020, with approximately 10% each. No single customer accounted for more than 5% of consolidated revenues for the twelve months ended December 31, 2021, 2020 or 2019.

ITEM 9. ***Changes in and Disagreements With Accountants on Accounting and Financial Disclosure***

None.

ITEM 9A. ***Controls and Procedures***

Controls and Procedures

The Company's management, with the participation of the Company's Chairman & Chief Executive Officer and Senior Vice President & Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) as of December 31, 2021. Based on such evaluation, the Company's Chairman & Chief Executive Officer and Senior Vice President & Chief Financial Officer have concluded that, as of December 31, 2021, the Company's disclosure controls and procedures were effective.

Management Report on Internal Control over Financial Reporting

The Management Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are found in Item 8. Financial Statements and Supplementary Data.

In connection with the evaluation by management, including the Company's Chairman & Chief Executive Officer and Senior Vice President & Chief Financial Officer, no changes in the Company's internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)) during the quarter ended December 31, 2021 were identified that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

ITEM 9B. ***Other Information***

None.

ITEM 9C. ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspections***

None.

PART III

ITEM 10. ***Directors, Executive Officers and Corporate Governance***

Information regarding the Directors of the Company who are standing for reelection and any persons nominated to become Directors of the Company is incorporated by reference from the information under the captions "Proposal 1 - Election of Directors" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

Information regarding the Audit Committee and its Financial Experts is incorporated by reference from the information under the captions "Proposal 1 - Election of Directors - Board of Directors and Its Committees" and "Audit Committee Report" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

Information regarding the Executive Officers of the Company can be found in Part I of this Annual Report on Form 10-K under the caption "Information About Our Executive Officers."

Information regarding the Company's code of ethics that applies to the Company's Chairman & Chief Executive Officer, Senior Vice President & Chief Financial Officer, and key financial and accounting personnel is incorporated by reference from the information under the caption "Proposal 1 - Election of Directors - Corporate Governance Policies and Practices" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

ITEM 11. ***Executive Compensation***

Information regarding executive compensation is incorporated by reference from the information under the captions "NEO Compensation," "Proposal 1 - Election of Directors - Director Compensation," and "Compensation Discussion and Analysis" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

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

Information regarding security ownership of certain beneficial owners and management and related stockholder matters is incorporated by reference from the information under the captions "Proposal 1 - Election of Directors - Ownership of ITW Stock" and "NEO Compensation - Equity Compensation Plan Information" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

ITEM 13. ***Certain Relationships and Related Transactions, and Director Independence***

Information regarding certain relationships and related transactions is incorporated by reference from the information under the captions "Proposal 1 - Election of Directors - Ownership of ITW Stock," "Certain Relationships and Related Party Transactions" and "Proposal 1 - Election of Directors - Corporate Governance Policies and Practices" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

Information regarding director independence is incorporated by reference from the information under the captions "Proposal 1 - Election of Directors - Corporate Governance Policies and Practices" and "Appendix A - Categorical Standards for Director Independence" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

ITEM 14. ***Principal Accounting Fees and Services***

This information is incorporated by reference from the information under the caption "Proposal 2 - Ratification of the Appointment of Independent Registered Public Accounting Firm" in the Company's Proxy Statement for the 2022 Annual Meeting of Stockholders.

PART IV

ITEM 15. ***Exhibits and Financial Statement Schedules***

(a) (1) Financial Statements

The following information is included as part of Item 8. Financial Statements and Supplementary Data:

Management Report on Internal Control over Financial Reporting
Statement of Income
Statement of Comprehensive Income
Statement of Financial Position
Statement of Changes in Stockholders' Equity
Statement of Cash Flows
Notes to Financial Statements

The following report of the Company's independent registered public accounting firm (PCAOB ID:34) is included as part of Item 8. Financial Statements and Supplementary Data:

Report of Independent Registered Public Accounting Firm

(2) Financial Statement Schedules
None.

(3) Exhibits

Exhibit Number	Description
2.1(a)	Investment Agreement, dated as of August 15, 2012, among CD&R Wimbledon Holdings III, L.P., a Cayman Islands limited partnership; Illinois Tool Works Inc.; ITW DS Investments Inc., a Delaware corporation; and Wilsonart International Holdings LLC, a Delaware limited liability company, filed as Exhibit 2.1 to the Company's Current Report on Form 8-K filed on August 17, 2012 (Commission File No. 1-4797) and incorporated herein by reference. (Certain of the schedules and similar attachments have been omitted pursuant to Item 601(b)(2) of Regulation S-K, but the Company undertakes to furnish a copy of the schedules or similar attachments to the Securities and Exchange Committee upon request.)
3(a)(i)	Amended and Restated Certificate of Incorporation of Illinois Tool Works Inc., filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2014 (Commission File No. 1-4797) and incorporated herein by reference.
3(a)(ii)	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Illinois Tool Works Inc., filed as Exhibit 3(a)(ii) to the Company's Current Report on Form 8-K filed on May 12, 2016 (Commission File No. 1-4797) and incorporated herein by reference.
3(b)	By-laws of Illinois Tool Works Inc., as amended and restated as of May 6, 2016, filed as Exhibit 3(b)(i) to the Company's Current Report on Form 8-K filed on May 12, 2016 (Commission File No. 1-4797) and incorporated herein by reference.
4(a)	Indenture between Illinois Tool Works Inc. and The First National Bank of Chicago, as Trustee, dated as of November 1, 1986, filed as Exhibit 4.4 to the Company's Registration Statement on Form S-3 filed on August 7, 2020 (Commission File No. 333-242331) and incorporated herein by reference.
4(b)	First Supplemental Indenture between Illinois Tool Works Inc. and Harris Trust and Savings Bank, as Trustee, dated as of May 1, 1990, filed as Exhibit 4.5 to the Company's Registration Statement on Form S-3 filed on August 7, 2020 (Commission File No. 333-242331) and incorporated herein by reference.
4(c)	Officers' Certificate dated August 31, 2011, establishing the terms, and setting forth the forms, of the 3.375% Notes due 2021 and the 4.875% Notes due 2041, filed as Exhibit 4.3 to the Company's Current Report on Form 8-K filed on September 1, 2011 (Commission File No. 001-04797) and incorporated herein by reference.
4(d)	Officers' Certificate dated August 28, 2012, establishing the terms, and setting forth the forms, of the 3.9% Notes due 2042, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on August 28, 2012 (Commission File No. 001-4797) and incorporated herein by reference.

Exhibit Number	Description
4(e)	Officers' Certificate dated February 25, 2014, establishing the terms, and setting forth the forms, of the 0.9% Notes due 2017, the 1.95% Notes due 2019, and the 3.5% Notes due 2024, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 26, 2014 (Commission File No. 001-04797) and incorporated herein by reference.
4(f)	Officers' Certificate dated May 20, 2014, establishing the terms, and setting forth the forms, of the 1.75% Euro Notes due 2022 and the 3.0% Euro Notes due 2034, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on May 22, 2014 (Commission File No. 001-04797) and incorporated herein by reference.
4(g)	Officers' Certificate dated May 19, 2015, establishing the terms, and setting forth the forms, of the 1.25% Euro Notes due 2023 and the 2.125% Euro Notes due 2030, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on May 22, 2015 (Commission File No. 001-04797) and incorporated herein by reference.
4(h)	Officers' Certificate dated November 7, 2016, establishing the terms, and setting forth the forms, of the 2.65% Notes due 2026, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 10, 2016 (Commission File No. 001-04797) and incorporated herein by reference.
4(i)	Officers' Certificate dated June 5, 2019, establishing the terms, and setting forth the forms, of the 0.250% Notes due 2024, the 0.625% Notes due 2027 and the 1.000% Notes due 2031, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 5, 2019 (Commission File No. 001-04797) and incorporated herein by reference.
4(j)	Description of the Company's common stock, filed as Exhibit 4(j) to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-4797) and incorporated herein by reference.
4(k)	Description of the 1.75% Euro Notes due 2022 and 3.00% Euro Notes due 2034, filed as Exhibit 4(k) to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-4797) and incorporated herein by reference.
4(l)	Description of the 1.25% Euro Notes due 2023 and 2.125% Euro Notes due 2030, filed as Exhibit 4(l) to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-4797) and incorporated herein by reference.
4(m)	Description of the 0.250% Euro Notes due 2024, 0.625% Euro Notes due 2027 and 1.00% Euro Notes due 2031, filed as Exhibit 4(m) to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-4797) and incorporated herein by reference.
10(a)(i)	Five Year Credit Agreement dated as of September 27, 2019 among Illinois Tool Works Inc., JPMorgan Chase Bank, N.A., as Agent, Citibank, N.A., as Syndication Agent, and a syndicate of lenders, filed as Exhibit 10(a) to the Company's Current Report on Form 8-K filed on October 3, 2019 (Commission File No. 1-4797) and incorporated herein by reference.
10(a)(ii)	Suspension of Rights Agreement dated September 22, 2021 between Illinois Tool Works Inc. and JPMorgan Chase Bank, N.A., as Agent, under the Five Year Credit Agreement dated as of September 27, 2019, among Illinois Tool Works Inc., as Borrower, and JPMorgan Chase Bank, N.A., as Agent, and the Lenders thereto (as amended or otherwise modified from time to time), filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021 (Commission File No. 1-4797) and incorporated herein by reference.
10(b)*	Illinois Tool Works Inc. 2011 Long-Term Incentive Plan, filed as Exhibit 99.2 to the Company's Current Report on Form 8-K filed on December 16, 2010 (Commission File No. 1-4797) and incorporated herein by reference.
10(c)*	Illinois Tool Works Inc. 2015 Long-Term Incentive Plan effective May 8, 2015, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2015 (Commission File No. 1-4797) and incorporated herein by reference.
10(d)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 7, 2012 (Commission File No. 1-4797) and incorporated herein by reference.
10(e)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 13, 2014 (Commission File No. 1-4797) and incorporated herein by reference.
10(f)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 9, 2016 (Commission File No. 1-4797) and incorporated herein by reference.

Exhibit Number	Description
10(g)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 9, 2017 (Commission File No. 1-4797) and incorporated herein by reference.
10(h)*	Form of restricted stock unit terms filed as Exhibit 99.2 to the Company's Current Report on Form 8-K filed on February 9, 2017 (Commission File No. 1-4797) and incorporated herein by reference.
10(i)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 14, 2019 (Commission File No. 1-4797) and incorporated herein by reference
10(j)*	Form of performance share unit terms filed as Exhibit 99.2 to the Company's Current Report on Form 8-K filed on February 14, 2019 (Commission File No. 1-4797) and incorporated herein by reference
10(k)*	Form of performance cash terms filed as Exhibit 99.3 to the Company's Current Report on Form 8-K filed on February 14, 2019 (Commission File No. 1-4797) and incorporated herein by reference
10(l)*	Form of stock option terms filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on February 5, 2020 (Commission File No. 1-4797) and incorporated herein by reference.
10(m)*	Form of performance share unit terms filed as Exhibit 99.2 to the Company's Current Report on Form 8-K filed on February 5, 2020 (Commission File No. 1-4797) and incorporated herein by reference.
10(n)*	Form of performance cash terms filed as Exhibit 99.3 to the Company's Current Report on Form 8-K filed on February 5, 2020 (Commission File No. 1-4797) and incorporated herein by reference.
10(o)*	Form of restricted stock unit terms filed as Exhibit 99.4 to the Company's Current Report on Form 8-K filed on February 5, 2020 (Commission File No. 1-4797) and incorporated herein by reference.
10(p)*	Illinois Tool Works Inc. 2011 Executive Incentive Plan, filed as Exhibit 99.1 to the Company's Current Report on Form 8-K filed on December 16, 2010 (Commission File No. 1-4797) and incorporated herein by reference.
10(q)*	Illinois Tool Works Inc. Executive Contributory Retirement Income Plan as amended and restated, effective January 1, 2010, filed as Exhibit 10 to the Company's Current Report on Form 8-K filed on November 5, 2009 (Commission File No. 1-4797) and incorporated herein by reference.
10(r)*	Illinois Tool Works Inc. Nonqualified Pension Plan, effective January 1, 2008, as amended and approved by the Board of Directors on December 22, 2008, filed as Exhibit 10(p) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008 (Commission File No. 1-4797) and incorporated herein by reference.
10(s)*	Illinois Tool Works Inc. 2011 Change-in-Control Severance Compensation Policy, filed as Exhibit 99.3 to the Company's Current Report on Form 8-K filed on December 16, 2010 (Commission File No. 1-4797) and incorporated herein by reference.
10(t)*	Illinois Tool Works Inc. Amended and Restated Directors' Deferred Fee Plan effective May 2, 2014, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2014 (Commission File No. 1-4797) and incorporated herein by reference.
10(u)*	Illinois Tool Works Inc. 2011 Cash Incentive Plan, filed as Exhibit 99.1 to the Company's Form 8-K filed on May 12, 2011 (Commission File No. 1-4797) and incorporated herein by reference.
10(v)*	First Amendment to the ITW Executive Contributory Retirement Income Plan dated February 15, 2013, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2013 (Commission File No. 1-4797) and incorporated herein by reference.
10(w)*	Consulting Agreement dated June 9, 2021 between Illinois Tool Works Inc. and SLM Advisory Services LLC, filed as Exhibit 10(a) to the Company's Quarterly Report on Form 10-Q/A for the quarterly period ended June 30, 2021 (Commission File No. 1-4797) and incorporated herein by reference.
21	Subsidiaries and Affiliates of the Company.
23	Consent of Independent Registered Public Accounting Firm.
24	Powers of Attorney.
31	Rule 13a-14(a) Certifications.
32	Section 1350 Certification.
101.INS	iXBRL Instance Document**

Exhibit Number	Description
101.SCH	iXBRL Taxonomy Extension Schema**
101.CAL	iXBRL Taxonomy Extension Calculation Linkbase**
101.DEF	iXBRL Taxonomy Extension Definition Linkbase**
101.LAB	iXBRL Taxonomy Extension Label Linkbase**
101.PRE	iXBRL Taxonomy Extension Presentation Linkbase**
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Management contract or compensatory plan or arrangement.

** The following financial information from Illinois Tool Works Inc.'s Annual Report on Form 10-K for the year ended December 31, 2021, formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Statement of Income, (ii) Statement of Comprehensive Income, (iii) Statement of Changes in Stockholders' Equity (iv) Statement of Financial Position, (v) Statement of Cash Flows and (vi) related Notes to Financial Statements.

ITEM 16. ***Form 10-K Summary***

None.

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 on this 11th day of February 2022.

ILLINOIS TOOL WORKS INC.

By: /s/ E. SCOTT SANTI

E. Scott Santi

Chairman & Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities indicated on this 11th day of February 2022.

Signatures	Title
/s/ E. SCOTT SANTI E. Scott Santi	Chairman & Chief Executive Officer, Director (Principal Executive Officer)
/s/ MICHAEL M. LARSEN Michael M. Larsen	Senior Vice President & Chief Financial Officer (Principal Financial Officer)
/s/ RANDALL J. SCHEUNEMAN Randall J. Scheuneman	Vice President & Chief Accounting Officer (Principal Accounting Officer)
DANIEL J. BRUTTO	Director
SUSAN CROWN	Director
DARRELL L. FORD	Director
JAMES W. GRIFFITH	Director
JAY L. HENDERSON	Director
RICHARD H. LENNY	Director
DAVID B. SMITH, JR.	Director
PAMELA B. STROBEL	Director
ANRÉ D. WILLIAMS	Director
	By: /s/ E. SCOTT SANTI (E. Scott Santi, *as Attorney-in-Fact)*

Original powers of attorney authorizing E. Scott Santi to sign the Company's Annual Report on Form 10-K and amendments thereto on behalf of the above-named directors of the registrant have been filed with the Securities and Exchange Commission as part of this Annual Report on Form 10-K (Exhibit 24).

ILLINOIS TOOL WORKS INC. and SUBSIDIARIES
GAAP TO NON-GAAP RECONCILIATIONS (UNAUDITED)

2012 ADJUSTED INCOME PER SHARE FROM CONTINUING OPERATIONS - DILUTED (UNAUDITED)

	Twelve Months Ended December 31, 2012
As reported	$ 4.72
Decorative Surfaces net gain	1.34
Decorative Surfaces equity interest	(0.04)
Decorative Surfaces operating results	0.21
As adjusted for the Decorative Surfaces business	$ 3.21

ILLINOIS TOOL WORKS INC. and SUBSIDIARIES
PROXY PEER GROUP

The 2021 peer group consists of the following 17 public companies, consistent with the peer group included in the Company's Proxy Statement:

3M Company	Eaton Corporation plc	Honeywell International Inc.	Stanley Black & Decker, Inc.
Caterpillar Inc.	Ecolab Inc.	Johnson Controls International plc	Trane Technologies plc
Cummins Inc.	Emerson Electric Co.	Parker-Hannifin Corporation	
Deere & Company	Fortive Corporation	PPG Industries, Inc.	
Dover Corporation	General Dynamics Corporation	Rockwell Automation, Inc.	

The total shareholder return peer group average is calculated using a simple average.

ILLINOIS TOOL WORKS INC. and SUBSIDIARIES
SEGMENT PEER GROUP

Automotive OEM: Enerpac Tool Group, Allison Transmission Holdings Inc., WESCO International, Inc. and BorgWarner Inc.
Test & Measurement and Electronics: Ametek Inc, Fortive Corp, Keysight Technologies, Inc., Mettler-Toledo International Inc., Renishaw PLC, Spectris PLC and Thermo Fisher Scientific Inc.
Food Equipment: Welbilt, Inc. and Middleby Corporation
Polymers & Fluids: 3M Company, Dupont De Nemours, Inc. and Huntsman Corporation
Welding: Kennametal Inc., Lincoln Electric Holdings, Inc. and Colfax Corporation
Construction Products: Carlisle, Crane Co., Ingersoll-Rand plc, Masco Corporation and Stanley Black & Decker, Inc.
Specialty Products: Ball Corporation, Berry Global Group Inc and Amcor plc

Shareholder Information

Transfer Agent and Registrar

Questions regarding stock ownership, dividend payments, or change of address should be directed to the company's transfer agent:

Broadridge Corporate Issuer Solutions, Inc.
P.O. Box 1342
Brentwood, NY 11717
http://shareholder.broadridge.com/ITW
Phone Toll Free: 888.829.7424
International: +1.720.399.2177

Common Stock

New York Stock Exchange
Symbol: ITW

Trademarks

Certain trademarks in this publication are owned or licensed by Illinois Tool Works Inc. or its wholly owned subsidiaries.

Contact Investor Relations

For additional assistance, including media inquiries: 224.661.7431 or investorrelations@itw.com.

Visit Us on the Web

www.itw.com

Committed to Sustainability

Learn about our activities, goals, and progress in our annual Sustainability Report: www.itw.com/sustainability.

Stock and Dividend Action

Effective with the October 14, 2021 payment, the quarterly cash dividend on ITW common stock was increased to $1.22 per share. ITW's annual dividend payment has increased for more than 58 consecutive years, except during a period of government controls in 1971.

The ITW Common Stock Dividend Reinvestment Plan enables registered shareholders to reinvest ITW dividends they receive in additional shares of common stock of the company at no additional cost. Participation in the plan is voluntary, and shareholders may join or withdraw at any time. The plan also allows for additional voluntary cash investments in any amount from $100 to $10,000 per month. For a brochure and full details of the program, please direct inquiries to the company's transfer agent, Broadridge Corporate Issuer Solutions, Inc.

155 Harlem Avenue / Glenview, Illinois 60025 / www.itw.com