



2016 Annual Report

**For more information:**

The Grainger Fact Book contains information about the company's strategy, operations and business units. The Fact Book can be found on the Grainger Investor Relations website at [grainger.com/investor](http://grainger.com/investor).

Grainger's Corporate Social Responsibility commitments include operating responsibly, valuing its people, sustaining the environment and serving its communities. To learn more about Grainger's CSR efforts, please visit [graingercsr.com](http://graingercsr.com).



To Our Shareholders:

In 2016, the industrial economy continued to be hampered by a challenging demand environment complicated by a lack of inflation, which put pressure on revenue and gross margins. Yet amidst these challenges, Grainger made progress by executing our strategy and staying ahead of customer needs. We strengthened the value we deliver to our customers and effectively managed expenses while identifying opportunities to improve our long-term competitiveness.

Our 2016 financial highlights were:

- Company sales of \$10.1 billion, up 2 percent from 2015.
- Reported earnings per share of \$9.87, down 15 percent from 2015. On an adjusted basis, earnings per share were \$11.58, down 3 percent versus 2015.
- Cash generated from operations of \$1.0 billion with free cash flow of \$774 million, up 23 percent from 2015.
- Cash returned to shareholders of \$1.1 billion in the form of approximately 3.6 million of shares repurchased for \$790 million and \$303 million in dividends paid.

While the broad line industrial maintenance, repair and operating (MRO) distribution market remains extremely attractive, it continues to evolve with customer behavior shifting to digital channels. The ease of finding products and prices online enables greater comparison shopping, requiring industrial distributors to balance higher customer expectations – all of which increase pressure on pricing and margins.

Grainger is addressing these opportunities and challenges from a position of strength. Our eCommerce capabilities, advantaged supply chain network, robust IT systems and comprehensive customer service provide a solid starting point for extending our leadership in the market.

Grainger's value proposition resonates in economies with high gross domestic product per capita and a developed infrastructure. As a result, we have refocused our efforts in North America, Japan and Western Europe. While the MRO markets in these geographies have contracted in the past several years, industry fragmentation provides Grainger with long-term growth potential. Our size, scale and service capabilities position us well to gain share going forward.

As a company and in each of our core markets, we have five priorities:

1. Create unique value for customers,
2. Ensure an effortless customer experience,
3. Reduce our cost base,
4. Create a great team member experience and
5. Be responsible stewards of the business.

Based on these priorities, we made significant changes in 2016 to our U.S. business, which represents 74 percent of total revenue. To better serve customers of all sizes, we further aligned our large-customer sales team to industry-specific verticals, created an inside sales force focused on medium-sized customers, opened our new Northeast Distribution Center and invested in digital capabilities. Grainger now has eCommerce solutions for customers of all sizes and types. Today, more than 65 percent of orders originate digitally and this number will continue to grow. Ensuring a competitively advantaged digital capability and

leveraging our existing online solutions will be critical for future success. Also in 2016, we were diligent in reducing our cost structure in the United States, including optimizing our branch network and announcing a consolidated contact center network.

Given the changing nature of competition in the MRO space, we are introducing a more competitive pricing structure in the United States starting in early 2017. The new structure will better enable customer acquisition with the Grainger brand and increase penetration with existing customers.

The past year presented significant challenges for our Canadian business, Acklands–Grainger. The combination of weaker oil and gas prices and the implementation of a new enterprise resource planning (ERP) system put pressure on Acklands–Grainger’s performance. The ERP system is now stable, the team has adapted to the new systems and processes and we are focused on improving our service and cost structure to return to profitability.

In 2016 we continued to focus our international activities on the highest-return geographies by investing where we know the greatest growth and profit potential exists, including Western Europe, through the launch of Cromwell Direct; Japan, through MonotaRO; and Mexico, where we continue to see strong growth after the ERP implementation there. In non-core markets, we have narrowed our scope looking to sustain profitability.

In 2017, Grainger will focus on the following initiatives:

- Execute the pricing changes in the United States to attract and acquire new customers to Grainger and capture a higher share of wallet with existing customers.
- Accelerate share gain with large customers in the United States, leveraging changes made to the sales organization in 2016.
- Regain share with medium-sized customers in the United States through our inside sales team and innovative digital solutions.
- Accelerate the rapid growth in revenue and earnings through our single channel online businesses MonotaRO, Zoro and Cromwell Direct.
- Reverse the decline in our Canadian business by improving service, adjusting the cost structure and continuing to diversify our customer base.
- Reduce our cost base everywhere throughout the company.
- Improve our team member experience through focused development and improved processes.

As a result, we expect to generate attractive returns for our shareholders.

We remain committed to fulfilling our purpose of helping professionals keep their operations running and their people safe. We take great pride in serving the hardworking people that power economies in our core markets. To succeed, we develop strong relationships with our customers. Whether those relationships are built on the phone, online, in a customer’s business or at a branch, our team members are at the heart of Grainger. As we start our 90th year, people will continue to be what makes the difference. We know our legacy is shaped both by what we do and how we do it.

As we move ahead, we would like to thank Gary Rogers for his service to Grainger. Gary has been a Grainger director for over 12 years and is retiring from the Board. We appreciate the strategic insight, innovative thinking and judgment Gary has brought to Grainger.

While Grainger is well-positioned to meet the current and future needs of our customers, we know that we must earn our customers' respect. What we do now and going forward will make the difference in our success with our customers. If we execute well and focus on our priorities, we will gain share by acquiring new customers and growing with existing customers. We are committed to growing in any economic cycle and continuing to make responsible decisions for our customers, team members and shareholders and the communities we serve. That's our legacy and our future.



James T. Ryan  
Chairman of the Board



D.G. Macpherson  
Chief Executive Officer

February 28, 2017

### **2016 CEO Transition**

October 1, 2016, marked an important transition in company leadership as D.G. Macpherson was named Chief Executive Officer (CEO) and was also appointed to the Board of Directors, with Jim Ryan continuing to serve as Chairman of the Board.

Only the fourth CEO in the company's 90-year history, Ryan's transition brings to a close his remarkable career of nearly eight years as CEO and nearly 36 years of continuous service. Under Ryan's leadership, Grainger transitioned from a largely bricks-and-mortar industrial supplier to a leading-edge digital company with multiple channels to meet the changing needs of businesses and institutions.

Prior steps in this succession plan included promoting Macpherson to COO in August 2015. In that role, Macpherson was responsible for Grainger's day-to-day operations and reported to Ryan. Macpherson had served the company since 2008 in various roles as Senior Vice President and Group President.

Macpherson's transition to CEO has been a seamless one, as he leads with values that are the hallmark of Grainger: relentlessly focusing on customers, consciously operating with high ethics, persistently developing talent at all levels and continually evolving the business.



**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 10-K**

(Mark One)

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

For the fiscal year ended December 31, 2016  
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 1-5684

**W.W. Grainger, Inc.**

(Exact name of registrant as specified in its charter)

**Illinois**

(State or other jurisdiction of incorporation or  
organization)

**100 Grainger Parkway, Lake Forest, Illinois**

(Address of principal executive offices)

**36-1150280**

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

**60045-5201**

(Zip Code)

**(847) 535-1000**

(Registrant's telephone number including area code)

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

**Title of each class**

Common Stock \$0.50 par value

**Name of each exchange on which registered**

New York Stock Exchange

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 and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

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

The aggregate market value of the voting common equity held by nonaffiliates of the registrant was \$12,999,003,606 as of the close of trading as reported on the New York Stock Exchange on June 30, 2016. The Company does not have nonvoting common equity.

The registrant had 58,837,353 shares of the Company's Common Stock outstanding as of January 31, 2017.

#### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the proxy statement relating to the annual meeting of shareholders of the registrant to be held on April 26, 2017, are incorporated by reference into Part III hereof.



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## PART I

### Item 1: Business

#### The Company

W.W. Grainger, Inc., incorporated in the State of Illinois in 1928, is a broad line distributor of maintenance, repair and operating (MRO) supplies and other related products and services used by businesses and institutions primarily in the United States (U.S.) and Canada, with a presence also in Europe, Asia and Latin America. In this report, the words “Grainger” or “Company” mean W.W. Grainger, Inc. and its subsidiaries.

Grainger uses a combination of multichannel and single channel online business models to provide customers with a range of options for finding and purchasing MRO products, utilizing sales representatives, contact centers, direct marketing materials, catalogs and eCommerce technology. Grainger serves approximately 3 million customers worldwide through a network of highly integrated distribution centers, websites and branches.

Products are regularly added to and deleted from Grainger's product lines on the basis of customer demand, market research, recommendations of suppliers, sales volumes and other factors.

Grainger's centralized business support functions provide coordination and guidance in the areas of accounting and finance, strategy and business development, communications and investor relations, compensation and benefits, information systems, health and safety, global supply chain functions, human resources, risk management, internal audit, legal, real estate, security, tax and treasury. These services are provided in varying degrees to all business units.

Grainger's two reportable segments are the U.S. and Canada, and they are described further below. Other businesses include Zoro Tools, Inc. (Zoro), the single channel online business in the U.S., MonotaRO Co. (MonotaRO) in Japan and operations in Europe, Asia and Latin America. These businesses generate revenue through the distribution of MRO supplies and products and provide related services. For segment and geographical information and consolidated net sales and operating earnings, see “Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations” and Note 16 to the Consolidated Financial Statements.

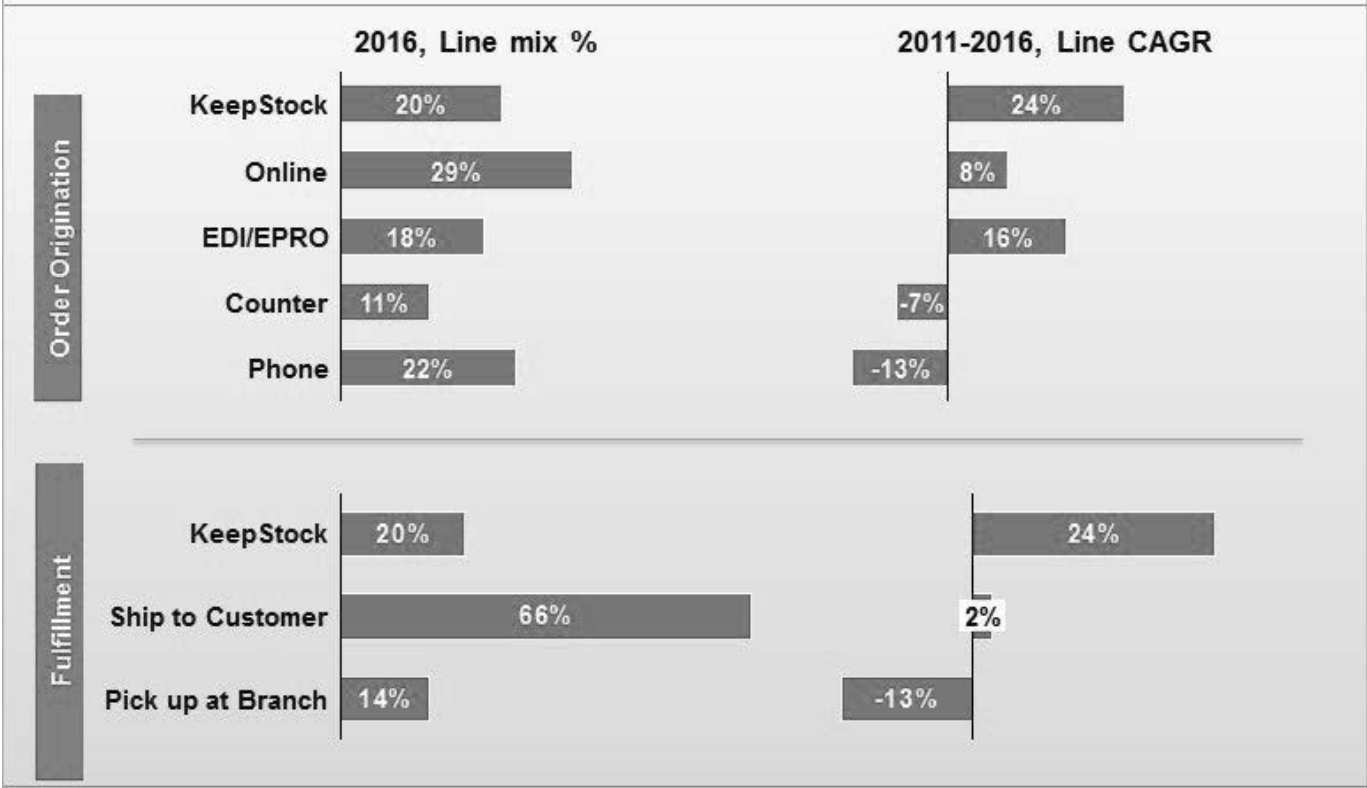
#### United States

The U.S. business offers a broad selection of MRO supplies and other related products and services through sales representatives, catalogs, eCommerce and local branches. A combination of product breadth, local availability, speed of delivery, detailed product information and competitively priced products and services is provided by this business. Products offered include material handling equipment, safety and security supplies, lighting and electrical products, power and hand tools, pumps and plumbing supplies, cleaning and maintenance supplies, building and home inspection supplies, vehicle and fleet components and many other items primarily focused on the facilities maintenance market. Services offered primarily relate to inventory management solutions. In 2016, service fee revenue represented less than 1% of sales.

The majority of products sold by the U.S. business are nationally branded products. In addition, 22% of 2016 sales were private label items bearing Grainger's registered trademarks, such as DAYTON® motors, power transmission, HVAC and material handling equipment, SPEEDAIRE® air compressors, AIR HANDLER® air filtration equipment, TOUGH GUY® cleaning products, WESTWARD® tools, CONDOR® safety products and LUMAPRO® lighting products. Grainger has taken steps to protect these trademarks against infringement and believes that they will remain available for future use in its business. The U.S. business purchases products for sale from more than 2,600 suppliers, most of which are manufacturers. Through a global sourcing operation, the business procures competitively priced, high-quality products produced outside the U.S. from approximately 400 suppliers. Grainger sells these items primarily under the private label brands listed above. No single supplier comprised more than 5% of total purchases and no significant difficulty has been encountered with respect to sources of supply.

The U.S. business operates and fulfills orders in all 50 states through a network of distribution centers (DCs), branches and contact centers. Customers range from small and medium-sized businesses to large corporations, government entities and other institutions. They are primarily represented by purchasing managers or workers in facilities maintenance departments and service shops across a wide range of industries such as manufacturing, hospitality, transportation, government, retail, healthcare and education. Sales in 2016 were made to approximately 1.1 million customers averaging 111,000 daily transactions. Approximately 79% of sales are concentrated with large customers and no single customer accounted for more than 3% of total sales.

Macro trends are changing the way Grainger's customers behave. Customers want highly tailored solutions with real-time access to information and just-in-time delivery of products and services. Demands for transparency are also increasing as access to information expands. These changes in behaviors are reflected in how customers do business with Grainger as demonstrated in the following chart:



Customers continue to migrate to online and electronic purchasing platforms such as EDI and eProcurement. Through Grainger.com and other branded websites, which serve as prominent channels in the U.S. business, customers have access to approximately 1.9 million products. Grainger.com provides real-time price and product availability and detailed product information and offers advanced features such as product search and compare capabilities. For customers with sophisticated electronic purchasing platforms, the U.S. business utilizes technology that allows these systems to communicate directly with Grainger.com. eCommerce revenues in the U.S. were \$3.7 billion in 2016, an increase of 12% versus 2015, and represented 46% of total revenues.

Inventory management services is another area where the U.S. business helps customers be more productive. KeepStock® inventory solutions is a comprehensive program that includes vendor-managed inventory, customer-managed inventory and on-site vending machines. Grainger's KeepStock program currently provides services to almost 23,000 customers and completed approximately 11,000 installations in 2016. As of December 31, 2016, there were approximately 59,500 total installations. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® revenue for the U.S. business would represent 57% of total sales.

Due to the customer migration to online and electronic purchasing, Grainger initiated a restructuring that resulted in the closing of 49 branches in 2015 and 55 branches in 2016. As of December 31, 2016, the U.S. business had 284 branches (254 stand alone, 28 on-site and 2 will-call express locations), 18 DCs, 3 national contact centers and 39 regional contact centers, which are located within branches.

DCs range in size from 45,000 square feet to 1.3 million square feet, the largest of which can stock up to 500,000 products. Automated equipment and processes allow larger DCs to handle the majority of the customer shipping for next-day product availability and replenish the branches that provide same-day availability. The DC network increasingly fulfills a larger portion of customer orders, especially as customers migrate to online and electronic purchasing. Grainger completed the construction of a new 1.3 million square-foot DC in New Jersey and began operations in 2016.

Branches serve the immediate needs of customers in their local markets by allowing them to pick up items directly. In addition, branches support local KeepStock® operations. The branch network has approximately 1,800 employees who primarily fulfill counter and will-call product purchases and provide customer service. Grainger's contact center network consists of approximately 2,000 employees who handle about 74,000 orders per day via phone, e-mail and fax. The contact centers will be consolidating to 3 national contact centers with expanded work-from-home arrangements over the next 18 months, which will enable improved customer service, better team member engagement and efficiencies.

The U.S. business has a sales force of approximately 3,600 professionals who help businesses and institutions select the right products to find immediate solutions to maintenance problems and reduce operating expenses by utilizing Grainger as a consistent source of supply across multiple locations. In 2016, Grainger continued to focus its outside sales force on facilitating growth with large customers who typically have more complex purchasing requirements than small and medium-sized customers. To meet the needs of the medium-sized customers, Grainger added approximately 260 inside sellers during 2016 with a plan to add 115 in the second half of 2017.

The Grainger catalog, most recently issued in February 2017, offers approximately 383,000 MRO products and is used by customers to assist in product selection. The 2017 catalog includes almost 21,000 new items and approximately 1.1 million copies of the catalog were produced.

Grainger estimates the U.S. market for MRO products to be approximately \$125 billion in 2016, of which Grainger's share is approximately 6%.

## **Canada**

Acklands – Grainger Inc. (Acklands – Grainger) is Canada's leading broad line distributor of industrial and safety supplies. This business provides a combination of product breadth, local availability, speed of delivery, detailed product information and competitively priced products and services.

The Canadian business serves customers through branches, sales and service representatives and DCs across Canada. The business initiated a restructuring in 2015 in response to the decline in oil prices and the resultant weak economy and low MRO market growth. The restructuring resulted in the closure of 16 branches in 2015 and an additional 14 branches in 2016. As of December 31, 2016, Acklands – Grainger had 151 branches and 5 DCs. Approximately 12,000 sales transactions are completed daily. Customers have access to more than 152,000 stocked products through a comprehensive catalog. The most recent catalog, printed in both English and French, was issued in February 2017. In addition, customers can purchase products through Acklandsgrainger.com, a fully bilingual website. Grainger estimates the 2016 Canadian market for MRO products to be approximately \$11 billion, of which Acklands – Grainger's share is approximately 7%.

## **Other Businesses**

Included in Other Businesses is Zoro in the U.S., MonotaRO in Japan and other operations in Europe, Asia and Latin America. The more significant businesses in this group, those with revenues of more than \$100 million in 2016, are described below.

### Zoro

Zoro is an online distributor of MRO products serving U.S. businesses and consumers through its website, Zoro.com. Zoro serves Canadian customers through ZoroCanada.com via export from the U.S. Zoro offers a broad selection of more than one million products at single, competitive prices. Zoro has no branches or sales force, and customer orders are fulfilled through the U.S. business supply chain.

### MonotaRO

Grainger operates in Japan and other Asian countries primarily through its 51% interest in MonotaRO Co (MonotaRO). MonotaRO provides small and mid-sized Japanese businesses with products that help them operate and maintain their facilities. MonotaRO is a catalog and web-based direct marketer with approximately 91% of orders being conducted through Monotaro.com, through which customers have access to approximately 10 million products. MonotaRO predominantly fulfills all orders from three DCs, the largest of which is a 425,000 square-foot DC in the Osaka area. MonotaRO is currently building a 590,000 square-foot DC in the Tokyo area, which it plans to put into operation in April

2017. Grainger estimates the 2016 Japanese market for MRO products to be approximately \$41 billion, of which MonotaRO's share is approximately 2%.

#### Cromwell

Cromwell is a broad line industrial distributor of MRO products in the United Kingdom (U.K.) serving approximately 70,000 industrial and manufacturing customers. Headquartered in Leicester, England, Cromwell has 52 U.K. branches and 10 international branches. Customers have access to almost 80,000 MRO products through a catalog and through [cromwell.co.uk](http://cromwell.co.uk). Grainger estimates the U.K. market for MRO products to be approximately \$16 billion, of which Cromwell's share is approximately 2%.

#### Fabory

The Fabory Group (Fabory) is a European specialty distributor of fasteners, tools and industrial supplies. Fabory is headquartered in Tilburg, the Netherlands. As of December 31, 2016, Fabory has 70 branches in 13 countries. Customers have access to more than 100,000 products through a catalog and [Fabory.com](http://Fabory.com). Grainger estimates the 2016 European market (in which Fabory has its primary operations) for MRO products, including fasteners, to be approximately \$34 billion, of which Fabory's share is approximately 1%.

#### Grainger Mexico

Grainger's operations in Mexico provide local businesses with MRO supplies and other related products primarily from Mexico and the U.S. The business in Mexico distributes products through a network of branches and two DCs where customers have access to approximately 310,000 products through a Spanish-language catalog and through [Grainger.com.mx](http://Grainger.com.mx). Grainger estimates the 2016 Mexican market for MRO products to be approximately \$10 billion, of which Grainger Mexico's share is approximately 1%.

#### **Seasonality**

Grainger's business in general is not seasonal, however, there are some products that typically sell more often during the winter or summer season. In any given month, unusual weather patterns, i.e., unusually hot or cold weather, could impact the sales volumes of these products, either positively or negatively.

#### **Competition**

Grainger faces competition in all the markets it serves, from manufacturers (including some of its own suppliers) that sell directly to certain segments of the market, wholesale distributors, catalog houses, retail enterprises and Internet-based businesses. Grainger provides local product availability, a broad product line, sales representatives, competitive pricing, catalogs (which include product descriptions and, in certain cases, extensive technical and application data) and electronic and eCommerce technology. Other services, such as inventory management, are also offered. Grainger believes that it can effectively compete with manufacturers on small orders, but manufacturers may have an advantage in filling large orders. There are several large competitors, although the majority of the market is served by small local and regional competitors.

#### **Employees**

As of December 31, 2016, Grainger had approximately 25,600 employees, of whom approximately 24,400 were full-time and 1,200 were part-time or temporary. Grainger has never had a major work stoppage and considers employee relations to be adequate.

#### **Website Access to Company Reports**

Grainger makes available, through its website, free of charge, its Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and amendments to those reports, as soon as reasonably practicable after these materials are electronically filed with or furnished to the Securities and Exchange Commission. This material may be accessed by visiting [www.grainger.com/investor](http://www.grainger.com/investor).

## Item 1A: Risk Factors

The following is a discussion of significant risk factors relevant to Grainger's business that could adversely affect its financial condition, results of operations and cash flows. The risk factors discussed in this section should be considered together with information included elsewhere in this Annual Report on Form 10-K and should not be considered the only risks to which the Company is exposed.

***Weakness in the economy, market trends and other conditions affecting the profitability and financial stability of Grainger's customers could negatively impact Grainger's sales growth and results of operations.***

Economic and industry trends affect Grainger's business environments. Grainger serves several industries in which the demand for its products and services is sensitive to the production activity, capital spending and demand for products and services of Grainger's customers. Many of these customers operate in markets that are subject to cyclical fluctuations resulting from market uncertainty, costs of goods sold, currency exchange rates, foreign competition, offshoring of production, oil and natural gas prices, geopolitical developments and a variety of other factors beyond Grainger's control. Any of these factors could cause customers to idle or close facilities, delay purchases, reduce production levels or experience reductions in the demand for their own products or services.

Any of these events could impair the ability of Grainger's customers to make full and timely payments or reduce the volume of products and services these customers purchase from Grainger and could cause increased pressure on Grainger's selling prices and terms of sale. Accordingly, a significant or prolonged slowdown in activity in the United States (U.S.), Canada or any other major world economy, or a segment of any such economy, could negatively impact Grainger's sales growth and results of operations.

***The facilities maintenance industry is highly fragmented, and changes in competition could result in decreased demand for Grainger's products and services.***

There are several large competitors in the industry, although most of the market is served by small local and regional competitors. Grainger faces competition in all markets it serves, from manufacturers (including some of its own suppliers) that sell directly to certain segments of the market, wholesale distributors, catalog houses, retail enterprises and Internet-based businesses that compete with price transparency. The industry is also consolidating as customers are increasingly aware of the total costs of fulfillment and of the need to have consistent sources of supply at multiple locations. This consolidation could cause the industry to become more competitive as greater economies of scale are achieved by competitors, or as competitors with new lower cost business models are able to operate with lower prices and gross profit on products. These competitive pressures could adversely affect Grainger's sales and profitability.

***Changes in inflation may adversely affect gross margins.***

Inflation impacts the costs at which Grainger can procure product and the ability to increase prices to customers over time. Prolonged periods of deflation could adversely affect the degree to which Grainger is able to increase sales through price increases.

***Volatility in commodity prices may adversely affect gross margins.***

Some of Grainger's products contain significant amounts of commodity-priced materials, such as steel, copper, petroleum derivatives or rare earth minerals, and are subject to price changes based upon fluctuations in the commodities market. Fluctuations in the price of fuel could affect transportation costs. Grainger's ability to pass on such increases in costs in a timely manner depends on market conditions. The inability to pass along cost increases could result in lower gross margins. In addition, higher prices could impact demand for these products, resulting in lower sales volumes.

***Unexpected product shortages could negatively impact customer relationships, resulting in an adverse impact on results of operations.***

Grainger's competitive strengths include product selection and availability. Products are purchased from more than 5,100 suppliers located in various countries around the world, no one of which accounted for more than 5% of total purchases. Historically, no significant difficulty has been encountered with respect to sources of supply; however, disruptions could occur due to factors beyond Grainger's control, including economic downturns, political unrest, port slowdowns, trade issues and other factors, any of which could adversely affect a supplier's ability to manufacture or

deliver products. As Grainger continues to source lower cost products from Asia and other areas of the world, the risk for disruptions has increased due to the additional lead time required and distances involved. If Grainger was to experience difficulty in obtaining products, there could be a short-term adverse effect on results of operations and a longer-term adverse effect on customer relationships and Grainger's reputation. In addition, Grainger has strategic relationships with a number of vendors. In the event Grainger was unable to maintain those relations, there might be a loss of competitive pricing advantages which could, in turn, adversely affect results of operations.

***Changes in customer or product mix could cause the gross margin percentage to decline.***

From time to time, Grainger experiences changes in customer and product mix that affect gross margin. Changes in customer and product mix result primarily from business acquisitions, changes in customer demand, customer acquisitions, selling and marketing activities and competition. If rapid growth with lower margin customers continues, Grainger will face pressure to maintain current gross margins, as these customers receive more discounted pricing due to their higher sales volume. There can be no assurance that Grainger will be able to maintain historical gross margins in the future.

***Disruptions in Grainger's supply chain could result in an adverse impact on results of operations.***

A disruption within Grainger's logistics or supply chain network, including damage, destruction, extreme weather and other events, which could cause one or more of Grainger's distribution centers to become non-operational, could adversely affect Grainger's ability to obtain or deliver inventory in a timely manner, impair Grainger's ability to meet customer demand for products and result in lost sales or damage to Grainger's reputation. Grainger's ability to provide same-day shipping and next-day delivery is an integral component of Grainger's business strategy and any such disruption could adversely impact results of operations.

***Interruptions in the proper functioning of information systems could disrupt operations and cause unanticipated increases in costs and/or decreases in revenues.***

The proper functioning of Grainger's information systems is critical to the successful operation of its business. Grainger continues to invest in software, hardware and network infrastructures in order to effectively manage its information systems. Although Grainger's information systems are protected with robust backup and security systems, including physical and software safeguards and remote processing capabilities, information systems are still vulnerable to natural disasters, power losses, computer viruses, telecommunication failures and other problems. If critical information systems fail or otherwise become unavailable, among other things, Grainger's ability to process orders, maintain proper levels of inventories, collect accounts receivable and disburse funds could be adversely affected. Any such interruption of Grainger's information systems could also subject Grainger to additional costs.

***Breaches of information systems security could damage Grainger's reputation, disrupt operations, increase costs and/or decrease revenues.***

Through Grainger's sales and eCommerce channels, Grainger collects and stores personally identifiable, confidential, proprietary and other information from customers so that they may, among other things, purchase products or services, enroll in promotional programs, register on Grainger's websites or otherwise communicate or interact with the Company. Moreover, Grainger's operations routinely involve receiving, storing, processing and transmitting sensitive information pertaining to its business, customers, suppliers and employees, and other sensitive matters.

While Grainger has instituted safeguards for the protection of such information, during the normal course of business, Grainger has experienced and expects to continue to experience attempts to breach the Company's information systems, and Grainger may be unable to protect sensitive data and/or the integrity of the Company's information systems. A cybersecurity incident could be caused by malicious outsiders using sophisticated methods to circumvent firewalls, encryption and other security defenses. Because techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until they are launched against a target, Grainger may be unable to anticipate these techniques or implement adequate preventative measures.

Moreover, from time to time, Grainger may share information with vendors and other third parties that assist with certain aspects of the business. While Grainger requires assurances that these vendors and other parties will protect confidential information, there is a risk that the confidentiality of data held or accessed by them may be compromised. If successful, those attempting to penetrate Grainger's or its vendors' information systems may misappropriate

personally identifiable, credit card, confidential, proprietary or other sensitive customer, supplier, employee or business information.

In addition, a Grainger employee, contractor or other third party with whom Grainger does business may attempt to circumvent security measures in order to obtain such information or inadvertently cause a breach involving such information. Further, Grainger's systems are integrated with customer systems in certain cases, and a breach of the Company's information systems could be used to gain illicit access to customer systems and information.

Loss of customer, supplier, employee or other business information could disrupt operations, damage Grainger's reputation and expose Grainger to claims from customers, suppliers, financial institutions, regulators, payment card associations, employees and others, any of which could have a material adverse effect on Grainger, its financial condition and results of operations.

***Fluctuations in foreign currency have an effect on reported results of operations.***

Grainger's exposure to fluctuations in foreign currency rates results primarily from the translation exposure associated with the preparation of the Consolidated Financial Statements, as well as from transaction exposure associated with transactions in currencies other than an entity's functional currency. While the Consolidated Financial Statements are reported in U.S. dollars, the financial statements of Grainger's subsidiaries outside the U.S. are prepared using the local currency as the functional currency and translated into U.S. dollars. In addition, Grainger is exposed to foreign currency exchange rate risk with respect to the U.S. dollar relative to the local currencies of Grainger's international subsidiaries, primarily the Canadian dollar, euro, pound sterling, Mexican peso, renminbi and yen, arising from transactions in the normal course of business, such as sales and loans to wholly owned subsidiaries, sales to third-party customers, purchases from suppliers and bank loans and lines of credit denominated in foreign currencies. Grainger also has foreign currency exposure to the extent receipts and expenditures are not denominated in the subsidiary's functional currency and that could have an impact on sales, costs and cash flows. These fluctuations in foreign currency exchange rates could affect Grainger's results of operations and impact reported net sales and net earnings.

***Changes in Grainger's credit ratings and outlook may reduce access to capital and increase borrowing costs.***

Grainger's credit ratings are based on a number of factors, including Grainger's financial strength and factors outside of Grainger's control, such as conditions affecting Grainger's industry generally or the introduction of new rating practices and methodologies. Grainger cannot provide assurances that Grainger's current credit ratings will remain in effect or that the ratings will not be lowered, suspended or withdrawn entirely by the rating agencies. If rating agencies lower, suspend or withdraw the ratings, the market price or marketability of Grainger's securities may be adversely affected. In addition, any change in ratings could make it more difficult for the Grainger to raise capital on acceptable terms, impact the ability to obtain adequate financing and result in higher interest costs for Grainger's existing credit facilities or on future financings.

***Acquisitions, partnerships, joint ventures and other business combination transactions involve a number of inherent risks, any of which could result in the benefits anticipated not being realized and could have an adverse effect on results of operations.***

Acquisitions, partnerships, joint ventures and other business combination transactions, both foreign and domestic, involve various inherent risks, such as uncertainties in assessing value, strengths, weaknesses, liabilities and potential profitability. There is also risk relating to Grainger's ability to achieve identified operating and financial synergies anticipated to result from the transactions. Additionally, problems could arise from the integration of acquired businesses, including unanticipated changes in the business or industry or general economic conditions that affect the assumptions underlying the acquisition. Any one or more of these factors could cause Grainger to not realize the benefits anticipated or have a negative impact on the fair value of the reporting units. Accordingly, goodwill and intangible assets recorded as a result of acquisitions could become impaired.

***In order to compete, Grainger must attract, retain and motivate key employees, and the failure to do so could have an adverse effect on results of operations.***

In order to compete and have continued growth, Grainger must attract, retain and motivate executives and other key employees, including those in managerial, technical, sales, marketing and support positions. Grainger competes to hire employees and then must train them and develop their skills and competencies. Grainger's results of operations



could be adversely affected by increased costs due to increased competition for employees, higher employee turnover or increased employee benefit costs.

***Grainger's continued success is substantially dependent on positive perceptions of Grainger's reputation.***

One of the reasons why customers choose to do business with Grainger and why employees choose Grainger as a place of employment is the reputation that Grainger has built over many years. To be successful in the future, Grainger must continue to preserve, grow and leverage the value of Grainger's brand. Reputational value is based in large part on perceptions of subjective qualities. Even an isolated incident, or the aggregate effect of individually insignificant incidents, can erode trust and confidence, particularly if they result in adverse publicity, governmental investigations or litigation, and as a result, could tarnish Grainger's brand and lead to adverse effects on Grainger's business.

***Grainger is subject to various domestic and foreign laws, regulations and standards. Failure to comply or unforeseen developments in related contingencies such as litigation could adversely affect Grainger's financial condition, results of operations and cash flows.***

Grainger's business is subject to a wide array of laws, regulations and standards in every domestic and foreign jurisdiction where it operates, including advertising and marketing regulations, anti-bribery and corruption laws, anti-competition regulations, data protection (including payment card industry data security standards), data privacy (including in the U.S. and the European Union, which has traditionally imposed strict obligations under data privacy laws and regulations that vary from country to country) and cybersecurity requirements (including as to protection of information and incident responses), environmental protection laws, foreign exchange controls and cash repatriation restrictions, government business regulations applicable to Grainger as a government contractor selling to federal, state and local government entities, health and safety laws, import and export requirements, intellectual property laws, labor laws, product compliance laws, supplier regulations regarding the sources of supplies or products, tax laws (including as to U.S. taxes on foreign subsidiaries), unclaimed property laws and laws, regulations and standards applicable to other commercial matters. Moreover, Grainger is also subject to audits and inquiries in the normal course of business.

Failure to comply with any of these laws, regulations and standards could result in civil, criminal, monetary and non-monetary penalties as well as potential damage to the Company's reputation. Changes in these laws, regulations and standards, or in their interpretation, could increase the cost of doing business, including, among other factors, as a result of increased investments in technology and the development of new operational processes. Furthermore, while Grainger has implemented policies and procedures designed to facilitate compliance with these laws, regulations and standards, there can be no assurance that employees, contractors or agents will not violate such laws, regulations and standards or Grainger's policies. Any such failure to comply or violation could individually or in the aggregate materially adversely affect Grainger's financial condition, results of operations and cash flows.

Grainger also is, and from time to time may become, party to a number of legal proceedings incidental to Grainger's business involving alleged damages or injuries arising out of the use of Grainger's products and services or violations of these laws, regulations or standards. The defense of these proceedings may require significant expenses and divert management's time and attention, and Grainger may be required to pay damages that could individually or in the aggregate materially adversely affect its financial condition, results of operations and cash flows. In addition, any insurance or indemnification rights that Grainger may have with respect to such matters may be insufficient or unavailable to protect the Company against potential loss exposures.

***Tax changes could affect Grainger's effective tax rate and future profitability.***

Grainger's future results could be adversely affected by changes in the effective tax rate as a result of changes in Grainger's overall profitability and changes in the mix of earnings in countries with differing statutory tax rates, changes in tax legislation, the results of the examination of previously filed tax returns and continuing assessment of the Company's tax exposures.

**Item 1B: Unresolved Staff Comments**

None.

## Item 2: Properties

As of December 31, 2016, Grainger's owned and leased facilities totaled approximately 29.3 million square feet. The U.S. and Canada businesses accounted for the majority of the total square footage. Grainger believes that its properties are generally in excellent condition, well maintained and suitable for the conduct of business.

A brief description of significant facilities follows:

Location	Facility and Use (6)	Size in Square Feet (in 000's)
U.S. (1)	284 U.S. branch locations	6,477
U.S. (2)	18 Distribution Centers	8,721
U.S. (3)	Other facilities	4,846
Canada (4)	159 Acklands – Grainger facilities	3,284
Other Businesses (5)	Other facilities	4,771
Chicago Area (2)	Headquarters and General Offices	1,226
	Total Square Feet	29,325

- (1) Consists of 211 owned and 73 leased properties located throughout the U.S. ranging in size from approximately 1,000 to 109,000 square feet.
- (2) These facilities are primarily owned and they range in size from approximately 45,000 square feet to 1.3 million square feet.
- (3) These facilities include both owned and leased locations, consisting of storage facilities, office space, call centers and idle properties.
- (4) Consists of general offices, distribution centers and branches located throughout Canada, of which 66 are owned and 93 leased.
- (5) These facilities include owned and leased locations in Europe, Asia, Latin America and other U.S. operations.
- (6) Owned facilities are not subject to any mortgages.

## Item 3: Legal Proceedings

### Environmental Matters

As previously disclosed, on August 5, 2015, Environment Canada initiated a proceeding against the Company's Canadian subsidiary, Acklands-Grainger, in the Provincial Court of Alberta seeking monetary sanctions based on allegations that Acklands-Grainger sold certain products containing an ozone-depleting substance in violation of the Canadian Environmental Protection Act, 1999 and prohibited by the Ozone-Depleting Substances Regulations, 1998. On December 12, 2016, as part of a negotiated plea agreement, Acklands-Grainger pleaded guilty in the Provincial Court of Alberta to two counts of violating the Ozone-Depleting Substances Regulations and agreed to pay a fine of C\$500,000. Acklands-Grainger intends to seek indemnification from the suppliers that sold Acklands-Grainger the products in question.

### Other Matters

For a description of other legal proceedings, see Note 17 to the Consolidated Financial Statements included under Item 8.

## Item 4: Mine Safety Disclosures

Not applicable.

## PART II

### Item 5: Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

#### Market Information and Dividends

Grainger's common stock is listed on the New York Stock Exchange, with the ticker symbol GWW. Effective January 1, 2015, Grainger voluntarily delisted its common stock from the Chicago Stock Exchange to eliminate duplicative administrative requirements. The high and low sales prices for the common stock and the dividends declared and paid per share for each calendar quarter during 2016 and 2015 are shown below.

	Quarters	Prices		Dividends
		High	Low	
2016	First	\$ 234.77	\$ 176.85	\$ 1.17
	Second	239.95	212.64	1.22
	Third	235.53	212.54	1.22
	Fourth	240.74	201.94	1.22
	Year	\$ 240.74	\$ 176.85	\$ 4.83
2015	First	\$ 256.97	\$ 228.15	\$ 1.08
	Second	252.87	228.05	1.17
	Third	240.00	194.42	1.17
	Fourth	233.00	189.60	1.17
	Year	\$ 256.97	\$ 189.60	\$ 4.59

Grainger expects that its practice of paying quarterly dividends on its common stock will continue, although the payment of future dividends is at the discretion of Grainger's Board of Directors and will depend upon Grainger's earnings, capital requirements, financial condition and other factors.

#### Holders

The approximate number of shareholders of record of Grainger's common stock as of January 31, 2017, was 720 with approximately 218,500 additional shareholders holding stock through nominees.

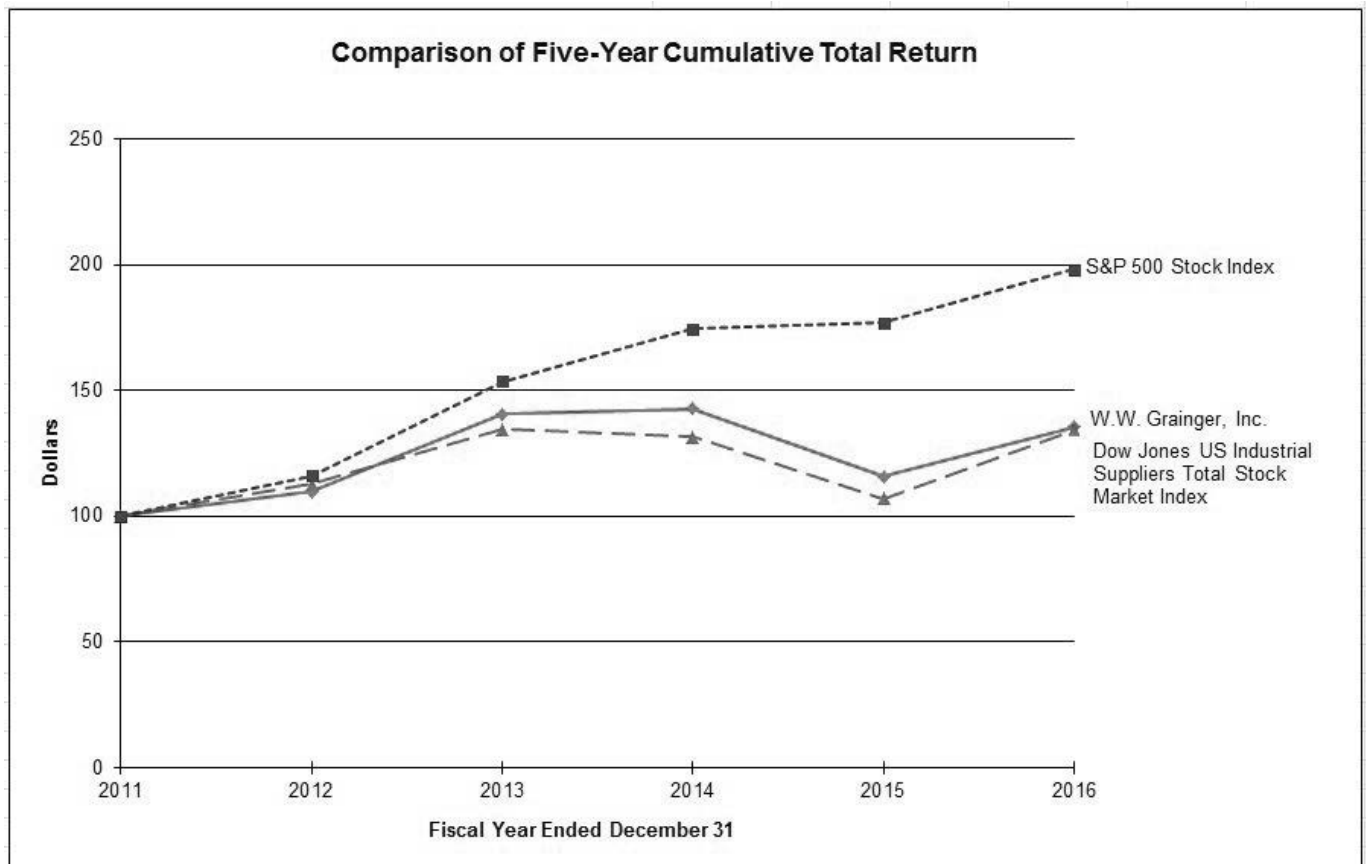
#### Issuer Purchases of Equity Securities - Fourth Quarter

Period	Total Number of Shares Purchased (A)	Average Price Paid Per Share (B)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (C)	Maximum Number of Shares That May Yet be Purchased Under the Plans or Programs
Oct. 1 – Oct. 31	306,313	\$212.89	306,313	6,367,978 shares
Nov. 1 – Nov. 30	239,007	\$216.57	239,007	6,128,971 shares
Dec. 1 – Dec. 31	270,264	\$236.75	270,264	5,858,707 shares
Total	815,584	\$221.87	815,584	

- (A) There were no shares withheld to satisfy tax withholding obligations in connection with the vesting of employee restricted stock awards.
- (B) Average price paid per share includes any commissions paid and includes only those amounts related to purchases as part of publicly announced plans or programs.
- (C) Purchases were made pursuant to a share repurchase program approved by Grainger's Board of Directors. Activity is reported on a trade date basis.

## Company Performance

The following stock price performance graph compares the cumulative total return on an investment in Grainger common stock with the cumulative total return of an investment in each of the Dow Jones US Industrial Suppliers Total Stock Market Index and the S&P 500 Stock Index. It covers the period commencing December 31, 2011, and ending December 31, 2016. The graph assumes that the value for the investment in Grainger common stock and in each index was \$100 on December 31, 2011, and that all dividends were reinvested.



	December 31,					
	2011	2012	2013	2014	2015	2016
W.W. Grainger, Inc.	\$ 100	\$ 110	\$ 141	\$ 143	\$ 116	\$ 136
Dow Jones US Industrial Suppliers Total Stock Market Index	100	113	135	132	107	134
S&P 500 Stock Index	100	116	154	175	177	198

**Item 6: Selected Financial Data**

	2016	2015	2014	2013	2012
	(In thousands of dollars, except for per share amounts)				
Net sales	\$ 10,137,204	\$ 9,973,384	\$ 9,964,953	\$ 9,437,758	\$ 8,950,045
Net earnings attributable to W.W. Grainger, Inc.	605,928	768,996	801,729	797,036	689,881
Net earnings per basic share	9.94	11.69	11.59	11.31	9.71
Net earnings per diluted share	9.87	11.58	11.45	11.13	9.52
Total assets	5,694,307	5,857,755	5,283,049	5,266,328	5,014,598
Long-term debt (less current maturities) and other long-term liabilities	2,159,602	1,716,507	737,232	743,702	817,229
Cash dividends paid per share	\$ 4.83	\$ 4.59	\$ 4.17	\$ 3.59	\$ 3.06

Net earnings for 2016 included a net expense of \$105 million, or \$1.71 per share, consisting of the following:

- Restructuring: A net charge of \$26 million, or \$0.43 after-tax earnings per share expense related to restructuring actions. These actions primarily included branch closures, net of gains on sale of branch real estate in the United States (U.S.) and Canadian businesses.
- Goodwill and intangible impairments: A non-cash impairment charge of \$52 million, or \$0.85 after-tax earning per share, related to goodwill and intangible impairments in Other Businesses.
- Unclaimed property contingency: A charge of \$23 million, or \$0.37 after-tax earnings per share, related to an adjustment for unclaimed property in the U.S. business primarily related to activity from 2008 through 2012.
- General Services Administration (GSA) contingency: An expense of \$6 million, or \$0.09 after-tax earnings per share, to increase the U.S. business reserve for certain tax, freight and miscellaneous billing issues in connection with the audit of government contracts with the GSA first entered in 1999.
- Inventory adjustment: A charge of \$7 million, or \$0.12 after-tax earnings per share, related to an inventory adjustment in the Canadian business to reflect on updated reserve methodology and better visibility to inventory performance provided by the conversion to the U.S. ERP system.
- Discrete tax items: A benefit of \$9 million, or \$0.15 earnings per share, related to the conclusion of the federal income tax audit for the years 2009 through 2012 in the U.S. business and other discrete tax items.

Net earnings for 2015 included a \$0.33 per share expense related to reorganization in the U.S. business and at the corporate office, a \$0.05 per share expense related to reorganization in the Canadian business and a \$0.07 per share expense for restructuring in Other Businesses. Results also included a \$0.09 per share benefit primarily related to revaluation of deferred tax liabilities resulting from tax law changes in the United Kingdom. When combined, these items had a net expense effect of \$0.36 per share.

Net earnings for 2014 included a \$0.40 per share expense related to closing of the business in Brazil, a \$0.15 per share non-cash charge due to the retirement plan transition in Europe and a \$0.15 per share expense related to restructuring the business in Europe. Results also included a \$0.11 per share expense related to a non-cash goodwill impairment charge in Other Businesses. When combined, these items had a net expense effect of \$0.81 per share.

Net earnings for 2013 included a \$0.29 per share expense related to non-cash impairment charges in Other Businesses, primarily for goodwill. Results also included a \$0.10 per share expense related to restructuring the businesses in Europe and China. When combined, these items had a net expense effect of \$0.39 per share.

Net earnings for 2012 included a \$0.66 per share expense related to the settlement of disputes involving the GSA and United States Postal Service (USPS) contracts in the U.S. business. Results also included a \$0.18 per share expense related to restructuring the businesses in Europe, India and China; a \$0.04 per share expense due to a non-cash impairment charge in the U.S. business and a \$0.03 per share expense related to U.S. branch closures. When combined, these items had a net expense effect of \$0.91 per share.

Grainger completed several acquisitions for the years presented above, all of which were immaterial individually and in the aggregate. Operating results have included the results of each business acquired since the respective acquisition dates.

For further information see "Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations."

## Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

### Overview

**General.** Grainger is a broad line distributor of maintenance, repair and operating (MRO) supplies and other related products and services used by businesses and institutions. Grainger's operations are primarily in the United States (U.S.) and Canada, with a presence in Europe, Asia and Latin America. Grainger uses a combination of multichannel and single channel business models to provide customers with a range of options for finding and purchasing products utilizing sales representatives, catalogs, direct marketing materials and eCommerce. Grainger serves approximately 3 million customers worldwide through a network of highly integrated branches, distribution centers and websites.

Grainger's two reportable segments are the U.S. and Canada. The U.S. operating segment reflects the results of Grainger's U.S. business. The Canada operating segment reflects the results for Acklands – Grainger Inc., Grainger's Canadian business. Other Businesses include single channel online businesses such as MonotaRO in Japan and Zoro in the U.S., and business units in Europe, Asia and Latin America.

**Business Environment.** Given Grainger's large number of customers and the diverse industries it serves, several economic factors and industry trends tend to shape Grainger's business environment. The overall economy and leading economic indicators provide general insight into projecting Grainger's growth. Grainger's sales in the U.S. and Canada tend to positively correlate with Business Investment, Business Inventory, Exports and Industrial Production. In the U.S., sales tend to positively correlate with Gross Domestic Product (GDP). In Canada, sales tend to positively correlate with oil prices. The table below provides these estimated indicators for 2016 and 2017:

	U.S.		Canada	
	Estimated 2016	Forecasted 2017	Estimated 2016	Forecasted 2017
Business Investment	(2.8)%	3.4%	(2.8)%	0.7%
Business Inventory	1.0 %	0.6%	—	—
Exports	0.4 %	1.9%	1.0 %	1.9%
Industrial Production	(1.0)%	1.4%	(0.5)%	1.9%
GDP	1.6 %	2.3%	1.3 %	2.1%
Oil Prices	—	—	\$43/barrel	\$57/barrel

Source: Global Insight (February 2017)

In the U.S., Business Investment and Exports are two major indicators of MRO spending. Per the Global Insight February 2017 forecast, Business Investment is forecast to improve in 2017 through equipment related spendings as the influence from slow growth abroad and in the United States fades. Export growth is expected to improve in 2017 as the global economy stabilizes and attracts more capital to the United States.

Per the Global Insight February 2017 forecast, Canada economic growth in 2016 is forecast to continue to remain low but improve in 2017. For the year, the Canadian economy, as measured by GDP, is forecast to grow to 2.1% in 2017 compared to the 2016 estimate of 1.3%. The 2017 forecast assumes that oil prices will continue a slow but steady rise and that business nonresidential investment (a component of Business Investment) will begin to increase. The latest forecast for the Canadian dollar includes further downward adjustments and weakness over the next two years compared to the U.S. dollar.

**Outlook.** Grainger plans to continue to make investments in its supply chain, eCommerce capabilities, information systems, sales force productivity tools and inventory management services. These investments will support the Company's revenue growth objectives of (i) continuing to grow its share of business with large, complex customers; (ii) creating a unique value proposition to further penetrate the medium customer segment and (iii) further leveraging its eCommerce capabilities to serve smaller customers. Through the execution of continuous improvement initiatives, the U.S. business will reduce its cost base while ensuring that it continues to deliver an effortless customer experience. In Canada, the Company took aggressive actions in 2016 that will position the business for long-term sustainable growth and profitability. These actions, which included business and personnel reorganization, branch closures, ERP and eCommerce investments, should position the Canadian business for growth in 2017 and restore the business to break even by the end of 2017.

On January 25, 2017, Grainger reiterated its 2017 sales and earnings per share guidance issued on November 11, 2016, and continues to expect 2 to 6 percent sales growth and earnings per share of \$11.30 to \$12.40 for 2017.

**Matters Affecting Comparability.** There were 255 sales days in the full year 2016 and 2015. Grainger completed one acquisition in 2015 and one in 2014, both of which were immaterial individually and in the aggregate. Grainger's operating results have included the results of each business acquired since the respective acquisition dates.

## Results of Operations

The following table is included as an aid to understanding changes in Grainger's Consolidated Statements of Earnings (in millions of dollars):

	For the Years Ended December 31,							
				Percent Increase/ (Decrease) from Prior Year		As a Percent of Net Sales		
	2016 (A)	2015 (A)	2014 (A)	2016	2015	2016	2015	2014
Net sales	\$ 10,137	\$ 9,973	\$ 9,965	2 %	— %	100.0%	100.0%	100.0%
Cost of merchandise sold	6,023	5,742	5,651	5 %	2 %	59.4	57.6	56.7
Gross profit	4,115	4,231	4,314	(3)%	(2)%	40.6	42.4	43.3
Operating expenses	2,995	2,931	2,967	2 %	(1)%	29.6	29.4	29.8
Operating earnings	1,119	1,300	1,347	(14)%	(4)%	11.0	13.0	13.5
Other expense	100	50	13	102 %	290 %	1.0	0.5	0.1
Income taxes	386	466	522	(17)%	(11)%	3.8	4.7	5.2
Noncontrolling interest	27	16	11	66 %	53 %	0.3	0.2	0.1
Net earnings attributable to W.W. Grainger, Inc.	\$ 606	\$ 769	\$ 801	(21)%	(4)%	6.0%	7.7%	8.1%

(A) May not sum due to rounding

### 2016 Compared to 2015

Grainger's net sales of \$10,137 million for 2016 were an increase of 2% when compared with net sales of \$9,973 million for the comparable 2015 period. The 2% increase for the year consisted of the following:

	Percent Increase/ (Decrease)
Cromwell acquisition	3
Volume	1
Price	(2)
Total	2%

Sales growth to government, retail and light manufacturing customers were offset by a decline in sales to natural resource customers, resellers, contractors and heavy manufacturing customers. In 2016, eCommerce sales for Grainger were \$4,757 million, an increase of 15% over the prior year and represented 47% of total sales. The increase was primarily driven by an increase in sales via EDI and electronic purchasing platforms in the U.S. and Japan businesses. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 56% of total sales. Refer to the *Segment Analysis* below for further details.

Gross profit of \$4,115 million for 2016 decreased 3%. The gross profit margin for 2016 was 40.6%, down 1.8 percentage points versus 2015, primarily due to price deflation exceeding cost deflation and unfavorable customer mix.



Operating expenses of \$2,995 million for 2016 increased 2% from \$2,931 million for 2015. The increase was primarily due to the following:

- \$35 million of restructuring charges primarily in the U.S. and Canadian businesses.
- \$52 million of impairment charges for goodwill and intangible assets in Other Businesses.
- \$36 million adjustment for unclaimed property in the U.S. business, primarily for the five years 2008 through 2012.
- \$9 million increase in the U.S. business reserve related to certain tax, freight and miscellaneous billing issues in connection with the audit of government contracts with the General Services Administration first entered in 1999.

In 2015, operating expenses included \$42 million related to restructuring and other charges primarily in the U.S. and Canadian business. Excluding the charges from both years, operating expenses were down 1%.

Operating earnings of \$1,119 million for 2016 decreased 14% from \$1,300 million for 2015. The decrease in operating earnings was driven by lower gross profit margin and higher restructuring costs and other charges. Operating earnings included the charges noted above. Excluding these charges from both years, operating earnings decreased 6%.

Net earnings attributable to Grainger for 2016 decreased by 21% to \$606 million from \$769 million in 2015. The decrease in net earnings primarily resulted from lower operating earnings, partially offset by lower income taxes. Excluding the charges from both years mentioned above and discrete tax items, net earnings decreased 10%.

Diluted earnings per share of \$9.87 in 2016 were 15% lower than \$11.58 for 2015, due to lower earnings, partially offset by lower average shares outstanding as a result of share repurchases. Excluding the charges mentioned above diluted earnings per share would have been \$11.58 compared to \$11.94 in 2015, a decrease of 3%.

The table below reconciles reported diluted earnings per share determined in accordance with generally accepted accounting principles (GAAP) in the U.S. to adjusted diluted earnings per share, a non-GAAP measure. Management believes adjusted diluted earnings per share is an important indicator of operations because it excludes items that may not be indicative of core operating results. Because non-GAAP financial measures are not standardized, it may not be possible to compare this financial measure with other companies' non-GAAP financial measures having the same or similar names.

	<b>Twelve Months Ended December 31,</b>		
	<b>2016</b>	<b>2015</b>	<b>%</b>
Diluted earnings per share reported	\$ 9.87	\$ 11.58	(15)%
Adjustments, pretax (1)	2.41	0.69	
Tax effect (1)(2)	(0.55)	(0.24)	
Discrete tax items	(0.15)	(0.09)	
Subtotal	1.71	0.36	
Diluted earnings per share adjusted	<u>\$ 11.58</u>	<u>\$ 11.94</u>	(3)%

(1) Adjustments discussed in detail in Item 6.

(2) The tax impact of adjustments is calculated based on the income tax rate in each applicable jurisdiction.

### Segment Analysis

Grainger's two reportable segments are the U.S. and Canada. The U.S. operating segment reflects the results of Grainger's U.S. business. The Canada operating segment reflects the results for Acklands – Grainger Inc., Grainger's Canadian business. Other businesses include single channel online businesses such as MonotaRO in Japan and Zoro in the U.S., and business units in Europe, Asia and Latin America.

The following comments at the reportable segment and other business unit level include external and intersegment net sales and operating earnings. See Note 16 to the Consolidated Financial Statements.

### United States

Net sales were \$7,870 million for 2016, a decrease of \$93 million, or 1% when compared with net sales of \$7,963 million for 2015. The 1% decrease for the year consisted of the following contributors:

	Percent Increase/ (Decrease)
Intercompany sales to Zoro	1
Volume	(1)
Price	(1)
Total	(1)%

Mid-single-digit sales growth to government and retail customers and low single-digit growth to light manufacturing was offset by mid-teen declines in sales to natural resource and reseller customers and mid-single-digit declines to heavy manufacturing customers and contractors.

In 2016, eCommerce sales for the U.S. business were \$3,660 million, an increase of 12% over the prior year and represented 46% of total sales. The increase was primarily driven by an increase in sales via EDI and electronic purchasing platforms. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 57% of total sales.

The segment gross profit margin decreased 1.3 percentage points in 2016 compared to 2015, driven by price deflation exceeding cost deflation and stronger sales growth to lower margin customers.

Operating expenses were down 2% for 2016 versus 2015. The decrease in operating expenses was driven by lower employees benefit costs, partially offset by higher restructuring costs and other charges discussed above. Excluding the restructuring and other charges in both periods, operating expenses would have been down 4%.

For the segment, operating earnings of \$1,275 million for 2016 decreased 7% versus \$1,372 million in 2015. The decline in operating earnings for 2016 was primarily driven by lower sales and gross profit margin, partially offset by lower operating expenses. Excluding the restructuring costs and other charges in both periods, operating earnings decreased 5%.

### Canada

Net sales were \$734 million for 2016, a decrease of \$157 million, or 18%, when compared with \$891 million for 2015. In local currency, sales decreased 15% for 2015. The 18% decrease for the year consisted of the following contributors:

	Percent Decrease
Volume	(10)
Foreign exchange	(3)
Price	(2)
ERP implementation	(2)
Wildfire impact	(1)
Total	(18)%

Sales performance in Canada was primarily driven by declines within the oil and gas sector in Alberta, combined with declines in all other end markets across the country. The Alberta region, which represents about one-third of the sales in the Canadian business, decreased 23% versus prior year, as it was negatively impacted by oil prices. Sales growth

for the remaining regions in aggregate was down 10% in local currency. In addition, the Canadian business implemented the U.S. ERP system in February 2016, which negatively impacted sales as employees transitioned to operating with the new system.

In 2016, eCommerce sales for the Canada business were \$98 million, a decrease of 8% over the prior year and represented 13% of total sales. The decrease was primarily driven by lower sales volume. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 26% of total sales.

The segment gross profit margin decreased 7.8 percentage points in 2016 versus 2015, due to an inventory adjustment of \$10 million in the second quarter of 2016, along with price deflation versus cost inflation and higher freight costs from an increase in shipping directly to customers. As a result of service issues due to the ERP system implementation, the Company did not increase prices to customers during 2016.

Operating expenses decreased 8% in 2016 versus 2015. The decrease was due to the benefit of a \$7 million gain from the sale of the former Toronto DC in the first quarter of 2016 and lower ERP system project costs, partially offset by higher restructuring costs. Excluding the restructuring costs from both periods, operating expenses decreased 11%.

Operating losses of \$65 million for 2016 versus operating earnings of \$27 million in 2015, a decrease of \$92 million. Excluding the restructuring costs mentioned above, the operating losses would have been \$41 million due to lower sales and gross profit margin and operating expenses declining at a slower rate than sales when compared to the prior period.

#### Other Businesses

Net sales for other businesses, which include MonotaRO in Japan, Zoro in the U.S. and operations in Europe, Asia, Latin America and Cromwell in the United Kingdom (U.K.) (acquired September 1, 2015) were \$1,885 million for 2016, an increase of \$479 million, or 34%, when compared to \$1,406 million for 2015. The net sales increase was primarily due to the Cromwell acquisition and incremental sales at Zoro and MonotaRO. The 34% increase for the year consisted of the following contributors:

	Percent Increase
Cromwell acquisition	18
Volume	15
Foreign exchange	1
Total	34%

Operating earnings for other businesses were \$41 million for 2016 compared to \$48 million for 2015. Excluding goodwill and intangible impairment charges of \$52 million in the Fabory and Colombia businesses and other restructuring charges in the prior year, operating earnings for other business increased by \$39 million driven by strong performance from MonotaRO, Zoro and the earnings contribution from Cromwell.

#### Other Income and Expense

Other expense was \$100 million in 2016 compared to \$50 million of expense in 2015. The following table summarizes the components of other income and expense (in thousands of dollars):

	For the Years Ended December 31,	
	2016	2015
Interest income (expense) - net	\$ (65,615)	\$ (32,405)
Loss from equity method investment	(31,193)	(11,740)
Other non-operating income	1,300	1,102
Other non-operating expense	(4,931)	(6,572)
Total	\$ (100,439)	\$ (49,615)

The increase in expense was driven by higher interest expense from the \$1 billion in long-term debt issued in June 2015 and \$400 million in long-term debt issued in May 2016, as well as higher operating losses from the Company's clean energy investments.

### Income Taxes

Income taxes of \$386 million in 2016 decreased 17% compared with \$466 million in 2015. Grainger's effective tax rates were 37.9% and 37.2% in 2016 and 2015, respectively. The year-over-year increase in the tax rate was primarily due to a larger proportion of earnings from higher tax rate jurisdictions, partially offset by a higher benefit from the Company's clean energy investments. The twelve months ended December 31, 2016, included a benefit from the conclusion of the federal income tax audit for the years 2009 through 2012 and other discrete items. Excluding the discrete tax benefits and non-deductible intangible write-downs, the Company's effective tax rate was 37.1%. The Company's clean energy investment generated \$0.15 per share of earnings for the year ended December 31, 2016.

### 2015 Compared to 2014

Grainger's net sales of \$9,973 million for 2015 were flat when compared with net sales of \$9,965 million for 2014. Contributors to the sales performance for 2015 were as follows:

	Percent Increase/ (Decrease)
Volume	2
Business acquisition	2
Price	(1)
Foreign exchange	(3)
Total	—%

Sales growth to light manufacturing and government customers were offset by a decline in sales to natural resource customers, contractors, resellers and heavy manufacturing customers. In 2015, eCommerce sales for Grainger were \$4,133 million, an increase of 16% over the prior year and represented 41% of total sales. The increase was primarily driven by an increase in sales via EDI and electronic purchasing platforms in the U.S. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 50% of total sales. Refer to the *Segment Analysis* below for further details.

Gross profit of \$4,231 million for 2015 decreased 2%. The gross profit margin for 2015 was 42.4%, down 0.9 percentage point versus 2014, primarily driven by higher sales to lower margin customers and price deflation exceeding cost deflation.

Operating expenses of \$2,931 million for 2015 decreased 1% from \$2,967 million for 2014. The decrease was primarily driven by lower employee benefits, partially offset by higher severance and contract services costs. Operating expenses included new sales representatives, supply chain and inventory management solutions, as well as \$42 million of charges primarily related to reorganizing the businesses in the U.S. and Canada. In 2014, operating expenses included \$51 million related to the closing of the business in Brazil, restructuring costs, the transition of the retirement plan in Europe and an impairment charge for the business in Colombia. Excluding the reorganization and restructuring costs from both years, operating expenses were down 1%.

Operating earnings of \$1,300 million for 2015 decreased 3% from \$1,347 million for 2014. Operating earnings declined due to a lower gross profit margin, partially offset by operating expense leverage. Operating earnings included the charges noted above. Excluding these charges from both years, operating earnings decreased 5%.

Net earnings attributable to Grainger for 2015 decreased by 4% to \$769 million from \$802 million in 2014. The decrease in net earnings primarily resulted from lower operating earnings, partially offset by lower income taxes. Diluted earnings per share of \$11.58 in 2015 were 1% higher than \$11.45 for 2014, due to lower average shares outstanding.

The following table reconciles reported diluted earnings per share determined in accordance with generally accepted accounting principles (GAAP) in the U.S. to adjusted diluted earnings per share, a non-GAAP measure. Management believes adjusted diluted earnings per share is an important indicator of operations because it excludes items that may not be indicative of core operating results. Because non-GAAP financial measures are not standardized, it may not be possible to compare this financial measure with other companies' non-GAAP financial measures having the same or similar names.

	Twelve Months Ended December 31,		
	2015	2014	%
Diluted earnings per share reported	\$ 11.58	\$ 11.45	1 %
Adjustments, pretax	0.69	0.94	
Tax effect (1)	(0.24)	(0.13)	
Discrete tax items	(0.09)	—	
Total, net of tax	0.36	0.81	
Diluted earnings per share adjusted	<u>\$ 11.94</u>	<u>\$ 12.26</u>	(3)%

(1) The tax impact of adjustments is calculated on the income tax rate in each applicable jurisdiction.

### *Segment Analysis*

The following comments at the reportable segment and other business unit level include external and intersegment net sales and operating earnings. See Note 16 to the Consolidated Financial Statements.

### United States

Net sales were \$7,963 million for 2015, an increase of \$37 million, or flat when compared with net sales of \$7,926 million for 2014. Contributors to the sales performance for 2015 were as follows:

	Percent Increase/ (Decrease)
Volume	—
Intercompany sales to Zoro	1
Price	(1)
Total	<u>—%</u>

Mid-single-digit sales growth to light manufacturing and government customers and low single-digit growth to commercial services were offset by a mid-teen decline in sales to natural resource customers and low-single-digit declines to heavy manufacturing customers and contractors. In 2015, eCommerce sales for the U.S. business were \$3,275 million, an increase of 16% over the prior year, and represented 41% of total sales. The increase was primarily driven by an increase in sales via EDI and electronic purchasing platforms. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 51% of total sales.

The segment gross profit margin decreased 1.0 percentage point in 2015 compared to 2014, primarily driven by price decreases exceeding product cost decreases and higher sales to lower margin customers.

Operating expenses were up 1% for 2015 versus 2014. Operating expenses included an incremental \$96 million in growth-related spending on eCommerce, new sales representatives, supply chain and inventory management solutions, as well as \$32 million of charges related to reorganizing the business, including branch closures. Excluding the reorganization costs, operating expenses decreased 1% primarily due to lower employee benefit costs.

For the segment, operating earnings of \$1,372 million for 2015 decreased 5% versus \$1,444 million in 2014. Excluding the reorganization expenses mentioned above, operating earnings were down 3%. The decline in operating earnings for 2015 was due to a lower gross profit margin, partially offset by positive operating expense leverage.

### Canada

Net sales were \$891 million for 2015, a decrease of \$185 million, or 17%, when compared with \$1,076 million for 2014. In local currency, sales increased 5% for 2015. The 17% decrease for the year consisted of the following contributors:

	Percent Increase/ (Decrease)
Volume	(14)
Foreign exchange	(12)
Acquisition	5
Price	4
Total	<u>(17)%</u>

Sales performance in Canada was driven by mid-teen declines in the oil and gas, contractor, commercial services, heavy manufacturing, resellers and retail markets. Net sales in the agriculture and mining and utilities end markets were up in the mid-single digits. In 2015, eCommerce sales for Canada were \$107 million, a decrease of 13% versus the prior year and represented 12% of total sales. If the Company included KeepStock®, the electronic inventory management offering, total eCommerce and KeepStock® sales would represent 23% of total sales.

The segment gross profit margin decreased 0.4 percentage point in 2015 versus 2014, primarily driven by product cost inflation exceeding price inflation driven by unfavorable foreign exchange, partially offset by higher supplier rebates.

Operating expenses decreased 4% in 2015. In local currency, operating expenses increased 11%, primarily due to higher severance costs related to reorganizing the business, higher depreciation driven primarily by a new DC and incremental costs from the WFS Enterprises Inc. (WFS) acquisition as 2014 included a partial year. Excluding the reorganization costs, operating expenses increased 9%.

Operating earnings of \$27 million for 2015 decreased \$61 million, or 69%, versus 2014. In local currency, operating earnings decreased 64%. The decrease in earnings was due to lower sales, lower gross profit margins and negative operating expense leverage.

### Other Businesses

Net sales for Other Businesses, which include Zoro in the U.S. and operations in Europe, Asia and Latin America and Cromwell in the U.K. (acquired September 1, 2015), were \$1,406 million for 2015, an increase of \$224 million, or 19%, when compared with \$1,182 million for 2014. The net sales increase was primarily due to incremental sales from Cromwell, Zoro and MonotaRO. The 19% increase for the year consisted of the following contributors:

	Percent Increase/ (Decrease)
Volume/Price	21
Acquisition	12
Foreign exchange	(14)
Total	<u>19%</u>

Operating earnings for other businesses were \$48 million for 2015 compared to a loss of \$38 million for 2014. The year 2015 included \$6 million of charges for the continuing restructuring of the business in Europe and additional costs to shut down the business in Brazil. The year 2014 included a \$29 million charge related to closing the business in Brazil, a \$14 million charge related to the transition of the employee retirement plan in Europe, a \$12 million impairment charge for the business in Colombia and \$10 million in restructuring costs for the business in Europe. Excluding these charges in both years, operating earnings increased \$27 million, primarily driven by improved operating performance by MonotaRO and Zoro, partially offset by incremental expenses associated with the single channel online business model in Europe.

### *Other Income and Expense*

Other income and expense was \$50 million of expense in 2015 compared with \$13 million of expense in 2014. The following table summarizes the components of other income and expense (in thousands of dollars):

	For the Years Ended December 31,	
	2015	2014
Interest income (expense) - net	\$ (32,405)	\$ (8,025)
Loss from equity method investment	(11,740)	—
Other non-operating income	1,102	483
Other non-operating expense	(6,572)	(5,189)
Total	<u>\$ (49,615)</u>	<u>\$ (12,731)</u>

The increase in expense was driven by higher interest expense from the \$1 billion in long-term debt issued in June 2015, as well as operating losses from the Company's clean energy investments. As discussed below, the operating losses in this investment were more than offset by energy tax credits that lowered Grainger's tax rate, which provided Grainger with positive net earnings and cash flow. The clean energy investment generated \$0.09 per share of earnings for 2015.

### *Income Taxes*

Income taxes of \$466 million in 2015 decreased 11% compared with \$522 million in 2014. Grainger's effective tax rates were 37.2% and 39.1% in 2015 and 2014, respectively. Excluding the effect of restructuring and non-operating items reported in both 2015 and 2014, Grainger's adjusted tax rate was 37.6% and 38.2% in 2015 and 2014, respectively. The decrease in the tax rate in 2015 was primarily due to the Company's clean energy investments, partially offset by a higher proportion of earnings in the U.S. versus geographies with lower tax rates.

## **Financial Condition**

Grainger expects its strong working capital position, cash flows from operations and borrowing capacity to continue, allowing it to fund its operations, including growth initiatives, capital expenditures, acquisitions and repurchase of shares, as well as to pay cash dividends.

### Cash Flow

#### 2016 Compared to 2015

Net cash provided by operating activities was \$1,003 million and \$990 million for the twelve months ended December 31, 2016 and 2015, respectively. The increase was primarily the result of lower employee related costs.

Net cash used in investing activities was \$262 million and \$843 million for the twelve months ended December 31, 2016 and 2015, respectively. The higher use of cash in 2015 was driven by the Cromwell acquisition in September 2015. In 2016, lower additions to property, buildings and equipment compared to the prior year and higher proceeds from the sale of branch real estate assets contributed to the reduction in cash used in investing activities.

Net cash used in financing activities was \$755 million and \$63 million in the twelve months ended December 31, 2016 and 2015, respectively. The change in financing activities was primarily driven by the issuance of \$400 million in Senior Notes in 2016 compared to the issuance of \$1 billion in Senior Notes in 2015 and significantly lower stock repurchases in 2016 compared to 2015.

#### 2015 Compared to 2014

Net cash provided by operating activities in 2015 were \$990 million versus \$960 million in 2014. This positive cash flow was due to relatively flat receivable balances, partially offset by a decrease in employee benefit liabilities.

Net cash used in investing activities was \$843 million and \$384 million in 2015 and 2014, respectively. The higher use of cash was primarily driven by \$464 million of net cash paid for a business acquisition in 2015 versus \$31 million in 2014.

Net cash used in financing activities of \$63 million in 2015 decreased \$695 million from \$758 million in 2014. The decrease was primarily due to proceeds from the issuance of \$1 billion in Senior Notes, a £160 million term loan and issuance of commercial paper to support the acquisition of Cromwell, as well as ¥6 billion term loans to support the construction of a new distribution center in MonotaRO. These proceeds were partially offset by an increase in share repurchases and dividends paid.

### Working Capital

Internally generated funds are the primary source of working capital and funds used in business expansion, supplemented by debt. In addition, funds are expended to support growth initiatives, as well as for business and systems development and other infrastructure improvements.

Working capital consists of current assets (less non-operating cash) and current liabilities (less short-term debt and current maturities of long-term debt). Working capital was \$1,722 million at December 31, 2016, compared with \$1,794 million at December 31, 2015. At these dates, the ratio of current assets to current liabilities was 2.4 and 2.5, respectively. The decrease in working capital was primarily related to increases in accounts payable.



### Capital Expenditures

In each of the past three years, a portion of operating cash has been used for additions to property, buildings, equipment and capitalized software as summarized in the following table (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
Land, buildings, structures and improvements	\$ 70,942	\$ 86,082	\$ 159,793
Furniture, fixtures, machinery and equipment	139,474	202,137	140,358
Subtotal	210,416	288,219	300,151
Capitalized software	73,833	85,649	87,239
Total	<u>\$ 284,249</u>	<u>\$ 373,868</u>	<u>\$ 387,390</u>

In 2016, the Company continued to invest in the North America distribution network, as well as the distribution network in other segments, and sales productivity initiatives. Other significant investments in 2016 included the eCommerce platform, sustaining capital investments in branches and distribution centers and other technology infrastructure.

In 2015, Grainger invested in the North America distribution center network and the completion of the common ERP platform for North America and made investments in support of sales initiatives. Other significant investments in 2015 included the eCommerce platform, sustaining capital investments for Grainger's branches and distribution centers and other technology infrastructure.

In 2014, Grainger made significant capital investments to build new distribution centers in the United States and Canada. In the U.S., Grainger began the replacement of its existing New Jersey distribution center with construction of a new 1.3 million square-foot distribution center, completed in 2016. In Canada, Grainger continued construction of the new distribution center in the Toronto area, completed in 2015. Grainger also invested in technology infrastructure, vending machines for the KeepStock® program and normal recurring replacement of equipment.

In 2017, capital expenditures are expected to range from \$250 million to \$275 million. Projected spending includes continued investments in the supply chain, eCommerce and inventory management solutions. Grainger expects to fund 2017 capital spending primarily from operating cash.

### Debt

Grainger maintains a debt ratio and liquidity position that provides flexibility in funding working capital needs and long-term cash requirements. In addition to internally generated funds, Grainger has various sources of financing available, including bank borrowings under lines of credit. Total debt, which is defined as total interest-bearing debt (current plus long-term) as a percent of total capitalization was 54.1% and 45.8%, as of December 31, 2016 and 2015, respectively.

On April 16, 2015, Grainger announced plans to issue \$1.8 billion in long-term debt over the next three years, to partially fund the repurchase of \$3 billion in shares. The remaining amount is expected to be funded from internally generated cash. In June 2015, Grainger issued \$1 billion in long-term debt, which was the first of three expected debt issuances. The debt is payable in 30 years and carries a 4.60% interest rate, payable semiannually. In May 2016, Grainger issued \$400 million in long-term debt, which was the second of three expected debt issuances. The new debt is payable in 30 years and carries a 3.75% interest rate, payable semiannually. With the new long-term debt, Grainger expects to maintain a debt to EBITDA ratio in the 1.0–1.5x range. EBITDA, which is defined as Earnings before Interest, Taxes, Depreciation and Amortization, is a non-GAAP measure and may not be defined and calculated by other companies in the same manner. Refer to Note 7 and Note 8 to the Consolidated Financial Statements included in Item 8. The Company ended 2016 with a Debt/EBITDA ratio of 1.7x, slightly beyond its targeted range of 1.0-1.5x. During 2017, the Company plans to reduce its share repurchase target to \$600 million from the \$800 million planned repurchases originally announced in 2015 to reduce short-term debt. This action, along with the performance indicated by the Company's 2017 guidance announced on January 25, 2017, should help the Company improve its Debt/EBITDA ratio.

### Commitments and Other Contractual Obligations

At December 31, 2016, Grainger's contractual obligations, including estimated payments due by period, are as follows (in thousands of dollars):

	Payments Due by Period				
	Total Amounts Committed	Less than 1 Year	1 - 3 Years	4 - 5 Years	More than 5 Years
Debt obligations	\$ 2,266,176	\$ 406,106	\$ 158,009	\$ 295,065	\$ 1,406,996
Interest on debt	1,768,974	66,323	131,439	123,878	1,447,334
Operating lease obligations	178,325	59,045	78,120	25,691	15,469
Purchase obligations:					
Uncompleted additions to property, buildings and equipment	71,350	69,171	1,871	308	—
Commitments to purchase inventory	469,215	469,215	—	—	—
Other purchase obligations	216,917	121,297	78,461	17,159	—
Other liabilities	200,504	65,757	29,365	31,478	73,904
Total	<u>\$ 5,171,461</u>	<u>\$ 1,256,914</u>	<u>\$ 477,265</u>	<u>\$ 493,579</u>	<u>\$ 2,943,703</u>

Purchase obligations for inventory are made in the normal course of business to meet operating needs. While purchase orders for both inventory purchases and non-inventory purchases are generally cancelable without penalty, certain vendor agreements provide for cancellation fees or penalties depending on the terms of the contract.

Other liabilities represent future payments for profit sharing and employee benefits plans as determined by actuarial projections and other employee benefit plans. Other employment-related benefits costs of \$60 million have not been included in this table as the timing of benefit payments is not predictable. See Note 9 to the Consolidated Financial Statements.

See also Note 8 and Note 10 to the Consolidated Financial Statements for further detail related to interest on long-term debt and operating lease obligations, respectively.

Grainger has recorded a noncurrent liability of approximately \$63 million for tax uncertainties and interest at December 31, 2016. This amount is excluded from the table above, as Grainger cannot make reliable estimates of these cash flows by period. See Note 14 to the Consolidated Financial Statements.

### Off-Balance Sheet Arrangements

Grainger does not have any material exposures to off-balance sheet arrangements. All significant contractual obligations are recorded on the Company's Consolidated Balance Sheet or fully disclosed in the notes to Grainger's Consolidated Financial Statements.

## **Critical Accounting Estimates**

The preparation of financial statements, in conformity with Generally Accepted Accounting Principles (GAAP) in the United States of America, requires management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses in the financial statements. Management bases its estimates on historical experience and other assumptions, which it believes are reasonable. If actual amounts are ultimately different from these estimates, the revisions are included in Grainger's results of operations for the period in which the actual amounts become known.

Accounting estimates are considered critical when they require management to make assumptions about matters that are highly uncertain at the time the estimates are made and when there are different estimates that management reasonably could have made, which would have a material impact on the presentation of Grainger's financial condition, changes in financial condition or results of operations.

Note 1 to the Consolidated Financial Statements describes the significant accounting policies used in the preparation of the Consolidated Financial Statements. The most significant areas involving management judgments and estimates follow. Actual results in these areas could differ materially from management's estimates under different assumptions or conditions.

*Allowance for Doubtful Accounts.* Grainger considers several factors to estimate the allowance for uncollectible accounts receivable including the age of the receivables, the percent past due and the historical ratio of actual write-offs to the age of the receivables. The analyses performed also take into consideration economic conditions that may have an impact on a specific industry, group of customers or a specific customer. Based on analysis of actual historical write-offs of uncollectible accounts receivable, Grainger's estimates and assumptions have been materially accurate in regards to the valuation of its allowance for doubtful accounts. However, write-offs could be materially different than the reserves established if business or economic conditions change or actual results deviate from historical trends, and Grainger's estimates and assumptions may be revised as appropriate to reflect these changes. For fiscal years 2016, 2015 and 2014, actual results did not vary materially from estimated amounts.

*Inventory Reserves.* Grainger establishes inventory reserves for excess and obsolete inventory. Grainger regularly reviews inventory to evaluate continued demand and identify any obsolete or excess quantities. Grainger records provisions for the difference between excess and obsolete inventory cost and its estimated realizable value. Estimated realizable value is based on anticipated future product demand, market conditions and liquidation values. As Grainger's inventory consists of approximately 1.6 million stocked products, it is not practical to quantify the actual disposition of excess and obsolete inventory against estimated amounts at a stock keeping unit (SKU) level and no individual SKU is material. There were no material differences noted between reserve levels compared to the level of write-offs historically. Grainger's methodology for estimating reserves is continually evaluated based on current experience and the methodology provides for a materially accurate level of reserves at any reporting date. Actual results could differ materially from projections and require changes to reserves that could have a material effect on Grainger's results of operations, based on significant changes in product demand, market conditions or liquidation value. If business or economic conditions change, Grainger's estimates and assumptions may be revised as appropriate. For fiscal years 2016, 2015 and 2014, actual results did not vary materially from estimated amounts.

*Goodwill and Indefinite Lived Intangible Assets.* Business acquisitions result in the recording of goodwill and identified intangible assets that affect the amount of amortization expense and possible impairment write-downs that may occur in future periods. Grainger reviews goodwill and intangible assets with indefinite lives for impairment at least annually or when events or changes in circumstances indicate the carrying value of these assets might exceed their current fair values.

Grainger completed the annual impairment testing during the fourth quarter of 2016. For all of the Company's reporting units, the estimated fair values substantially exceeded the carrying values, except for the Fabory reporting unit. As of the 2015 test, the fair value of the Fabory reporting unit exceeded its \$106 million carrying value by 15%. During the current year testing, Grainger considered Fabory's performance and the revised outlook. Prior branch rationalization initiatives and structural changes in the business contributed to cost improvements. However, declines in sales, primarily in the Netherlands and France, and price pressure contributed to lower earnings for the year. The current year business performance and revised financial projections also reflect market conditions, which continued to be negatively impacted by the downturn in oil and gas and maritime industries in the Netherlands, Fabory's largest market. The revised outlook and uncertainty beyond 2016 were factored into lower earnings, cash flow projections and long-term expectations for Fabory's future performance, resulting in the calculated fair value of the reporting unit below its carrying value in step one of the two-step quantitative test, and step two impairment calculations were required. As a result, a \$47 million

goodwill impairment charge was recorded with no tax benefit due to the non-deductibility of goodwill in the relevant taxing jurisdictions.

The risk of potential failure of step one of the quantitative tests in future reporting periods is highly dependent upon key assumptions included in the determination of the reporting unit's fair value. The fair value of reporting units is calculated primarily using the discounted cash flow (DCF) method and incorporating value indicators from a market approach to evaluate the reasonableness of the resulting fair values. The DCF method incorporates various assumptions regarding the amount and timing of future expected cash flows, including revenues, gross margins, operating expenses, capital expenditures and working capital based on operational budgets, long-range strategic plans and other estimates. The terminal value growth rate is used to calculate the value of cash flows beyond the last projected period and reflects management's best estimates for perpetual growth for the reporting units. Estimates of market-participant risk-adjusted weighted average cost of capital are used as a basis for determining the discount rates to apply to the reporting units' future expected cash flows and terminal value.

Changes in assumptions regarding future performance and unfavorable economic environment may have a significant impact on reporting units' cash flows in the future. Grainger performed a sensitivity analysis to determine the reasonableness of the step one results for the reporting units subject to the two-step quantitative tests and evaluated the impact of a 100 basis point increase in the discount rate or a 100 basis point decrease in the terminal growth rate. No indications of impairment resulted from this sensitivity analysis. Given the sensitivity of the calculated fair value to changes in these key assumptions, Grainger may be required to recognize an impairment for goodwill in the future due to changes in market conditions or other factors related to these key assumptions.

Stock Incentive Plans. Grainger maintains stock incentive plans under which a variety of incentive grants may be awarded to employees and directors. Grainger uses a binomial lattice option pricing model to estimate the fair value of stock option grants. The model requires projections of the risk-free interest rate, expected life, volatility, dividend yield and forfeiture rate of the stock option grants. The fair value of options granted used the following assumptions:

	For the Years Ended December 31,		
	2016	2015	2014
Risk-free interest rate	1.4%	1.5%	2.0%
Expected life	6 years	6 years	6 years
Expected volatility	24.5%	24.9%	25.0%
Expected dividend yield	2.0%	1.9%	1.7%

The risk-free interest rate is selected based on yields from U.S. Treasury zero-coupon issues with a remaining term approximately equal to the expected term of the options being valued. The expected life selected for options granted during each year presented represents the period of time that the options are expected to be outstanding based on historical data of option holders' exercise and termination behavior. Expected volatility is based upon implied and historical volatility of the closing price of Grainger's stock over a period equal to the expected life of each option grant. Historical information is also the primary basis for selection of the expected dividend yield assumptions. Because stock option compensation expense is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures, using historical forfeiture experience. The amount of stock option compensation expense is significantly affected by the valuation model and these assumptions. If different assumptions were used, the stock option compensation expense could be significantly different from what is recorded in the current period.

Compensation expense for other stock-based awards is based upon the closing market price on the last trading date preceding the date of the grant. Because the expense for other stock-based awards should reflect the awards ultimately expected to vest, it has been reduced for estimated forfeitures, using historical forfeiture experience.

For additional information concerning stock incentive plans, see Note 11 to the Consolidated Financial Statements.

Postretirement Healthcare Benefits. The postretirement healthcare obligation and net periodic cost are dependent on assumptions and estimates used in calculating such amounts. The assumptions used include, among others, discount rates, assumed rates of return on plan assets and healthcare cost trend rates and certain employee-related factors, such as turnover, retirement age and mortality rates. Changes in these and other assumptions (caused by conditions in equity markets or plan experience, for example) could have a material effect on Grainger's postretirement benefit obligation and expense and could affect its results of operations and financial condition. These changes in assumptions may also affect voluntary decisions to make additional contributions to the trust established for funding the postretirement benefit obligation.

The discount rate assumptions used by management reflect the rates available on high-quality fixed income debt instruments as of December 31, the measurement date, of each year. A higher discount rate reduces the present value of benefit obligations and net periodic benefit costs. As of December 31, 2016, Grainger decreased the discount rate used in the calculation of the postretirement plan obligation from 4.20% to 4.00% to reflect the decrease in market interest rates. Grainger estimates that this decrease could decrease 2017 pretax earnings by approximately \$0.8 million. However, other changes in assumptions may increase, decrease or eliminate this effect.

A 1 percentage point change in assumed healthcare cost trend rates would have had the following effects on December 31, 2016 results (in thousands of dollars):

	1 Percentage Point	
	Increase	(Decrease)
Effect on total of service and interest cost	\$ 1,411	\$ (1,162)
Effect on postretirement benefit obligation	27,542	(22,748)

Grainger used Mortality Table RPH-2014 and changed the mortality improvement scale used to project mortality rates into the future from Mortality Improvement Scale MP-2015 to Mortality Improvement Scale MP-2016 at December 31, 2016. Mortality Table RPH-2014 is a headcount-weighted table that is more appropriate for the measurement of other postretirement employee benefit plans. Scale MP-2016, published by the Society of Actuaries, reflects the most recent data for mortality improvement. Grainger estimates this change could increase 2017 pretax earnings by approximately \$0.6 million.

Grainger updated the 2016 census for involuntary terminations that occurred in 2016. Grainger estimates this change could increase 2017 pretax earnings by approximately \$0.5 million.

As of December 31, 2016, Grainger adopted a new healthcare trend rate to include a pre and post age 65 trend rate. The alternative trend rates allow for a better estimate of expected trends for this plan. Grainger estimates this change could decrease 2017 pretax earnings by approximately \$1.8 million.

Grainger uses the long-term historical return on the plan assets and the historical performance of the S&P 500 and the Total International Composite Index to develop its expected return on plan assets. In 2016, the Company increased the after-tax expected long-term rate of return on plan assets from 6.65% to 7.13% based on the historical average of long-term rates of return due to a change in the estimated tax rate. This change was due to the nature of the taxable income earned on the investments in the Group Benefit Trust and the applicable tax rates. Grainger estimates this change could increase 2017 pretax earnings by approximately \$0.8 million.

Grainger may terminate or modify the postretirement plan at any time, subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code, as amended. In the event the postretirement plan is terminated, all assets of the Group Benefit Trust inure to the benefit of the participants. The foregoing assumptions are based on the presumption that the postretirement plan will continue. Were the postretirement plan to terminate, different actuarial assumptions and other factors might be applicable.

Grainger has used its best judgment in making assumptions and estimates and believes such assumptions and estimates used are appropriate. Changes to the assumptions may be required in future years as a result of actual experience or new trends or plan changes and, therefore, may affect Grainger's retirement plan obligations and future expense. For additional information concerning postretirement healthcare benefits, see Note 9 to the Consolidated Financial Statements.

*Income Taxes.* The tax balances and income tax expense recognized by Grainger are based on management's interpretations of the tax laws of multiple jurisdictions. Income tax expense reflects Grainger's best estimates and assumptions regarding, among other items, the level of future taxable income, interpretation of tax laws and tax planning opportunities, plans for reinvestment of cash overseas and uncertain tax positions. Future rulings by tax authorities and future changes in tax laws and their interpretation, changes in projected levels of taxable income, changes in planned need for cash overseas and future tax planning strategies could impact the actual effective tax rate and tax balances recorded by Grainger.

*Contingent Liabilities.* At any time, Grainger may be subject to investigations, legal proceedings or claims related to the ongoing operation of its business, including claims both by and against Grainger. Such proceedings typically involve claims related to product liability, general negligence, contract disputes, environmental issues, unclaimed property, wage and hour laws, intellectual property, employment practices, regulatory compliance or other matters and actions brought by employees, consumers, competitors, suppliers or governmental entities. Grainger retains a significant portion of the risk of certain losses related to workers' compensation, auto liability, general liability and property losses through the utilization of high deductibles and self-insured retentions. Grainger routinely assesses the likelihood of any adverse outcomes related to these matters on a case by case basis, as well as the potential ranges of losses and fees. Grainger establishes accruals for its potential exposures, as appropriate, for claims against Grainger when losses become probable and the financial impact of an adverse outcome is reasonably estimable. Legal fees are recognized as incurred and are not included in accruals for contingencies. Where Grainger is able to reasonably estimate a range of potential losses, Grainger records the amount within that range that constitutes Grainger's best estimate. Grainger also discloses the nature of and range of loss for claims against Grainger when losses are reasonably possible and the exposure is considered material to Grainger's Consolidated Financial Statements. These accruals and disclosures are determined based on the facts and circumstances related to the individual cases and require estimates and judgments regarding the interpretation of facts and laws, as well as the effectiveness of strategies or other factors beyond Grainger's control. If the assessment of any of these factors changes, the estimates may change. Predicting the outcome of claims and litigation, and estimating related costs and exposure, involves substantial uncertainties that could cause actual costs to vary materially from estimates and accruals.

*Other.* Other significant accounting policies, not involving the same level of measurement uncertainties as those discussed above, are nevertheless important to an understanding of the financial statements. Policies such as revenue recognition, depreciation, intangibles, long-lived assets, fair value measurements and valuations and warranties require judgments on complex matters that are often subject to multiple external sources of authoritative guidance such as the Financial Accounting Standards Board and the Securities and Exchange Commission. Possible changes in estimates or assumptions associated with these policies are not expected to have a material effect on the financial condition or results of operations of Grainger. More information on these additional accounting policies can be found in Note 1 to the Consolidated Financial Statements.

### **Effects of Inflation and Changing Prices**

Grainger is affected by inflation through increased product and operating costs, and the ability to pass on cost increases to customers over time is dependent upon market conditions. The ability to achieve sales growth through increased prices is also subject to inflation and normal competitive conditions. The predominant use of the last-in, first-out (LIFO) method of accounting for inventories and accelerated depreciation methods for financial reporting and income tax purposes result in a substantial recognition of the effects of inflation in the financial statements.

Some of Grainger's products contain significant amounts of commodity-priced materials, such as steel, copper, petroleum derivatives or rare earth minerals, and are subject to price changes based upon fluctuations in the commodities market.

Grainger believes the most positive means to combat inflation and advance the interests of investors lie in the continued application of basic business principles, which include improving productivity, maintaining working capital turnover and offering products and services that can command appropriate prices in the marketplace.

### **Forward-Looking Statements**

From time to time, in this Annual Report on Form 10-K, as well as in other written reports and verbal statements, Grainger makes forward-looking statements that are not historical in nature but concern forecasts of future results, business plans, analyses, prospects, strategies, objectives and other matters that may be deemed to be "forward-looking statements" under the federal securities laws. Such forward-looking statements are identified by words such as "anticipate," "estimate," "believe," "expect," "could," "forecast," "may," "intend," "plan," "predict," "project" and similar terms and expressions.

Grainger cannot guarantee that any forward-looking statement will be realized, although Grainger does believe that its assumptions underlying its forward-looking statements are reasonable. Achievement of future results is subject to risks and uncertainties, many of which are beyond the Company's control, which could cause Grainger's results to differ materially from those that are presented.

Important factors that could cause actual results to differ materially from those presented or implied in a forward-looking statement include, without limitation: higher product costs or other expenses; a major loss of customers; loss or disruption of source of supply; increased competitive pricing pressures; failure to develop or implement new technologies or business strategies; the outcome of pending and future litigation or governmental or regulatory proceedings, including with respect to wage and hour, anti-bribery and corruption, environmental, advertising, privacy and cybersecurity matters; investigations, inquiries, audits and changes in laws and regulations; disruption of information technology or data security systems; general industry or market conditions; general global economic conditions; currency exchange rate fluctuations; market volatility; commodity price volatility; labor shortages; facilities disruptions or shutdowns; higher fuel costs or disruptions in transportation services; natural and other catastrophes; unanticipated weather conditions; loss of key members of management; the Company's ability to operate, integrate and leverage acquired businesses; changes in credit ratings; changes in effective tax rates and other factors identified under Item 1A: Risk Factors and elsewhere in this Form 10-K.

Caution should be taken not to place undue reliance on Grainger's forward-looking statements and Grainger undertakes no obligation to publicly update any of its forward-looking statements, whether as a result of new information, future events or otherwise.

**Item 7A: Quantitative and Qualitative Disclosures About Market Risk**

Grainger may use financial instruments to reduce its exposure to adverse fluctuations in foreign currency exchange rates and interest rates as part of its overall risk management strategy. The derivative positions reduce risk by hedging certain underlying economic exposures. Because of the high correlation between the hedging instrument and the underlying exposure, fluctuations in the value of the instruments are generally offset by reciprocal changes in the value of the underlying exposure. Grainger does not enter into derivative financial instruments for trading or speculative purposes.

**Foreign Currency Exchange Rates**

Grainger's financial results, including the value of assets and liabilities, are exposed to foreign currency exchange rate risk when the financial statements of the international subsidiaries, as stated in their local currencies, are translated into U.S. dollars. While it is difficult to quantify any particular impact of changes in exchange rates, a uniform 10% strengthening in the U.S. dollar (whereby all other variables are held constant and unusual expense items described in "Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations" are excluded) would have resulted in an increase in net earnings of \$2 million for the year ended December 31, 2016, and a decrease of \$1 million for the year ended December 31, 2015. Comparatively, a 10% weakening of the U.S. dollar would have resulted in a decrease in net earnings of \$2 million for the year ended December 31, 2016, and an increase of \$1 million for the year ended December 31, 2015. This sensitivity analysis of the effects of changes in foreign currency exchange rates does not factor in future potential changes in sales levels or local currency prices or costs.

**Interest Rates**

Grainger is subject to interest rate risk related to its variable rate debt portfolio. Grainger may enter into interest rate swap agreements to manage those risks. Based on Grainger's variable rate debt and derivative instruments outstanding, a 1 percentage point increase in interest rates paid by Grainger would have resulted in a decrease to net earnings of approximately \$5 million for 2016 and \$3 million for 2015. A 1 percentage point decrease in interest rates would have resulted in an increase to net earnings of approximately \$5 million for 2016 and \$3 million for 2015. This sensitivity analysis of the effects of changes in interest rates on long-term debt does not factor in future potential changes in long-term debt levels.

**Commodity Price Risk**

Grainger has limited primary exposure to commodity price risk on certain products for resale, but does not purchase commodities directly.



**Item 8: Financial Statements and Supplementary Data**

The financial statements and supplementary data are included on pages 39 to 80. See the Index to Financial Statements and Supplementary Data on page 38.

**Item 9: Changes in and Disagreements With Accountants on Accounting and Financial Disclosure**

None.

**Item 9A: Controls and Procedures**Disclosure Controls and Procedures

Grainger carried out an evaluation, under the supervision and with the participation of its management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of Grainger's disclosure controls and procedures pursuant to Exchange Act Rule 13a-15. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that Grainger's disclosure controls and procedures were effective as of the end of the period covered by this report.

Internal Control Over Financial Reporting**(A) Management's Annual Report on Internal Control Over Financial Reporting**

Management's report on Grainger's internal control over financial reporting is included on page 39 of this Report under the heading Management's Annual Report on Internal Control Over Financial Reporting.

**(B) Attestation Report of the Registered Public Accounting Firm**

The report from Ernst & Young LLP on its audit of the effectiveness of Grainger's internal control over financial reporting as of December 31, 2016, is included on page 40 of this Report under the heading Report of Independent Registered Public Accounting Firm.

**(C) Changes in Internal Control Over Financial Reporting**

There have been no changes in Grainger's internal control over financial reporting during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, Grainger's internal control over financial reporting.

**Item 9B: Information required to be disclosed in a Form 8-K**

None.

## PART III

### Item 10: Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to Grainger's proxy statement relating to the annual meeting of shareholders to be held April 26, 2017, under the captions "Directors," "Board of Directors and Board Committees" and "Section 16(a) Beneficial Ownership Reporting Compliance." Information required by this item regarding executive officers of Grainger is set forth below under the caption "Executive Officers."

Grainger has adopted a code of ethics that applies to its principal executive officer, principal financial officer and principal accounting officer and controller. This code of ethics is part of Grainger's Business Conduct Guidelines for directors, officers and employees, which is available free of charge through Grainger's website at [www.grainger.com/investor](http://www.grainger.com/investor). A copy of the Business Conduct Guidelines is also available in print without charge to any person upon request to Grainger's Corporate Secretary. Grainger intends to disclose on its website any amendment to any provision of the Business Conduct Guidelines that relates to any element of the definition of "code of ethics" enumerated in Item 406 (b) of Regulation S-K under the Exchange Act and any waiver from any such provision granted to Grainger's principal executive officer, principal financial officer, principal accounting officer and controller or persons performing similar functions. Grainger has also adopted Operating Principles for the Board of Directors, which are available on its website and are available in print to any person who requests them.

#### Executive Officers

Following is information about the Executive Officers of Grainger including age as of March 1, 2017. Executive Officers of Grainger generally serve until the next annual election of officers, or until earlier resignation or removal.

<b>Name and Age</b>	<b>Positions and Offices Held and Principal Occupation and Employment During the Past Five Years</b>
Laura D. Brown (53)	Senior Vice President, Communications and Investor Relations, a position assumed in 2010 after serving as Vice President, Global Business Communications, a position assumed in 2009 and Vice President, Investor Relations, a position assumed in 2008.
Joseph C. High (62)	Senior Vice President and Chief People Officer, a position assumed in June 2011. Prior to joining Grainger, Mr. High was the Senior Vice President of Human Resources at Owens Corning in Toledo, Ohio, a position assumed in 2004.
John L. Howard (59)	Senior Vice President and General Counsel, a position assumed in 2000.
Ronald L. Jadin (56)	Senior Vice President and Chief Financial Officer, a position assumed in 2008. Previously, Mr. Jadin served as Vice President and Controller, a position assumed in 2006 after serving as Vice President, Finance.
D.G. Macpherson (49)	Chief Executive Officer, a position assumed in October 2016. Previously, Mr. Macpherson served as Chief Operating Officer, a position assumed in 2015; Senior Vice President and Group President, Global Supply Chain and International, a position assumed in 2013; Senior Vice President and President, Global Supply Chain and Corporate Strategy, a position assumed in 2012, and Senior Vice President, Global Supply Chain, a position assumed in 2008.
Paige K. Robbins (48)	Senior Vice President, Global Supply Chain, Branch Network, Contact Centers and Corporate Strategy, a position assumed in 2016. Since joining Grainger in September 2010, Ms. Robbins has held various positions as a Vice President, including in the areas of Global Supply Chain and Logistics.
James T. Ryan (58)	Chairman of the Board, a role held since April 2009. Mr. Ryan also served as President and Chief Executive Officer of Grainger from June 2008 through September 2016.
Eric R. Tapia (40)	Vice President and Controller, a position assumed in 2016. Previously, Mr. Tapia served as Vice President, Internal Audit from 2010 to 2016. Mr. Tapia is a Certified Public Accountant (CPA) and before joining Grainger in 2010 was an audit partner with KPMG.

**Item 11: Executive Compensation**

The information required by this item is incorporated by reference to Grainger's proxy statement relating to the annual meeting of shareholders to be held April 26, 2017, under the captions "Board of Directors and Board Committees," "Director Compensation," "Report of the Compensation Committee of the Board" and "Compensation Discussion and Analysis."

**Item 12: Directors and Executive Officers**

The information required by this item is incorporated by reference to Grainger's proxy statement relating to the annual meeting of shareholders to be held April 26, 2017, under the captions "Ownership of Grainger Stock" and "Equity Compensation Plans."

**Item 13: Certain Relationships and Related Transactions**

The information required by this item is incorporated by reference to Grainger's proxy statement relating to the annual meeting of shareholders to be held April 26, 2017, under the captions "Election of Directors" and "Transactions with Related Persons."

**Item 14: Principal Accountant Fees and Services**

The information required by this item is incorporated by reference to Grainger's proxy statement relating to the annual meeting of shareholders to be held April 26, 2017, under the caption "Audit Fees and Audit Committee Pre-Approval Policies and Procedures."

**PART IV****Item 15: Exhibits and Financial Statements Schedules**

- (a) Documents filed as part of the Form 10-K
- (1) Financial Statements: see Item 8, "Financial Statements and Supplementary Data," on page 38 hereof, for a list of financial statements. Management's Annual Report on Internal Control Over Financial Reporting.
  - (2) Financial Statement Schedules: the schedules listed in Rule 5-04 of Regulation S-X have been omitted because they are either not applicable or the required information is shown in the consolidated financial statements or notes thereto.
  - (3) Exhibits Required by Item 601 of Regulation S-K: the information required by this Item 15(a)(3) of Form 10-K is set forth on the Exhibit Index that follows the Signatures page of the Form 10-K.

**INDEX TO FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**  
December 31, 2016, 2015 and 2014

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## **MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

The management of W.W. Grainger, Inc. (Grainger) is responsible for establishing and maintaining adequate internal control over financial reporting. Grainger's internal control system was designed to provide reasonable assurance to Grainger's management and Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements under all potential conditions. Therefore, effective internal control over financial reporting provides only reasonable, and not absolute, assurance with respect to the preparation and presentation of financial statements.

Grainger's management assessed the effectiveness of Grainger's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Based on its assessment under that framework and the criteria established therein, Grainger's management concluded that Grainger's internal control over financial reporting was effective as of December 31, 2016.

Ernst & Young LLP, an independent registered public accounting firm, has audited Grainger's internal control over financial reporting as of December 31, 2016, as stated in their report, which is included herein.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of  
W.W. Grainger, Inc. and Subsidiaries

We have audited W.W. Grainger, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). W.W. Grainger, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

In our opinion, W.W. Grainger, Inc. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of W.W. Grainger, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of earnings, comprehensive earnings, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 of W.W. Grainger, Inc. and subsidiaries and our report dated February 28, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Chicago, Illinois  
February 28, 2017

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of  
W.W. Grainger, Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheets of W.W. Grainger, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of earnings, comprehensive earnings, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of W.W. Grainger, Inc. and subsidiaries at December 31, 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), W.W. Grainger Inc. and subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Chicago, Illinois  
February 28, 2017

**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED STATEMENTS OF EARNINGS**  
(In thousands of dollars, except for share and per share amounts)

	For the Years Ended December 31,		
	2016	2015	2014
Net sales	\$ 10,137,204	\$ 9,973,384	\$ 9,964,953
Cost of merchandise sold	6,022,647	5,741,956	5,650,711
Gross profit	4,114,557	4,231,428	4,314,242
Warehousing, marketing and administrative expenses	2,995,060	2,931,108	2,967,125
Operating earnings	1,119,497	1,300,320	1,347,117
Other income and (expense):			
Interest income	717	1,166	2,068
Interest expense	(66,332)	(33,571)	(10,093)
Loss from equity method investment	(31,193)	(11,740)	—
Other non-operating income	1,300	1,102	483
Other non-operating expense	(4,931)	(6,572)	(5,189)
Total other expense	(100,439)	(49,615)	(12,731)
Earnings before income taxes	1,019,058	1,250,705	1,334,386
Income taxes	386,220	465,531	522,090
Net earnings	632,838	785,174	812,296
Less: Net earnings attributable to noncontrolling interest	26,910	16,178	10,567
Net earnings attributable to W.W. Grainger, Inc.	\$ 605,928	\$ 768,996	\$ 801,729
Earnings per share:			
Basic	\$ 9.94	\$ 11.69	\$ 11.59
Diluted	\$ 9.87	\$ 11.58	\$ 11.45
Weighted average number of shares outstanding:			
Basic	60,430,892	65,156,864	68,334,322
Diluted	60,839,930	65,765,121	69,205,744

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



**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS**  
(In thousands of dollars)

	For the Years Ended December 31,		
	2016	2015	2014
Net earnings	\$ 632,838	\$ 785,174	\$ 812,296
Other comprehensive earnings (losses):			
Foreign currency translation adjustments:			
Foreign currency translation loss, net of tax benefit of \$0, \$0 and \$2,806, respectively	(38,729)	(154,096)	(127,847)
Reclassification of cumulative currency translation	—	—	9,042
Other, net of tax expense of \$0, \$0 and \$(2,360), respectively	—	—	3,782
Net foreign currency translation loss	(38,729)	(154,096)	(115,023)
Defined postretirement benefit plan:			
Defined postretirement benefit plan (loss) gain, net of tax benefit (expense) of \$3,749, \$(19,056) and \$14,140, respectively	(6,022)	30,451	(22,667)
Reclassification related to amortization, net of tax expense	(4,034)	(3,246)	(4,072)
Net defined postretirement benefit plans	(10,056)	27,205	(26,739)
Other employment-related benefit plans:			
(Loss) gain on other employment-related benefit plans, net of tax benefit of \$718, \$0 and \$440, respectively	(2,397)	641	(1,462)
Reclassification related to plan amendment and settlement, net of tax benefit	—	—	6,971
Net other employment-related benefit plans	(2,397)	641	5,509
Other	885	1,300	786
Total other comprehensive losses	(50,297)	(124,950)	(135,467)
Comprehensive earnings, net of tax	582,541	660,224	676,829
Less: Comprehensive earnings attributable to noncontrolling interest:			
Net earnings	26,910	16,178	10,567
Foreign currency translation adjustments	906	(532)	(9,880)
Comprehensive earnings attributable to W.W. Grainger, Inc.	<u>\$ 554,725</u>	<u>\$ 644,578</u>	<u>\$ 676,142</u>

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

**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED BALANCE SHEETS**  
(In thousands of dollars, except for share and per share amounts)

<u>ASSETS</u>	As of December 31,	
	2016	2015
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 274,146	\$ 290,136
Accounts receivable - net	1,223,096	1,209,641
Inventories – net	1,406,470	1,414,177
Prepaid expenses and other assets	81,766	85,670
Prepaid income taxes	34,751	49,018
Total current assets	3,020,229	3,048,642
<b>PROPERTY, BUILDINGS AND EQUIPMENT</b>		
Land	355,976	323,765
Buildings, structures and improvements	1,313,233	1,352,498
Furniture, fixtures, machinery and equipment	1,742,293	1,694,050
	3,411,502	3,370,313
Less: Accumulated depreciation and amortization	1,990,611	1,939,072
Property, buildings and equipment – net	1,420,891	1,431,241
DEFERRED INCOME TAXES	64,775	83,996
GOODWILL	527,150	582,336
INTANGIBLES – NET	586,126	648,010
OTHER ASSETS	75,136	63,530
<b>TOTAL ASSETS</b>	<b>\$ 5,694,307</b>	<b>\$ 5,857,755</b>

**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED BALANCE SHEETS - CONTINUED**  
(In thousands of dollars, except for share and per share amounts)

<u>LIABILITIES AND SHAREHOLDERS' EQUITY</u>	As of December 31,	
	2016	2015
<b>CURRENT LIABILITIES</b>		
Short-term debt	\$ 386,140	\$ 353,072
Current maturities of long-term debt	19,966	247,346
Trade accounts payable	650,092	583,474
Accrued compensation and benefits	212,525	196,667
Accrued contributions to employees' profit-sharing plans	54,948	124,587
Accrued expenses	290,207	266,702
Income taxes payable	15,059	16,686
Total current liabilities	1,628,937	1,788,534
LONG-TERM DEBT (less current maturities)	1,840,946	1,388,414
DEFERRED INCOME TAXES AND TAX UNCERTAINTIES	126,101	154,352
EMPLOYMENT-RELATED AND OTHER NONCURRENT LIABILITIES	192,555	173,741
<b>SHAREHOLDERS' EQUITY</b>		
Cumulative Preferred Stock – \$5 par value – 12,000,000 shares authorized; none issued or outstanding	—	—
Common Stock – \$0.50 par value – 300,000,000 shares authorized; issued 109,659,219 shares	54,830	54,830
Additional contributed capital	1,030,256	1,000,476
Retained earnings	7,113,559	6,802,130
Accumulated other comprehensive losses	(272,294)	(221,091)
Treasury stock, at cost – 50,854,905 and 47,630,511 shares, respectively	(6,128,416)	(5,369,711)
Total W.W. Grainger, Inc. shareholders' equity	1,797,935	2,266,634
Noncontrolling interest	107,833	86,080
Total shareholders' equity	1,905,768	2,352,714
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	\$ 5,694,307	\$ 5,857,755

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

**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands of dollars)

	For the Years Ended December 31,		
	2016	2015	2014
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net earnings	\$ 632,838	\$ 785,174	\$ 812,296
Provision for losses on accounts receivable	16,216	10,181	12,945
Deferred income taxes and tax uncertainties	(5,884)	4,076	(13,732)
Depreciation and amortization	248,857	227,967	208,326
Impairment of goodwill and other intangible assets	52,318	—	16,652
(Gains) losses from non-cash charges and sales of assets	(18,521)	2,765	41,037
Stock-based compensation	35,735	46,861	49,032
Losses from equity method investment	31,193	11,740	—
Change in assets and liabilities – net of acquisitions and divestitures:			
Accounts receivable	(45,600)	(3,085)	(122,580)
Inventories	(4,403)	(37,737)	(92,443)
Prepaid expenses and other assets	18,641	15,788	(24,550)
Trade accounts payable	72,882	23,130	32,019
Other current liabilities	(25,044)	(70,306)	8,693
Income taxes payable	(3,513)	6,943	(1,487)
Accrued employment-related benefits cost	7,542	(27,721)	35,027
Other – net	(10,281)	(5,872)	(1,421)
Net cash provided by operating activities	<u>1,002,976</u>	<u>989,904</u>	<u>959,814</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Additions to property, buildings and equipment and intangibles	(284,249)	(373,868)	(387,390)
Proceeds from sales of assets	55,023	14,857	26,755
Equity method investment	(34,103)	(20,382)	—
Cash paid for business acquisitions	(159)	(464,431)	(30,713)
Other – net	1,224	466	7,290
Net cash used in investing activities	<u>(262,264)</u>	<u>(843,358)</u>	<u>(384,058)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Net increase in commercial paper	39,748	325,000	5,000
Borrowings under lines of credit	36,055	54,770	108,721
Payments against lines of credit	(37,358)	(78,559)	(117,277)
Proceeds from issuance of long-term debt	515,985	1,307,183	150,504
Payments of long-term debt	(262,248)	(52,838)	(170,907)
Proceeds from stock options exercised	34,125	60,885	48,579
Excess tax benefits from stock-based compensation	11,905	27,553	33,772
Purchase of treasury stock	(789,773)	(1,400,071)	(525,120)
Cash dividends paid	(302,971)	(306,474)	(291,395)
Net cash used in financing activities	<u>(754,532)</u>	<u>(62,551)</u>	<u>(758,123)</u>
Exchange rate effect on cash and cash equivalents	(2,170)	(20,503)	(21,633)
<b>NET CHANGE IN CASH AND CASH EQUIVALENTS:</b>	<u>(15,990)</u>	<u>63,492</u>	<u>(204,000)</u>
Cash and cash equivalents at beginning of year	290,136	226,644	430,644
Cash and cash equivalents at end of year	<u>\$ 274,146</u>	<u>\$ 290,136</u>	<u>\$ 226,644</u>
<b>Supplemental cash flow information:</b>			
Cash payments for interest (net of amounts capitalized)	\$ 63,143	\$ 31,591	\$ 10,172
Cash payments for income taxes	\$ 359,506	\$ 442,486	\$ 509,378

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

**W.W. Grainger, Inc. and Subsidiaries**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
(In thousands of dollars, except for per share amounts)

	Common Stock	Additional Contributed Capital	Retained Earnings	Accumulated Other Comprehensive Earnings (Losses)	Treasury Stock	Noncontrolling Interest
Balance at January 1, 2014	\$ 54,830	\$ 893,055	\$5,822,612	\$ 28,914	\$ (3,548,973)	\$ 76,398
Exercise of stock options	—	4,709	—	—	42,920	872
Tax benefits on stock-based compensation awards	—	36,618	—	—	—	—
Stock option expense	—	14,547	—	—	—	152
Amortization of other stock-based compensation awards	—	31,480	—	—	—	—
Settlement and vesting of other stock-based compensation awards	—	(32,711)	—	—	(1,636)	—
Purchase of treasury stock	—	—	—	—	(524,926)	(194)
Net earnings	—	—	801,729	—	—	10,567
Other comprehensive losses	—	—	—	(125,587)	—	(9,880)
Cash dividends paid (\$4.17 per share)	—	642	(288,351)	—	—	(3,686)
Balance at December 31, 2014	\$ 54,830	\$ 948,340	\$6,335,990	\$ (96,673)	\$ (4,032,615)	\$ 74,229
Exercise of stock options	—	1,454	—	—	58,713	460
Tax benefits on stock-based compensation awards	—	31,614	—	—	—	—
Stock option expense	—	14,311	—	—	—	163
Amortization of other stock-based compensation awards	—	28,332	—	—	—	—
Settlement and vesting of other stock-based compensation awards	—	(24,235)	—	—	4,122	—
Purchase of treasury stock	—	—	—	—	(1,399,931)	(140)
Net earnings	—	—	768,996	—	—	16,178
Other comprehensive losses	—	—	—	(124,418)	—	(532)
Cash dividends paid (\$4.59 per share)	—	660	(302,856)	—	—	(4,278)
Balance at December 31, 2015	\$ 54,830	\$ 1,000,476	\$6,802,130	\$ (221,091)	\$ (5,369,711)	\$ 86,080
Exercise of stock options	—	(2,216)	—	—	36,131	58
Tax benefits on stock-based compensation awards	—	12,284	—	—	—	—
Stock option expense	—	11,508	—	—	—	441
Amortization of other stock-based compensation awards	—	23,407	—	—	—	—

Settlement and vesting of other stock-based compensation awards	—	(15,921)	—	—	5,176	—
Purchase of treasury stock	—	—	—	—	(800,012)	(130)
Net earnings	—	—	605,928	—	—	26,910
Other comprehensive (losses) earnings	—	—	—	(51,203)	—	3,664
Cash dividends paid (\$4.83 per share)	—	718	(294,499)	—	—	(9,190)
Balance at December 31, 2016	<u>\$ 54,830</u>	<u>\$ 1,030,256</u>	<u>\$ 7,113,559</u>	<u>\$ (272,294)</u>	<u>\$ (6,128,416)</u>	<u>\$ 107,833</u>

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

## **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **INDUSTRY INFORMATION**

W.W. Grainger, Inc. is a broad line distributor of maintenance, repair and operating supplies, and other related products and services used by businesses and institutions. In this report, the words "Company" or "Grainger" mean W.W. Grainger, Inc. and its subsidiaries.

### **PRINCIPLES OF CONSOLIDATION**

The Consolidated Financial Statements include the accounts of the Company and its subsidiaries over which the Company exercises control. All significant intercompany transactions are eliminated from the consolidated financial statements. The Company has a 51% ownership in MonotaRO Co., with the residual representing the noncontrolling interest.

### **USE OF ESTIMATES**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and the disclosure of contingent liabilities. Actual results could differ from those estimates.

### **FOREIGN CURRENCY TRANSLATION**

The U.S. dollar is the reporting currency for all periods presented. The financial statements of the Company's foreign operating subsidiaries are measured using the local currency as the functional currency. Assets and liabilities of the Company's foreign operating subsidiaries are translated into U.S. dollars at the exchange rate in effect at the balance sheet date. Revenues and expenses are translated at average rates in effect during the period. Net exchange gains or losses resulting from the translation of financial statements of foreign operations and related long-term debt are recorded as a separate component of other comprehensive earnings. See Note 13 to the Consolidated Financial Statements. Foreign currency transaction gains and losses are included in the Consolidated Statement of Earnings.

### **RECLASSIFICATIONS**

Certain amounts in the 2015 and 2014 financial statements, as previously reported, have been reclassified to conform to the 2016 presentation. See Note 3 to the Consolidated Financial Statements. These changes did not have a material impact on the Consolidated Financial Statements.

### **REVENUE RECOGNITION**

Revenues recognized include product sales, billings for freight and handling charges and fees earned for services provided. The Company recognizes product sales and billings for freight and handling charges primarily on the date products are shipped to, or picked up by, the customer. In cases where the product is shipped directly to the customer, the Company recognizes revenue at the time of shipment primarily on a gross basis. The Company's standard shipping terms are FOB shipping point. On occasion, the Company will negotiate FOB destination terms. These sales are recognized upon delivery to the customer. eCommerce revenues, which accounted for 47% of total 2016 revenues, are recognized on the same terms as revenues through other channels. Fee revenues, which accounted for less than 1% of total 2016 revenues, are recognized after services are completed including related service costs. Taxes collected from customers and remitted to governmental authorities are presented on a net basis and are not included in revenue.

### **COST OF MERCHANDISE SOLD**

Cost of merchandise sold includes product and product-related costs, vendor consideration, freight-out and handling costs. The Company defines handling costs as those costs incurred to fulfill a shipped sales order.

### **VENDOR CONSIDERATION**

The Company receives rebates and allowances from its vendors to promote their products. The Company utilizes numerous advertising programs to promote its vendors' products, including catalogs and other printed media, Internet, radio and other marketing programs. Most of these programs relate to multiple vendors, which makes supporting the specific, identifiable and incremental criteria difficult, and would require numerous assumptions and judgments. Based on the inexact nature of trying to track reimbursements to the advertising expenditure for each vendor, the Company treats most vendor advertising allowances as a reduction to product purchase price and is reflected in Cost of merchandise sold rather than a reduction of operating (advertising) expenses.

Vendor funds that are determined to be reimbursement of specific, incremental and identifiable costs incurred to promote vendors' products are recorded as an offset to the related expenses in Warehouse, marketing and administrative expenses.

Rebates earned from vendors that are based on product purchases are capitalized into inventory as part of product purchase price. These rebates are credited to Cost of merchandise sold based on sales. Vendor rebates that are earned based on products sold are credited directly to Cost of merchandise sold.

#### ADVERTISING

Advertising costs are expensed in the year the related advertisement is first presented. Advertising expense was \$180 million, \$180 million and \$169 million for 2016, 2015 and 2014, respectively. Most vendor-provided allowances are classified as a reduction to product purchase price and is reflected in Cost of merchandise sold. For additional information see VENDOR CONSIDERATION above.

Catalog expense is amortized equally over the life of the catalog, beginning in the month of its distribution. Advertising costs for catalogs that have not been distributed by year-end are capitalized as Prepaid expenses. Amounts included in Prepaid expenses at December 31, 2016 and 2015, were \$12 million and \$19 million, respectively.

#### WAREHOUSING, MARKETING AND ADMINISTRATIVE EXPENSES

Included in this category are purchasing, branch operations, information services and marketing and selling expenses, as well as other types of general and administrative costs.

#### STOCK INCENTIVE PLANS

The Company measures all share-based payments using fair-value-based methods and records compensation expense related to these payments over the vesting period. See Note 11 to the Consolidated Financial Statements.

#### INCOME TAXES

Income taxes are recognized during the year in which transactions enter into the determination of financial statement income, with deferred taxes being provided for temporary differences between financial and tax reporting. The Company recognizes in the financial statements a provision for tax uncertainties, resulting from application of complex tax regulations in multiple tax jurisdictions. The Company evaluates our deferred income taxes to determine if valuation allowances are required using a "more likely than not" standard. This assessment considers the nature, frequency and amount of book and taxable income and losses, the duration of statutory carryback and forward periods, future reversals of existing taxable temporary differences and tax planning strategies, among other matters. See Note 14 to the Consolidated Financial Statements.

#### OTHER COMPREHENSIVE EARNINGS (LOSSES)

The Company's Other comprehensive earnings (losses) include foreign currency translation adjustments, changes in fair value of derivatives designated as hedges and unrecognized gains (losses) on postretirement and other employment-related benefit plans. Accumulated other comprehensive earnings (losses) (AOCE) are presented separately as part of shareholders' equity. See Note 13 to the Consolidated Financial Statements.

#### CASH AND CASH EQUIVALENTS

The Company considers investments in highly liquid debt instruments, purchased with an original maturity of 90 days or less, to be cash equivalents.



## CONCENTRATION OF CREDIT RISK

The Company places temporary cash investments with institutions of high credit quality and, by policy, limits the amount of credit exposure to any one institution.

The Company has a broad customer base representing many diverse industries doing business in all regions of the United States, Canada, Europe, Asia and Latin America. Consequently, no significant concentration of credit risk is considered to exist.

## ACCOUNTS RECEIVABLE AND ALLOWANCE FOR DOUBTFUL ACCOUNTS

Accounts receivable are stated at their estimated net realizable value. The Company establishes reserves for customer accounts that are potentially uncollectible. The method used to estimate the allowances is based on several factors, including the age of the receivables and the historical ratio of actual write-offs to the age of the receivables. These analyses also take into consideration economic conditions that may have an impact on a specific industry, group of customers or a specific customer. See Note 4 to the Consolidated Financial Statements.

## INVENTORIES

Inventories are valued at the lower of cost or market. Cost is determined primarily by the last-in, first-out (LIFO) method, which accounts for approximately 64% of total inventory. For the remaining inventory, cost is determined by the first-in, first-out (FIFO) method.

Grainger establishes inventory reserves for obsolete inventory. Grainger regularly reviews inventory to evaluate continued demand and identify any obsolete or excess quantities. Grainger records provisions for the difference between excess and obsolete inventory cost and its estimated realizable value.

## PROPERTY, BUILDINGS AND EQUIPMENT

Property, buildings and equipment are valued at cost. For financial statement purposes, depreciation and amortization are recorded in amounts sufficient to relate the cost of depreciable assets to operations over their estimated service lives, principally on the declining-balance and sum-of-the-years-digits depreciation methods. The Company's international businesses record depreciation expense primarily on a straight-line basis. The principal estimated useful lives for determining depreciation are as follows:

Buildings, structures and improvements	10 to 30 years
Furniture, fixtures, machinery and equipment	3 to 10 years

Depreciation expense was \$166 million, \$162 million and \$154 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Improvements to leased property are amortized over the initial terms of the respective leases or the estimated service lives of the improvements, whichever is shorter.

The Company capitalized interest costs of \$2 million, \$4 million and \$2 million for the years ended December 31, 2016, 2015 and 2014, respectively.

## LONG-LIVED ASSETS

The carrying value of long-lived assets, primarily property, buildings and equipment and amortizable intangibles, is evaluated whenever events or changes in circumstances indicate that the carrying value of the asset may be impaired. An impairment loss is recognized when estimated undiscounted future cash flows resulting from use of the asset, including disposition, are less than the carrying value of the asset. Impairment is measured as the amount by which the asset's carrying amount exceeds the fair value.

## GOODWILL AND OTHER INTANGIBLES

Goodwill is recognized as the excess cost of an acquired entity over the net amount assigned to assets acquired and liabilities assumed. Goodwill is not amortized, but rather tested for impairment on an annual basis and more often if circumstances require. Impairment losses are recognized whenever the implied fair value of goodwill is less than its carrying value.

The Company recognizes an acquired intangible apart from goodwill whenever the intangible arises from contractual or other legal rights, or whenever it can be separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged, either individually or in combination with a related contract, asset or liability. Such intangibles are amortized over their estimated useful lives unless the estimated useful life is determined to be indefinite. The straight-line method of amortization is used as it has been determined to approximate the use pattern of the asset. The Company also maintains intangible assets with indefinite lives, which are not amortized. These intangibles are tested for impairment on an annual basis and more often if circumstances require. Impairment losses are recognized whenever the estimated fair value of these assets is less than their carrying value. See Note 3 to the Consolidated Financial Statements.

The Company capitalizes certain costs related to the purchase and development of internal-use software. Amortization of capitalized software is on a straight-line basis over three or five years.

#### FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amounts of cash and cash equivalents, receivables and accounts payable approximate fair value due to the short-term nature of these financial instruments. See Note 8 to the Consolidated Financial Statements for fair value of long-term debt.

#### WARRANTY RESERVES

The Company generally warrants the products it sells against defects for one year. For a significant portion of warranty claims, the manufacturer of the product is responsible for expenses. For warranty expenses not covered by the manufacturer, the Company provides a reserve for future costs based primarily on historical experience. Warranty reserves were \$3 million at December 31, 2016 and 2015.

#### CONTINGENCIES

The Company accrues for costs relating to litigation claims and other contingent matters, when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated.

#### NEW ACCOUNTING STANDARDS

In July 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Board (ASU) 2015-11, *Simplifying the Measurement of Inventory*, which simplifies the subsequent measurement of inventory by replacing the lower of cost or market test with a lower of cost or net realizable value (NRV) test. NRV is calculated as the estimated selling price less reasonably predictable costs of completion, disposal and transportation. This ASU is effective for fiscal years and for interim periods within those fiscal years beginning after December 15, 2016, and prospective adoption is required. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments: Recognition and Measurement of Financial Assets and Financial Liabilities*. This change to the financial instrument model primarily affects the accounting for equity investments, financial liabilities under fair value options and the presentation and disclosure requirements for financial instruments. The effective date for the standard is for fiscal years and interim periods within those years beginning after December 15, 2017. Certain provisions of the new guidance can be adopted early. The Company is evaluating the impact of this ASU.

In February 2016, the FASB issued ASU 2016-02, *Leases*. This ASU improves transparency and comparability related to the accounting and reporting of leasing arrangements. The guidance will require balance sheet recognition for assets and liabilities associated with rights and obligations created by leases with terms greater than twelve months. The effective date for the standard is for fiscal years and interim periods within those years beginning after December 15, 2018. Early adoption is permitted. The Company is evaluating the impact of this ASU.

In March 2016, the FASB issued ASU 2016-07, *Investments - Equity Method and Joint Ventures: Simplifying the Transition to the Equity Method of Accounting*. This ASU eliminates the requirement to retroactively adjust the investment, results of operations and retained earnings when an investment qualifies for use of the equity method as a result of an increase in the level of ownership interest or degree of influence. The amendment requires that the investor add the cost of acquiring the additional interest to the current basis of the investor's previously held interest and adopt the equity method of accounting as of the date the investment becomes qualified for equity method accounting. The effective date for the standard is for fiscal years and interim periods within those years beginning after

December 15, 2016. The amendment should be applied prospectively and early application is permitted. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In March 2016, the FASB issued ASU 2016-09, *Stock Based Compensation: Improvements to Employee Share-Based Payment Accounting*. This ASU simplifies several aspects of the accounting for employee share-based payment transactions, including accounting for income taxes, forfeitures and statutory tax withholdings requirements, as well as classification in the statement of cash flows. The effective date for the standard is for fiscal years and interim periods within those years beginning after December 15, 2016. Early adoption is permitted. If early adoption is elected, all amendments in the ASU that apply must be adopted in the same period. The Company has elected not to early adopt this ASU. The Company expects the new guidance to impact its tax expense and dilutive shares outstanding calculation, with a potentially dilutive impact on future earnings per share and increased period-to-period variability of net earnings. The impact cannot be quantified due to the timing and exercise activity that will occur in future periods.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments*. This ASU affects an entity to varying degrees depending on the credit quality of the assets held by the entity, their duration and how the entity applies current GAAP. The effective date of the amendment to the standard is for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Company is evaluating the impact of this ASU.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments*. This ASU addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The effective date of the amendment to the standard is for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes - Intra-Entity Transfers of Assets Other Than Inventory*. This ASU eliminates the existing exception in U.S. GAAP that prohibits the recognition of income tax consequences for most intra-entity asset transfers. The effective date of this ASU is fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In October 2016, the FASB issued ASU 2016-17, *Consolidation - Interests Held Through Related Parties That Are Under Common Control*. This ASU amends the consolidation guidance on how a reporting entity that is the single decision maker of a variable interest entity (VIE) should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary of that VIE. The effective date of the amendment to the standard is for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In December 2016, the FASB issued ASU 2016-19, *Technical Corrections and Improvements*. This ASU represents changes to clarify, correct errors or make minor improvements to the Accounting Standards Codification. The amendments make the Accounting Standards Codification easier to understand and easier to apply by eliminating inconsistencies and providing clarifications. Most of the amendments in this Update do not require transition guidance and are effective upon issuance of this Update. Six amendments in this Update clarify guidance or correct references in the Accounting Standards Codification that could potentially result in changes in current practice because of either misapplication or misunderstanding of current guidance. Early adoption is permitted for the amendments that require transition guidance. This ASU is not expected to have a material impact on the Company's Consolidated Financial Statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*. This ASU clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The effective date of this ASU is for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The Company is evaluating the impact of this ASU.

In January 2017, the FASB issued ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. This ASU is to simplify how an entity is required to test goodwill for impairment. The effective date of the amendment to the standard is for fiscal years beginning after December 15, 2017, including interim periods

within those fiscal years. The Company's goodwill impairment testing for the fiscal period beginning January 1, 2018, will follow the provisions of this ASU.

## REVENUE RECOGNITION STANDARDS

In July 2015, FASB announced a one-year delay in the effective date of ASU 2014-09, *Revenue from Contracts with Customers*. This ASU will now be effective for interim and annual periods beginning after December 15, 2017. The standard will supersede nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of the ASU is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The ASU also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The standard permits adoption as early as the original effective date, which was for interim and annual periods beginning after December 15, 2016.

In March 2016, the FASB issued ASU 2016-08, *Revenue from Contract with Customers: Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*. This ASU is meant to reduce the potential for diversity in practice arising from inconsistent application of the principal versus agent guidance as well as reduce the cost and complexity during the transition and on an ongoing basis.

In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing*. This ASU is meant to clarify the identification of performance obligations and the licensing implementation guidelines, while retaining the related principles of those areas.

In December 2016, the FASB issued ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. This ASU includes technical corrections and improvements to Topic 606 and other Topics amended by Update 2014-09 to increase stakeholders' awareness of the proposals and to expedite improvements to ASU 2014-09.

The effective dates of ASU 2016-08, ASU 2016-10 and ASU 2016-20 are consistent with ASU 2014-09. The Company has elected not to early adopt these ASUs. The standard permits the use of either the full retrospective or the modified retrospective adoption method. The Company is planning to elect the modified retrospective method and recognize the cumulative effect of initially applying the new standard as an adjustment to the opening balance of equity as of January 1, 2018. These ASUs require expanded qualitative and quantitative disclosures of revenue and cash flows emerging from Contracts with Customers.

The Company has evaluated the provisions of the new standard and is in the process of assessing its impact on financial statements, information systems, business processes and financial statement disclosures. Based on initial reviews, the standard is not expected to have a material impact on the Company's Consolidated Financial Statements.

## NOTE 2 - BUSINESS ACQUISITIONS AND DIVESTITURES

On September 1, 2015, the Company acquired all of the issued share capital of Cromwell Group (Holdings) Limited (Cromwell). With sales of £285 million (\$437 million) for fiscal year ending August 31, 2015, prior to the acquisition, Cromwell was the largest independent MRO distributor in the United Kingdom. This acquisition brings together Cromwell's product strength and customer relationships with Grainger's expertise in supply chain and eCommerce to accelerate growth in the core and online Cromwell business. The Company paid £310 million (\$464 million), subject to customary adjustments, for the Cromwell acquisition. The acquisition was partially funded with newly issued debt in the United Kingdom. The goodwill recorded in the acquisition totaled approximately \$123 million. The goodwill is not deductible for tax purposes. The intangibles recorded in the acquisition consisted primarily of tradename (approximately \$84 million) and customer relationships (approximately \$132 million) intangibles. The tradename is deemed to have an indefinite life and the customer relationship will be amortized over 15 years. The purchase price allocation has been finalized during 2016 and the impact to the consolidated financial statements was not material. Disclosure of pro forma results was not required.

During 2014, the Company announced plans to close the business in Brazil. In 2014, the Company recorded shutdown costs of \$29 million in the Consolidated Statement of Earnings, including \$9 million reclassified from Accumulated other comprehensive earnings (losses) related to foreign currency translation losses from the consolidation of the business unit.

## NOTE 3 - GOODWILL AND OTHER INTANGIBLE ASSETS

The balances and changes in the carrying amount of Goodwill by segment are as follows (in thousands of dollars):

	United States	Canada	Other Businesses	Total
Balance at January 1, 2015	\$ 202,020	\$ 141,189	\$ 163,696	\$ 506,905
Acquisitions	—	—	114,903	114,903
Translation	—	(22,660)	(16,812)	(39,472)
Balance at December 31, 2015	202,020	118,529	261,787	582,336
Acquisitions and Purchase Price Adjustments	—	—	8,362	8,362
Impairment	—	—	(47,244)	(47,244)
Translation	—	3,611	(19,915)	(16,304)
Balance at December 31, 2016	<u>\$ 202,020</u>	<u>\$ 122,140</u>	<u>\$ 202,990</u>	<u>\$ 527,150</u>
Cumulative goodwill impairment charges, January 1, 2016	\$ 17,038	\$ 32,265	\$ 23,055	\$ 72,358
Goodwill impairment charges	—	—	47,244	47,244
Cumulative goodwill impairment charges, December 31, 2016	<u>\$ 17,038</u>	<u>\$ 32,265</u>	<u>\$ 70,299</u>	<u>\$ 119,602</u>

Business acquisitions result in the recording of goodwill and identified intangible assets that affect the amount of amortization expense and possible impairment write-downs that may occur in future periods. Grainger annually reviews goodwill and intangible assets with indefinite lives for impairment in the fourth quarter and when events or changes in circumstances indicate the carrying value of these assets might exceed their current fair values. Grainger tests for goodwill impairment at the reporting unit level and performs a qualitative assessment of factors such as a reporting unit's current performance and overall economic conditions to determine if it is more likely than not that the goodwill might be impaired and whether it is necessary to perform the two-step quantitative goodwill impairment test. In the two-step test, Grainger compares the carrying value of assets of the reporting unit to its calculated fair value. If the carrying value of assets of the reporting unit exceeds its calculated fair value, the second step is performed, where the implied fair value of goodwill is compared to the carrying value of that goodwill, to determine the amount of impairment.

The fair value of reporting units is calculated primarily using the discounted cash flow (DCF) method and incorporating value indicators from a market approach to evaluate the reasonableness of the resulting fair values. The DCF method incorporates various assumptions including the amount and timing of future expected cash flows, including revenues,

gross margins, operating expenses, capital expenditures and working capital based on operational budgets, long-range strategic plans and other estimates. The terminal value growth rate is used to calculate the value of cash flows beyond the last projected period and reflects management's best estimates for perpetual growth for the reporting units. Estimates of market-participant risk-adjusted weighted average cost of capital are used as a basis for determining the discount rates to apply to the reporting units' future expected cash flows and terminal value.

Grainger completed its annual goodwill impairment testing during the fourth quarter. For all of the Company's reporting units, the estimated fair values substantially exceeded the carrying values, except for the Fabory reporting unit. As of the 2015 test, the fair value of the Fabory reporting unit exceeded its \$106 million carrying value by 15%. During the current year testing, Grainger considered Fabory's performance and the revised outlook. Prior branch rationalization initiatives and structural changes in the business contributed to cost improvements. However, declines in sales, primarily in the Netherlands and France, and price pressure contributed to lower earnings for the year. The current year business performance and revised financial projections also reflect market conditions, which continued to be negatively impacted by the downturn in oil and gas and maritime industries in the Netherlands, Fabory's largest market. The revised outlook and uncertainty beyond 2016 were factored into lower earnings, cash flow projections and long-term expectations for Fabory's future performance, resulting in the calculated fair value of the reporting unit below its carrying value in step one of the two-step quantitative test, and step two impairment calculations were required. As a result, the Company recorded a \$47 million goodwill impairment charge with no tax benefit due to the nondeductibility of goodwill in the relevant taxing jurisdictions. The risk of potential failure of step one of the impairment test for Fabory's remaining goodwill of \$55 million as of December 31, 2016, is highly dependent upon a number of assumptions included in the determination of the reporting unit's fair value. Changes in assumptions regarding discount rate and future performance may have a significant impact on the fair value of the reporting unit in the future. If future earnings and cash flow projections are not achieved or unfavorable economic environment continues in Fabory's key markets, future impairment of the remaining goodwill or intangible assets could result.

The balances and changes in Intangible assets - net are as follows (in thousands of dollars):

	Weighted average life	As of December 31,					
		2016			2015		
		Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Customer lists and relationships	14.2 years	\$ 424,405	\$ 175,112	\$ 249,293	\$ 452,429	\$ 148,424	\$ 304,005
Trademarks, trade names and other	13.8 years	25,353	14,262	11,091	25,764	13,051	12,713
Non-amortized trade names and other		128,282	—	128,282	146,576	—	146,576
Capitalized software	4.2 years	571,978	374,518	197,460	504,283	319,567	184,716
<b>Total intangible assets</b>	<b>8.5 years</b>	<b>\$ 1,150,018</b>	<b>\$ 563,892</b>	<b>\$ 586,126</b>	<b>\$ 1,129,052</b>	<b>\$ 481,042</b>	<b>\$ 648,010</b>

Capitalized software of \$185 million was previously reported in Other Assets as of December 31, 2015. The amount was reclassified to Intangibles - net to conform to the 2016 presentation.

Amortization expense recognized on intangible assets was \$82 million, \$65 million and \$54 million for the years ended December 31, 2016, 2015 and 2014, respectively, and is included in Warehousing, marketing and administrative expenses on the Consolidated Statement of Earnings.

Estimated amortization expense for future periods is as follows (in thousands of dollars):

Year	Expense
2017	\$ 85,791
2018	75,502
2019	58,309
2020	43,488
2021	31,716
Thereafter	163,038

#### NOTE 4 - ALLOWANCE FOR DOUBTFUL ACCOUNTS

The following table shows the activity in the allowance for doubtful accounts (in thousands of dollars):

	For the Years Ended December 31,	
	2016	2015
Balance at beginning of period	\$ 22,288	\$ 22,121
Provision for uncollectible accounts	16,216	10,181
Write-off of uncollectible accounts, net of recoveries	(11,248)	(10,495)
Business acquisitions, foreign currency and other	(566)	481
Balance at end of period	\$ 26,690	\$ 22,288

#### NOTE 5 - INVENTORIES

Inventories primarily consist of merchandise purchased for resale. Inventories would have been \$382 million and \$388 million higher than reported at December 31, 2016 and 2015, respectively, if the FIFO method of inventory accounting had been used for all Company inventories. Net earnings would have decreased by \$3 million and \$1 million, and increased by \$1 million for the years ended December 31, 2016, 2015 and 2014, respectively, using the FIFO method of accounting. Inventory values using the FIFO method of accounting approximate replacement cost. The Company provides reserves for excess and obsolete inventory.

The following table shows the activity in the reserves for excess and obsolete inventory (in thousands of dollars):

	For the Years Ended December 31,	
	2016	2015
Balance at beginning of period	\$ (168,105)	\$ (136,748)
Provision for excess and obsolete inventory	(58,485)	(35,165)
Disposal of unsaleable inventory	30,161	24,046
Business acquisitions, foreign currency and other	4,915	(20,238)
Balance at end of period	\$ (191,514)	\$ (168,105)

#### NOTE 6 - RESTRUCTURING RESERVES

The Company recorded employee termination benefits with the majority expected to be paid through 2017 related to the restructuring. Severance costs of approximately \$34 million and \$30 million were recorded in the years ended December 31, 2016 and 2015, respectively, and are included in Warehousing, marketing and administrative expenses. The reserve balance as of December 31, 2016 and 2015 was approximately \$23 million and \$24 million, respectively, and is included in Accrued Compensation and Benefits.

## NOTE 7 - SHORT-TERM DEBT

Short-term debt consisted of the following (in thousands of dollars):

	As of December 31,	
	2016	2015
<u>Lines of Credit</u>		
Outstanding at December 31	\$ 16,392	\$ 23,072
Maximum month-end balance during the year	\$ 24,722	\$ 47,802
Weighted average interest rate during the year	4.04%	4.37%
Weighted average interest rate at December 31	5.13%	3.16%
<u>Commercial Paper</u>		
Outstanding at December 31	\$ 369,748	\$ 330,000
Maximum month-end balance during the year	\$ 629,712	\$ 330,000
Weighted average interest rate during the year	0.50%	0.23%
Weighted average interest rate at December 31	0.69%	0.47%

### Lines of Credit

The Company's U.S. business had a committed line of credit of \$900 million in 2016 and 2015 for which the Company paid a commitment fee of 0.07% in 2016 and 2015. This line of credit supports the issuance of commercial paper. The current line is due to expire in August 2018.

Foreign subsidiaries also utilize lines of credit to meet business growth and operating needs. The Company had \$88 million and \$100 million of uncommitted lines of credit at December 31, 2016 and 2015, respectively.

### Commercial Paper

The Company issued commercial paper for general working capital needs.

### Letters of Credit

The Company's U.S. business had \$30 million and \$29 million of letters of credit at December 31, 2016 and 2015, respectively, primarily related to the Company's insurance program. Letters of credit were also issued to facilitate purchases of products. These issued amounts were \$5 million and \$3 million at December 31, 2016 and 2015, respectively. Letters of credit issued by the Company's international businesses were immaterial.



## NOTE 8 - LONG-TERM DEBT

Long-term debt consisted of the following (in thousands of dollars):

	As of December 31,	
	2016	2015
4.60% senior notes due 2045	\$ 1,000,000	\$ 1,000,000
3.75% senior notes due 2046	400,000	—
U.S. dollar term loan	—	114,614
British pound term loan and revolving credit facility	187,506	235,808
Euro term loan and revolving credit facility	120,900	114,030
Canadian dollar revolving credit facility	100,521	108,389
Other	71,109	75,866
	<u>1,880,036</u>	<u>1,648,707</u>
Less current maturities	(19,966)	(247,346)
Debt issuance costs and discounts	(19,124)	(12,947)
	<u>\$ 1,840,946</u>	<u>\$ 1,388,414</u>

### Senior Notes

On May 16, 2016, the Company issued \$400 million of unsecured 3.75% Senior Notes (3.75% Notes) that mature on May 15, 2046. The 3.75% Notes require no principal payments until the maturity date and interest is payable semi-annually on May 15 and November 15, beginning on November 15, 2016. Prior to November 15, 2045, the Company may redeem the 3.75% Notes in whole at any time or in part from time to time at a “make-whole” redemption price. This redemption price is calculated by reference to the then-current yield on a U.S. treasury security with a maturity comparable to the remaining term of the 3.75% Notes plus 20 basis points, together with accrued and unpaid interest, if any, to the redemption date. Additionally, if the Company experiences specific kinds of changes in control, it will be required to make an offer to purchase the 3.75% Notes at 101% of their principal amount plus accrued and unpaid interest, if any, to the date of purchase. On or after November 15, 2045, the Company may redeem the 3.75% Notes in whole at any time or in part from time to time at 100% of their principal amount, together with accrued and unpaid interest, if any, to the redemption date. Costs and discounts of approximately \$7 million associated with the issuance of the 3.75% Notes, representing underwriting fees and other expenses, have been recorded as a contra-liability within Long-term debt and will be amortized to interest expense over the term of the 3.75% Notes. The fair value of the 3.75% Notes was approximately \$371 million as of December 31, 2016.

On June 11, 2015, the Company issued \$1 billion of unsecured 4.60% Senior Notes (4.60% Notes) that mature on June 15, 2045. The 4.60% Notes require no principal payments until the maturity date and interest is payable semi-annually on June 15 and December 15, beginning on December 31, 2015. Prior to December 15, 2044, the Company may redeem the 4.60% Notes in whole at any time or in part from time to time at a “make-whole” redemption price. This redemption price is calculated by reference to the then-current yield on a U.S. treasury security with a maturity comparable to the remaining term of the 4.60% Notes plus 25 basis points, together with accrued and unpaid interest, if any, to the redemption date. Additionally, if the Company experiences specific kinds of changes in control, it will be required to make an offer to purchase the 4.60% Notes at 101% of their principal amount plus accrued and unpaid interest, if any, to the date of purchase. On or after December 15, 2044, the Company may redeem the 4.60% Notes in whole at any time or in part from time to time at 100% of their principal amount, together with accrued and unpaid interest, if any, to the redemption date. Costs and discounts of approximately \$11 million associated with the issuance of the 4.60% Notes, representing underwriting fees and other expenses, have been recorded as a contra-liability within Long-term debt and will be amortized to interest expense over the term of the 4.60% Notes. The fair value of the 4.60% Notes was approximately \$1.1 billion and \$1 billion as of December 31, 2016 and 2015, respectively.

The estimated fair value of the Company's 3.75% Notes and 4.60% Notes was based on available external pricing data and current market rates for similar debt instruments, among other factors, which are classified as level 2 inputs within the fair value hierarchy. The carrying value of other long-term debt approximates fair value due to the variable interest rates.

#### *U.S. Dollar Term Loan*

In January 2016, the Company exercised its option to prepay the U.S. dollar loan and paid off the remaining balance of the loan.

#### *British Pound Term Loan and Revolving Credit Facility*

On August 26, 2015, the Company entered into an unsecured credit facilities agreement providing for a five-year term loan of £160 million and revolving credit facility of £20 million. Proceeds of the term loan were used to partially fund the acquisition of Cromwell and to pay certain costs related to the acquisition. Under the agreement, the principal amount of the term loan will be repaid semiannually in installments of £4 million beginning February 2016 through February 2020 with the remaining outstanding amount due August 2020. At the election of the Company, the term loan bears interest at the London Interbank Offered Rate (LIBOR) Rate plus the Applicable Margin as defined within the term loan agreement. At December 31, 2016, the Company had elected a one-month LIBOR Interest Period. The weighted average interest rate was 1.17% and 1.26% for the years ended December 31, 2016 and 2015, respectively.

The Company has the right to obtain advances under the revolving credit facility, which will be used for general corporate and working capital purposes. Pursuant to the credit agreement, there is a commitment fee of 0.26% as of December 31, 2016. There is no balance outstanding on the revolving credit facility as of December 31, 2016.

#### *Euro Term Loan and Revolving Credit Facility*

On August 31, 2016, the Company entered into an agreement for a five year term loan of €110 million and a revolving credit facility of up to €20 million. The proceeds from the term loan were used to pay in full €102.5M of a term loan that matured in August 2016, which was entered into to partially fund the acquisition of Fabory in 2011. Under the agreement, no principal amount of the loan will be required to be paid until the loan becomes due on August 31, 2021, at which time the loan will be required to be paid in full. The Company, at its option, may prepay this term loan in whole or in part at the end of any interest period without penalty. The loan bears interest at the Euro Interbank Offered Rate (EURIBOR) plus a margin of 45 basis points. If EURIBOR is less than zero, then EURIBOR will be deemed to be zero. The interest rate at December 31, 2016, was 0.45%. Costs of approximately €0.5 million associated with the issuance of the term loan, representing arrangement fees and other expenses, have been recorded as a contra-liability within Long-term debt and will be amortized to interest expense over the life of the term loan. The revolving credit facility must generally be paid at the conclusion of each interest period as defined in the facility agreement. This facility will bear interest at EURIBOR plus a margin of 35 basis points.

The Company has the right to obtain advances under the revolving credit facility, which will be used for general corporate and working capital purposes. Pursuant to the credit agreement, there is a commitment fee of 0.1225% as of December 31, 2016. There is €5M outstanding on the revolving credit facility as of December 31, 2016. The interest rate on the outstanding amount at December 31, 2016, was 0.35%.

#### *Canadian Dollar Revolving Credit Facility*

In September 2014, the Company entered into an unsecured revolving credit facility with a maximum availability of C\$175 million. Pursuant to the credit agreement, there is a commitment fee of 0.07% as of December 31, 2016, and the facility matures on September 24, 2019. As of December 31, 2016 and 2015, the Company had drawn C\$135 million and C\$150 million, respectively, under the facility for the purpose of repaying an intercompany loan and to fund general working capital needs. The weighted average interest rate during the year on this outstanding amount was 1.59%. No principal payments are required on the credit facility until the maturity date.

The scheduled aggregate principal payments related to long-term debt, excluding debt issuance costs, are due as follows (in thousands of dollars):

Year	Payment Amount
2017	\$ 19,966
2018	29,339
2019	128,670
2020	179,322
2021	115,743
Thereafter	1,406,996
Total	<u>\$ 1,880,036</u>

The Company's debt instruments include affirmative and negative covenants that are usual and customary for companies with similar credit ratings. The Company was in compliance with all debt covenants as December 31, 2016.

## **NOTE 9 - EMPLOYEE BENEFITS**

The Company provides various retirement benefits to eligible employees, including contributions to defined contribution plans, pension benefits associated with defined benefit plans, postretirement medical benefits and other benefits. Eligibility requirements and benefit levels vary depending on employee location. Various foreign benefit plans cover employees in accordance with local legal requirements.

### Defined Contribution Plans

A majority of the Company's U.S. employees are covered by a noncontributory profit-sharing plan. Effective January 1, 2016, the plan was amended to better align Company contributions to Company performance and now includes two components, a variable annual contribution based on a rate of return on invested capital and an automatic contribution equal to 3% of total eligible compensation to a 401(k) plan. In addition, employees covered by the plan are also able to make personal contributions to the 401(k) plan. The total Company contribution will be maintained at a minimum of 8% and a maximum of 18% of total eligible compensation paid to eligible employees. The total profit-sharing plan expense was \$84 million, \$121 million and \$175 million for 2016, 2015 and 2014, respectively.

The Company sponsors additional defined contribution plans available to certain U.S. and foreign employees for which contributions are paid by the Company and participating employees. The expense associated with these defined contribution plans totaled \$12 million, \$11 million and \$15 million for 2016, 2015 and 2014, respectively.

### Defined Benefit Plans and Other Retirement Plans

The Company sponsors defined benefit plans available to certain foreign employees. The cost of these programs is not significant to the Company. In certain countries, pension contributions are made to government-sponsored social security pension plans in accordance with local legal requirements. For these plans, the Company has no continuing obligations other than the payment of contributions.

### Postretirement Benefits

The Company has a postretirement healthcare benefits plan that provides coverage for a majority of its U.S. employees hired prior to January 1, 2013, and their dependents should they elect to maintain such coverage upon retirement. Covered employees become eligible for participation when they qualify for retirement while working for the Company. Participation in the plan is voluntary and requires participants to make contributions toward the cost of the plan, as determined by the Company.

The net periodic benefits costs charged to operating expenses, which were valued with a measurement date of January 1 for each year, consisted of the following components (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
Service cost	\$ 8,238	\$ 10,128	\$ 9,005
Interest cost	9,855	9,649	10,549
Expected return on assets	(10,113)	(10,375)	(8,237)
Amortization of prior service credit	(6,688)	(6,801)	(7,254)
Amortization of transition asset	—	—	(143)
Amortization of unrecognized losses	129	1,512	779
Net periodic benefits costs	<u>\$ 1,421</u>	<u>\$ 4,113</u>	<u>\$ 4,699</u>

Reconciliations of the beginning and ending balances of the postretirement benefit obligation, which is calculated as of December 31 measurement date, the fair value of plan assets available for benefits and the funded status of the benefit obligation follow (in thousands of dollars):

	2016	2015
Benefit obligation at beginning of year	\$ 239,348	\$ 282,917
Service cost	8,238	10,128
Interest cost	9,855	9,649
Plan participants' contributions	2,943	2,754
Actuarial losses (gains)	13,218	(58,251)
Benefits paid	(9,439)	(8,739)
Prescription drug rebates	865	890
Benefit obligation at end of year	<u>265,028</u>	<u>239,348</u>
Plan assets available for benefits at beginning of year	155,611	156,015
Actual returns on plan assets	13,557	1,635
Employer's contributions	—	2,747
Plan participants' contributions	2,774	2,754
Benefits paid	(9,262)	(8,430)
Prescription drug rebates	865	890
Plan assets available for benefits at end of year	<u>163,545</u>	<u>155,611</u>
Noncurrent postretirement benefit obligation	<u>\$ 101,483</u>	<u>\$ 83,737</u>

The amounts recognized in AOCE consisted of the following (in thousands of dollars):

	As of December 31,	
	2016	2015
Prior service credit	\$ 53,814	\$ 60,502
Unrecognized losses	(12,656)	(3,015)
Deferred tax (liability)	(15,861)	(22,134)
Net accumulated gains	<u>\$ 25,297</u>	<u>\$ 35,353</u>

The \$10 million increase in unrecognized losses was primarily driven by a decrease in the discount rate and revised healthcare cost trends, partially offset by a change in the mortality improvement tables used and a change in per capita costs.

The components of AOCE related to the postretirement benefit costs that will be amortized into net periodic postretirement benefit costs in 2017 are estimated as follows (in thousands of dollars):

	2017
Amortization of prior service credit	\$ (6,492)
Amortization of unrecognized losses	937
Estimated amount to be amortized from AOCE into net periodic postretirement benefit costs	<u>\$ (5,555)</u>

The Company has elected to amortize the amount of net unrecognized gains (losses) over a period equal to the average remaining service period for active plan participants expected to retire and receive benefits of approximately 13.5 years for 2016.

The benefit obligation was determined by applying the terms of the plan and actuarial models. These models include various actuarial assumptions, including discount rates, long-term rates of return on plan assets, healthcare cost trend rate and cost-sharing between the Company and the retirees. The Company evaluates its actuarial assumptions on an annual basis and considers changes in these long-term factors based upon market conditions and historical experience.

The following assumptions were used to determine net periodic benefit costs at January 1:

	For the Years Ended December 31,		
	2016	2015	2014
Discount rate	4.20%	3.89%	4.90%
Long-term rate of return on plan assets, net of tax	6.65%	6.65%	5.70%
Initial healthcare cost trend rate	7.00%	7.25%	7.50%
Ultimate healthcare cost trend rate	4.50%	4.50%	4.50%
Year ultimate healthcare cost trend rate reached	2026	2026	2026

The following assumptions were used to determine benefit obligations at December 31:

	2016	2015	2014
Discount rate	4.00%	4.20%	3.89%
Expected long-term rate of return on plan assets, net of tax	7.13%	6.65%	6.65%
Initial healthcare cost trend rate	6.81%	7.00%	7.25%
Ultimate healthcare cost trend rate	4.50%	4.50%	4.50%
Year ultimate healthcare cost trend rate reached	2026	2026	2026

The discount rate assumptions reflect the rates available on high-quality fixed income debt instruments as of December 31, the measurement date of each year. These rates have been selected due to their similarity to the duration of the projected cash flows of the postretirement healthcare benefit plan. As of December 31, 2016, the Company decreased the discount rate from 4.20% to 4.00% to reflect the decrease in the market interest rates, which contributed to the unrealized actuarial loss at December 31, 2016. As of December 31, 2016, the Company changed the mortality improvement table used to project mortality rates into the future from Mortality Table RP-2014 with Mortality Improvement Scale MB 2015 to Mortality Table RPH-2014 with Mortality Improvement Scale MP 2016, which was published by the Society of Actuaries and reflects the most recent updates to life expectancies. RPH-2014 Table is a headcount weighted table, which is also more appropriate for a postretirement healthcare benefit plan. The Company reviews external data and its own historical trends for healthcare costs to determine the healthcare cost trend rates. As of December 31, 2016, Grainger adopted a new healthcare trend rate to include a pre and post age 65 trend rates. Post age 65, prescription drug costs, primarily specialty drugs, are expected to increase the cost of healthcare more significantly than medical expenses. The alternative trend rates allow for a better estimate of expected costs for this plan. As of December 31, 2016, the initial healthcare cost trend rate was 6.81% for pre age 65 and 9.36% for post

age 65. The healthcare costs trend rates decline each year until reaching the ultimate trend rate of 4.50%. Assumed healthcare cost trend rates have a significant effect on the amounts reported for the healthcare plans. A 1 percentage point change in assumed healthcare cost trend rates would have the following effects on 2016 results (in thousands of dollars):

	1 Percentage Point	
	Increase	(Decrease)
Effect on total service and interest cost	\$ 1,411	\$ (1,162)
Effect on postretirement benefit obligation	27,542	(22,748)

The Company has established a Group Benefit Trust (Trust) to fund the plan obligations and process benefit payments. All assets of the Trust are invested in equity funds designed to track to either the Standard & Poor's 500 Index (S&P 500) or the Total International Composite Index. The Total International Composite Index tracks non-U.S. stocks within developed and emerging market economies. This investment strategy reflects the long-term nature of the plan obligation and seeks to take advantage of the earnings potential of equity securities in the global markets and intends to reach a balanced allocation between U.S. and non-U.S. equities. The plan's assets are stated at fair value, which represents the net asset value of shares held by the plan in the registered investment companies at the quoted market prices (Level 1 input). The plan assets available for benefits are net of Trust liabilities, primarily related to deferred income taxes and taxes payable at December 31 (in thousands of dollars):

	2016	2015
Registered investment companies:		
Fidelity Spartan U.S. Equity Index Fund	\$ 70,950	\$ 70,973
Vanguard 500 Index Fund	87,587	78,254
Vanguard Total International Stock	24,056	22,976
Plan Assets	182,593	172,203
Trust liabilities	(19,048)	(16,592)
Plan assets available for benefits	<u>\$ 163,545</u>	<u>\$ 155,611</u>

The Company uses the long-term historical return on the plan assets and the historical performance of the S&P 500 and the Total International Composite Index to develop its expected return on plan assets. The Company increased the after-tax expected long-term rates of return on plan assets from 6.65% to 7.13% at December 31, 2016, based on the historical average of long-term rates of return and a lower estimated tax rate. This change was due to the nature of the taxable income earned on Trust investments. The required use of an expected long-term rate of return on plan assets may result in recognition of income that is greater or less than the actual return on plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns and, therefore, result in a pattern of income recognition that more closely matches the pattern of the services provided by the employees.

The Company's investment policies include periodic reviews by management and trustees at least annually concerning: (1) the allocation of assets among various asset classes (e.g., domestic stocks, international stocks, short-term bonds, long-term bonds, etc.); (2) the investment performance of the assets, including performance comparisons with appropriate benchmarks; (3) investment guidelines and other matters of investment policy and (4) the hiring, dismissal or retention of investment managers.

The funding of the Trust is an estimated amount that is intended to allow the maximum deductible contribution under the Internal Revenue Code of 1986 (IRC), as amended. There are zero minimum funding requirements and the Company intends to follow its practice of funding the maximum deductible contribution under the IRC.

The Company forecasts the following benefit payments related to postretirement (which include a projection for expected future employee service) for the next ten years (in thousands of dollars):

Year	Estimated Gross Benefit Payments
2017	\$ 8,211
2018	9,236
2019	10,212
2020	11,428
2021	12,692
2022-2026	78,216

#### NOTE 10 - LEASES

The Company leases certain land, buildings and equipment under noncancellable operating leases that expire at various dates through 2036. Capital leases as of December 31, 2016, are not considered material. Many of the building leases obligate the Company to pay real estate taxes, insurance and certain maintenance costs, and contain multiple renewal provisions, exercisable at the Company's option. Leases that contain predetermined fixed escalations of the minimum rentals are recognized in rental expense on a straight-line basis over the lease term. Cash or rent abatements received upon entering into certain operating leases are also recognized on a straight-line basis over the lease term.

At December 31, 2016, the approximate future minimum lease payments for all operating leases were as follows (in thousands of dollars):

Year	Future Minimum Lease Payments
2017	\$ 59,045
2018	45,504
2019	32,616
2020	15,358
2021	10,333
Thereafter	15,469
Total minimum payments required	178,325
Less amounts representing sublease income	(4,063)
	<u>\$ 174,262</u>

Rent expense was \$81 million for 2016 and \$77 million for 2015 and 2014, respectively. These amounts are net of sublease income of \$2 million for each 2016, 2015 and 2014.

## NOTE 11 - STOCK INCENTIVE PLANS

The Company maintains stock incentive plans under which the Company may grant a variety of incentive awards to employees and directors. Non-qualified stock options, performance shares, restricted stock units and deferred stock units have been granted and are outstanding under these plans. In 2015, the Company approved the 2015 Incentive Plan (Plan), which replaced all prior active plans. The Plan authorizes the granting of options to purchase shares at a price equal to the closing market price on the date of the grant. As of December 31, 2016, there were 2.9 million shares available for grant under the plans. When options are exercised, shares of the Company's treasury stock are issued.

Pretax stock-based compensation expense was \$35 million, \$43 million and \$46 million in 2016, 2015 and 2014, respectively, and is included in Warehousing, marketing and administrative expenses. Related income tax benefits recognized in earnings were \$11 million, \$13 million and \$15 million in 2016, 2015 and 2014, respectively.

### Options

The Company issues stock option grants to certain employees as part of their incentive compensation. Option awards are granted with an exercise price equal to the closing market price of the Company's stock on the last trading day preceding the date of grant. The options generally vest over three years, although accelerated vesting is provided in certain circumstances. Awards generally expire 10 years from the grant date. Transactions involving stock options are summarized as follows:

	Shares Subject to Option	Weighted Average Price Per Share	Options Exercisable
Outstanding at January 1, 2014	2,850,455	\$ 132.67	1,652,417
Granted	257,693	\$ 248.21	
Exercised	(479,452)	\$ 100.33	
Canceled or expired	(45,892)	\$ 199.80	
Outstanding at December 31, 2014	2,582,804	\$ 149.01	1,647,903
Granted	294,522	\$ 232.20	
Exercised	(587,441)	\$ 105.08	
Canceled or expired	(63,599)	\$ 216.76	
Outstanding at December 31, 2015	2,226,286	\$ 169.96	1,411,460
Granted	294,874	\$ 234.25	
Exercised	(317,110)	\$ 108.28	
Canceled or expired	(80,014)	\$ 210.01	
Outstanding at December 31, 2016	2,124,036	\$ 186.59	1,346,707

At December 31, 2016, there was \$8.6 million of total unrecognized compensation expense related to nonvested option awards, which the Company expects to recognize over a weighted average period of 1.8 years.

The following table summarizes information about stock options (in thousands of dollars):

	For the years ended December 31,		
	2016	2015	2014
Fair value of options exercised	\$ 8,086	\$ 14,423	\$ 11,167
Total intrinsic value of options exercised	35,800	73,671	71,924
Fair value of options vested	14,535	16,047	16,115
Settlements of options exercised	34,573	61,863	47,974



Information about stock options outstanding and exercisable as of December 31, 2016, is as follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable				
	Number	Weighted Average		Intrinsic Value (000's)	Number	Weighted Average		Intrinsic Value (000's)
		Remaining Contractual Life	Exercise Price			Remaining Contractual Life	Exercise Price	
\$72.14 - \$85.82	261,307	1.85 years	\$ 80.95	\$ 39,536	261,307	1.85 years	\$ 80.95	\$ 39,536
\$102.26 - \$196.31	549,608	3.75 years	\$ 125.86	58,471	549,608	3.75 years	\$ 125.86	58,471
\$204.01 - \$262.14	1,313,121	7.34 years	\$ 233.03	(1,020)	535,792	5.86 years	\$ 226.51	(22)
	<u>2,124,036</u>	5.73 years	\$ 186.59	\$ 96,987	<u>1,346,707</u>	4.22 years	\$ 157.19	\$ 97,985

The Company uses a binomial lattice option pricing model for the valuation of stock options. The weighted average fair value of options granted in 2016, 2015 and 2014 was \$44.94, \$46.67 and \$53.43, respectively. The fair value of each option granted in 2016, 2015 and 2014 used the following assumptions:

	For the years ended December 31,		
	2016	2015	2014
Risk-free interest rate	1.4%	1.5%	2.0%
Expected life	6 years	6 years	6 years
Expected volatility	24.5%	24.9%	25.0%
Expected dividend yield	2.0%	1.9%	1.7%

The risk-free interest rate is selected based on yields from U.S. Treasury zero-coupon issues with a remaining term approximately equal to the expected term of the options being valued. The expected life selected for options granted during each year presented represents the period of time that the options are expected to be outstanding based on historical data of option holder exercise and termination behavior. Expected volatility is based upon implied and historical volatility of the Company's closing stock price over a period equal to the expected life of each option grant. Historical Company information is also the primary basis for selection of expected dividend yield assumptions.

#### Performance Shares

The Company awards performance-based shares to certain executives. Receipt of Company stock is contingent upon the Company meeting sales growth and/or return on invested capital (ROIC) goals. Each participant is granted a target number of shares; however the number of shares actually awarded at the end of the performance period can fluctuate from the target award, based upon achievement of the sales or ROIC goals.

Performance share value is based upon closing market prices on the last trading day preceding the date of award and is charged to earnings on a ratable basis over the vesting period, primarily three, and up to seven years for certain awards, based on the number of shares expected to vest. Holders of performance share awards are not entitled to receive cash payments equivalent to cash dividends. If the performance shares vest, they will be settled by the Company's issuance of common stock in exchange for the performance shares on a one-for-one basis.

The following table summarizes the transactions involving performance-based share awards:

	2016		2015		2014	
	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share
Beginning nonvested shares outstanding	73,160	\$ 232.72	57,236	\$ 220.00	57,533	\$ 185.02
Issued	60,414	\$ 191.38	47,264	\$ 227.26	32,194	\$ 242.65
Canceled	(11,724)	\$ 241.41	(13,108)	\$ 215.01	(6,835)	\$ 190.90
Vested	(23,510)	\$ 242.65	(18,232)	\$ 191.36	(25,656)	\$ 177.75
Ending nonvested shares outstanding	<u>98,340</u>	\$ 203.91	<u>73,160</u>	\$ 232.72	<u>57,236</u>	\$ 220.00

At December 31, 2016, there was \$11.5 million of total unrecognized compensation expense related to performance-based share awards that the Company expects to recognize over a weighted average period of 3.2 years.

#### Restricted Stock Units (RSUs)

The Company awards restricted stock units (RSUs) to certain employees and executives. RSUs granted vest over periods from three to seven years from issuance, although accelerated vesting is provided in certain instances. Holders of RSUs are entitled to receive non-forfeitable cash payments equivalent to cash dividends and other distributions paid with respect to common stock. RSUs are settled by the issuance of the Company's common stock on a one-for-one basis. Compensation expense related to RSUs is based upon the closing market price on the last trading day preceding the date of award and is charged to earnings on a straight-line basis over the vesting period. The following table summarizes RSU activity:

	2016		2015		2014	
	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share	Shares	Weighted Average Price Per Share
Beginning nonvested units	432,783	\$ 213.45	560,351	\$ 182.40	739,717	\$ 154.09
Issued	113,909	\$ 230.36	104,220	\$ 234.21	103,427	\$ 248.12
Canceled	(62,869)	\$ 229.70	(38,124)	\$ 219.74	(51,410)	\$ 170.98
Vested	(110,420)	\$ 193.51	(193,664)	\$ 133.56	(231,383)	\$ 123.82
Ending nonvested units	<u>373,403</u>	\$ 221.77	<u>432,783</u>	\$ 213.45	<u>560,351</u>	\$ 182.40
Fair value of shares vested	<u>\$21,367</u>		<u>\$25,865</u>		<u>\$28,650</u>	

At December 31, 2016, there was \$43 million of total unrecognized compensation expense related to nonvested RSUs that the Company expects to recognize over a weighted average period of 3.0 years.

## NOTE 12 - CAPITAL STOCK

The Company had no shares of preferred stock outstanding as of December 31, 2016 and 2015. The activity related to outstanding common stock and common stock held in treasury was as follows:

	2016		2015	
	Outstanding Common Stock	Treasury Stock	Outstanding Common Stock	Treasury Stock
Balance at beginning of period	62,028,708	47,630,511	67,432,041	42,227,178
Exercise of stock options	315,171	(315,171)	580,947	(580,947)
Settlement of restricted stock units, net of 41,128 and 73,496 shares retained, respectively	78,310	(78,310)	145,757	(145,757)
Settlement of performance share units, net of 6,765 and 9,971 shares retained, respectively	11,806	(11,806)	15,956	(15,956)
Purchase of treasury shares	(3,629,681)	3,629,681	(6,145,993)	6,145,993
Balance at end of period	<u>58,804,314</u>	<u>50,854,905</u>	<u>62,028,708</u>	<u>47,630,511</u>

## NOTE 13 - ACCUMULATED OTHER COMPREHENSIVE EARNINGS (LOSSES) (AOCE)

The components of AOCE consisted of the following (in thousands of dollars):

	Foreign Currency Translation	Defined Postretirement Benefit Plan	Other Employment- related Benefit Plans	Other	Total	Foreign Currency Translation Attributable to Noncontrolling Interests	AOCE Attributable to W.W. Grainger, Inc.
Balance at January 1, 2014, net of tax	\$ (7,297)	\$ 34,887	\$ (8,811)	\$ (2,971)	\$ 15,808	\$ (13,106)	\$ 28,914
Other comprehensive earnings (loss) before reclassifications, net of tax	(124,065)	(22,667)	(1,462)	786	(147,408)	(9,880)	(137,528)
Amounts reclassified to Warehousing, marketing and administrative expenses	9,042	(6,617)	9,295	—	11,720	—	11,720
Amounts reclassified to Income Taxes	—	2,545	(2,324)	—	221	—	221
Net current period activity	\$ (115,023)	\$ (26,739)	\$ 5,509	\$ 786	\$ (135,467)	\$ (9,880)	\$ (125,587)
Balance at December 31, 2014, net of tax	\$ (122,320)	\$ 8,148	\$ (3,302)	\$ (2,185)	\$ (119,659)	\$ (22,986)	\$ (96,673)
Other comprehensive earnings (loss) before reclassifications, net of tax	(154,096)	30,451	641	1,300	(121,704)	(532)	(121,172)
Amounts reclassified to Warehousing, marketing and administrative expenses	—	(5,289)	—	—	(5,289)	—	(5,289)
Amounts reclassified to Income Taxes	—	2,043	—	—	2,043	—	2,043
Net current period activity	\$ (154,096)	\$ 27,205	\$ 641	\$ 1,300	\$ (124,950)	\$ (532)	\$ (124,418)
Balance at December 31, 2015, net of tax	\$ (276,416)	\$ 35,353	\$ (2,661)	\$ (885)	\$ (244,609)	\$ (23,518)	\$ (221,091)
Other comprehensive earnings (loss) before reclassifications, net of tax	(38,729)	(6,022)	(2,397)	885	(46,263)	906	(47,169)
Amounts reclassified to Warehousing, marketing and administrative expenses	—	(6,559)	—	—	(6,559)	—	(6,559)
Amounts reclassified to Income Taxes	—	2,525	—	—	2,525	—	2,525
Net current period activity	(38,729)	(10,056)	(2,397)	885	(50,297)	906	(51,203)
Balance at December 31, 2016, net of tax	\$ (315,145)	\$ 25,297	\$ (5,058)	\$ —	\$ (294,906)	\$ (22,612)	\$ (272,294)

**NOTE 14 - INCOME TAXES**

Income tax expense (benefit) consisted of the following (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
Current provision:			
Federal	\$ 310,582	\$ 412,545	\$ 437,648
State	38,249	49,894	47,199
Foreign	25,076	24,087	43,088
Total current	373,907	486,526	527,935
Deferred tax (benefit) provision	12,313	(20,995)	(5,845)
Total provision	<u>\$ 386,220</u>	<u>\$ 465,531</u>	<u>\$ 522,090</u>

Earnings (losses) before income taxes by geographical area consisted of the following (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
United States	\$ 1,073,879	\$ 1,203,880	\$ 1,299,523
Foreign	(54,821)	46,825	34,863
	<u>\$ 1,019,058</u>	<u>\$ 1,250,705</u>	<u>\$ 1,334,386</u>

The income tax effects of temporary differences that gave rise to the net deferred tax asset (liability) were (in thousands of dollars):

	As of December 31,	
	2016	2015
Deferred tax assets:		
Inventory	\$ 30,030	\$ 32,390
Accrued expenses	70,021	56,127
Accrued employment-related benefits	124,556	116,423
Foreign operating loss carryforwards	67,350	70,881
Other	22,256	12,962
Deferred tax assets	314,213	288,783
Less valuation allowance	(72,705)	(62,333)
Deferred tax assets, net of valuation allowance	\$ 241,508	\$ 226,450
Deferred tax liabilities:		
Property, buildings and equipment	(75,690)	(42,249)
Intangibles	(127,292)	(134,784)
Software	(25,431)	(20,744)
Prepays	(11,959)	(17,901)
Other	(1,067)	(17,277)
Deferred tax liabilities	(241,439)	(232,955)
Net deferred tax asset (liability)	\$ 69	\$ (6,505)

The net deferred tax asset (liability) is classified as follows:

Noncurrent assets	\$ 64,775	\$ 83,996
Noncurrent liabilities (foreign)	(64,706)	(90,501)
Net deferred tax asset (liability)	\$ 69	\$ (6,505)

At December 31, 2016, the Company had \$256 million of net operating loss (NOLs) carryforwards related primarily to foreign operations. Some of the operating loss carryforwards may expire at various dates through 2036. The Company has recorded a valuation allowance, which represents a provision for uncertainty as to the realization of the tax benefits of these carryforwards and deferred tax assets that may not be realized. The Company's valuation allowance changed as follows (in thousands of dollars):

	For the Years Ended December 31,	
	2016	2015
Balance at beginning of period	\$ 62,333	\$ 56,876
Valuation allowance increases primarily related to foreign NOLs	12,174	7,045
Valuation allowance releases related to foreign NOLs	(3,870)	(437)
Other valuation allowance changes, net	2,068	(1,151)
Balance at end of period	\$ 72,705	\$ 62,333

A reconciliation of income tax expense with federal income taxes at the statutory rate follows (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
Federal income tax at the 35% statutory rate	\$ 356,670	\$ 437,746	\$ 467,035
State income taxes, net of federal income tax benefit	25,993	29,507	31,263
Clean energy credit	(28,670)	(13,358)	—
Foreign rate difference	21,077	12,041	20,318
Other - net	11,150	(405)	3,474
Income tax expense	\$ 386,220	\$ 465,531	\$ 522,090
Effective tax rate	37.9%	37.2%	39.1%

In the second quarter of 2015, the Company acquired a non-controlling interest in a limited liability company established to produce refined coal. Additionally, in the first quarter of 2016 the Company acquired a non-controlling interest in a second limited liability company established to produce refined coal. The production and sale of refined coal that results in required emission reductions is eligible for renewable energy tax credits under Section 45 of the Internal Revenue Code. The Company receives tax credits in proportion to its equity interest. The income tax credits from the investment resulted in a 2.8 and a 1.0 percentage point reduction to the overall effective tax rate for 2016 and 2015, respectively.

Undistributed earnings of foreign subsidiaries at December 31, 2016, amounted to \$629 million. No provision for deferred U.S. income taxes has been made for these subsidiaries because the Company intends to permanently reinvest such earnings in its foreign operations. If at some future date these earnings cease to be permanently invested, the Company may be subject to U.S. income taxes, foreign withholding and other taxes on such amounts, which cannot be reasonably estimated at this time.

The balance and changes in the liability for tax uncertainties, excluding interest, are as follows (in thousands of dollars):

	For the Years Ended December 31,		
	2016	2015	2014
Balance at beginning of year	\$ 60,576	\$ 45,126	\$ 40,317
Additions for tax positions related to the current year	14,119	14,916	11,545
Additions for tax positions of prior years	13,215	2,653	5,318
Reductions for tax positions of prior years	(14,774)	(1,616)	(4,109)
Reductions due to statute lapse	(1,527)	(402)	(1,271)
Settlements, audit payments, refunds - net	(12,928)	(101)	(6,674)
Balance at end of year	\$ 58,681	\$ 60,576	\$ 45,126

The Company classifies the liability for tax uncertainties in deferred income taxes and tax uncertainties. Included in this amount are \$22 million and \$17 million at December 31, 2016 and 2015, respectively, of tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. Any changes in the timing of deductibility of these items would not affect the annual effective tax rate but would accelerate the payment of cash to the taxing authorities to an earlier period. The changes to tax positions of prior years in 2016 related generally to the impact of conclusion of audits and audit settlements.

The Company regularly undergoes examination of its federal income tax returns by the Internal Revenue Service (IRS). In 2016, the Company settled the 2009 and 2010 federal audits with the IRS Appeals Office. The Company's federal tax returns for 2011 and 2012 are currently under audit by the IRS, and the tax years 2013 through 2016 are open. The Company is also subject to audit by state, local and foreign taxing authorities. Tax years 2002 - 2016 remain subject to state and local audits and 2006 - 2016 remain subject to foreign audits. The amount of liability associated with the Company's uncertain tax positions may change within the next 12 months due to the pending audit activity, expiring statutes or tax payments. A reasonable estimate of such change cannot be made.

The Company recognizes interest expense related to tax uncertainties in the provision for income taxes. During 2016, 2015 and 2014, the Company recognized tax uncertainties' interest expense of \$1 million, \$1 million and \$2 million, respectively. As of December 31, 2016, 2015 and 2014, the Company accrued approximately \$4 million, \$5 million and \$4 million for tax uncertainties' interest, respectively.

## NOTE 15 - EARNINGS PER SHARE

Certain of the Company's stock incentive plans grant stock awards that contain nonforfeitable rights to dividends meet the criteria of a participating security. Under the two-class method, earnings are allocated between common stock and participating securities. The presentation of basic and diluted earnings per share is required only for each class of common stock and not for participating securities. As such, the Company presents basic and diluted earnings per share for its one class of common stock.

The two-class method includes an earnings allocation formula that determines earnings per share for each class of common stock according to dividends declared and undistributed earnings for the period. The Company's reported net earnings are reduced by the amount allocated to participating securities to arrive at the earnings allocated to common stock shareholders for purposes of calculating earnings per share.

The dilutive effect of participating securities is calculated using the more dilutive of the treasury stock or the two-class method. The Company has determined the two-class method to be the more dilutive. As such, the earnings allocated to common stock shareholders in the basic earnings per share calculation is adjusted for the reallocation of undistributed earnings to participating securities to arrive at the earnings allocated to common stock shareholders for calculating the diluted earnings per share.

The following table sets forth the computation of basic and diluted earnings per share under the two-class method (in thousands of dollars, except for share and per share amounts):

	For the Years Ended December 31,		
	2016	2015	2014
Net earnings attributable to W.W. Grainger, Inc. as reported	\$ 605,928	\$ 768,996	\$ 801,729
Distributed earnings available to participating securities	(2,383)	(2,823)	(3,154)
Undistributed earnings available to participating securities	(3,044)	(4,735)	(6,370)
Numerator for basic earnings per share - Undistributed and distributed earnings available to common shareholders	600,501	761,438	792,205
Undistributed earnings allocated to participating securities	3,044	4,735	6,370
Undistributed earnings reallocated to participating securities	(3,023)	(4,692)	(6,290)
Numerator for diluted earnings per share - Undistributed and distributed earnings available to common shareholders	<u>\$ 600,522</u>	<u>\$ 761,481</u>	<u>\$ 792,285</u>
Denominator for basic earnings per share – weighted average shares	60,430,892	65,156,864	68,334,322
Effect of dilutive securities	409,038	608,257	871,422
Denominator for diluted earnings per share – weighted average shares adjusted for dilutive securities	<u>60,839,930</u>	<u>65,765,121</u>	<u>69,205,744</u>
Earnings per share two-class method			
Basic	\$ 9.94	\$ 11.69	\$ 11.59
Diluted	\$ 9.87	\$ 11.58	\$ 11.45



## NOTE 16 - SEGMENT INFORMATION

The Company has two reportable segments: the United States and Canada. The United States operating segment reflects the results of the Company's U.S. business. The Canada operating segment reflects the results for Acklands – Grainger, the Company's Canadian business. Other businesses include MonotaRO in Japan, Zoro in the United States and operations in Europe, Asia and Latin America. These businesses individually do not meet the criteria of a reportable segment. Operating segments generate revenue almost exclusively through the distribution of MRO supplies, as service revenues account for approximately 1% of total revenues for each operating segment.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. Intersegment transfer prices are established at external selling prices, less costs not incurred due to a related party sale. The segment results include certain centrally incurred costs for shared services that are charged to the segments based upon the relative level of service used by each operating segment.

Following is a summary of segment results (in thousands of dollars):

	2016			
	United States	Canada	Other Businesses	Total
Total net sales	\$ 7,870,105	\$ 733,829	\$ 1,884,963	\$ 10,488,897
Intersegment net sales	(347,468)	(110)	(4,115)	(351,693)
Net sales to external customers	<u>7,522,637</u>	<u>733,719</u>	<u>1,880,848</u>	<u>10,137,204</u>
Segment operating earnings	1,274,851	(65,362)	40,684	1,250,173
Segment assets	2,275,009	286,035	494,067	3,055,111
Depreciation and amortization	159,334	18,050	23,792	201,176
Additions to long-lived assets	\$ 153,556	\$ 12,275	\$ 95,288	\$ 261,119

	2015			
	United States	Canada	Other Businesses	Total
Total net sales	\$ 7,963,416	\$ 890,530	\$ 1,405,750	\$ 10,259,696
Intersegment net sales	(282,305)	(105)	(3,902)	(286,312)
Net sales to external customers	<u>7,681,111</u>	<u>890,425</u>	<u>1,401,848</u>	<u>9,973,384</u>
Segment operating earnings	1,371,626	27,368	48,051	1,447,045
Segment assets	2,191,045	317,504	507,116	3,015,665
Depreciation and amortization	150,654	17,334	19,999	187,987
Additions to long-lived assets	\$ 302,316	\$ 20,464	\$ 21,135	\$ 343,915

	2014			
	United States	Canada	Other Businesses	Total
Total net sales	\$ 7,926,075	\$ 1,075,754	\$ 1,182,186	\$ 10,184,015
Intersegment net sales	(211,399)	(304)	(7,359)	(219,062)
Net sales to external customers	<u>7,714,676</u>	<u>1,075,450</u>	<u>1,174,827</u>	<u>9,964,953</u>
Segment operating earnings	1,444,288	87,583	(37,806)	1,494,065
Segment assets	2,181,521	394,342	345,987	2,921,850
Depreciation and amortization	136,081	15,305	20,444	171,830
Additions to long-lived assets	\$ 243,251	\$ 106,918	\$ 31,137	\$ 381,306

Following are reconciliations of the segment information with the consolidated totals per the financial statements (in thousands of dollars):

	2016	2015	2014
Operating earnings:			
Total operating earnings for reportable segments	\$ 1,250,173	\$ 1,447,045	\$ 1,494,065
Unallocated expenses	(130,676)	(146,725)	(146,948)
Total consolidated operating earnings	<u>\$ 1,119,497</u>	<u>\$ 1,300,320</u>	<u>\$ 1,347,117</u>
Assets:			
Assets for reportable segments	\$ 3,055,111	\$ 3,015,665	\$ 2,921,850
Other current and noncurrent assets	2,464,656	2,624,966	2,113,900
Unallocated assets	174,540	217,124	247,299
Total consolidated assets	<u>\$ 5,694,307</u>	<u>\$ 5,857,755</u>	<u>\$ 5,283,049</u>

	2016		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	\$ 201,176	\$ 21,469	\$ 222,645
Additions to long-lived assets	\$ 261,119	\$ 10,542	\$ 271,661

	Revenues	Long-Lived Assets
Geographic information:		
United States	\$ 7,834,361	\$ 1,134,817
Canada	739,687	210,931
Other foreign countries	1,563,156	210,605
	<u>\$ 10,137,204</u>	<u>\$ 1,556,353</u>

	2015		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	\$ 187,987	\$ 18,854	\$ 206,841
Additions to long-lived assets	\$ 343,915	\$ 16,912	\$ 360,827

	Revenues	Long-Lived Assets
Geographic information:		
United States	\$ 7,866,300	\$ 1,231,083
Canada	897,431	215,202
Other foreign countries	1,209,653	153,508
	<u>\$ 9,973,384</u>	<u>\$ 1,599,793</u>

	2014		
	Segment Totals	Unallocated	Consolidated Total
Other significant items:			
Depreciation and amortization	\$ 171,830	\$ 18,341	\$ 190,171
Additions to long-lived assets	\$ 381,306	\$ 22,498	\$ 403,804
		Revenues	Long-Lived Assets
Geographic information:			
United States		\$ 7,780,382	\$ 1,109,175
Canada		1,074,660	253,466
Other foreign countries		1,109,911	110,083
		<u>\$ 9,964,953</u>	<u>\$ 1,472,724</u>

Revenues are attributed to countries based on the ship-to location of the customer.

Unallocated expenses and unallocated assets primarily relate to the Company headquarters' support services, which are not part of any business segment, as well as intercompany eliminations. Unallocated expenses include payroll and benefits, depreciation and other costs associated with headquarters-related support services. Unallocated assets include non-operating cash and cash equivalents, certain prepaid expenses and property, buildings and equipment-net.

Assets for reportable segments include net accounts receivable and first-in, first-out inventory, which are reported to the Company's Chief Operating Decision Maker. Long-lived assets consist of property, buildings, equipment and capitalized software.

Depreciation and amortization presented above includes depreciation of long-lived assets and amortization of capitalized software.

#### **NOTE 17 - CONTINGENCIES AND LEGAL MATTERS**

The Company has been named, along with numerous other nonaffiliated companies, as a defendant in litigation in various states involving asbestos and/or silica. These lawsuits typically assert claims of personal injury arising from alleged exposure to asbestos and/or silica as a consequence of products purportedly distributed by the Company. In 2016, the Company was named in new lawsuits relating to asbestos involving approximately 70 new plaintiffs, while lawsuits relating to asbestos and/or silica involving approximately 80 plaintiffs were dismissed with respect to the Company, typically based on the lack of product identification.

At December 31, 2016, the Company is named in cases filed on behalf of approximately 480 plaintiffs in which there is an allegation of exposure to asbestos and/or silica. The Company has denied, or intends to deny, the allegations in all of the above-described lawsuits. If a specific product distributed by the Company is identified in any of these lawsuits, the Company would attempt to exercise indemnification remedies against the product manufacturer. In addition, the Company believes that a substantial number of these claims are covered by insurance. The Company has entered into agreements with its major insurance carriers relating to the scope, coverage and costs of defense of lawsuits involving claims of exposure to asbestos. While the Company is unable to predict the outcome of these lawsuits, it believes that the ultimate resolution will not have, either individually or in the aggregate, a material adverse effect on the Company's consolidated financial position or results of operations.

From time to time the Company is involved in various other legal and administrative proceedings that are incidental to its business, including claims related to product liability, general negligence, contract disputes, environmental issues, wage and hour laws, intellectual property, employment practices, regulatory compliance or other matters and actions brought by employees, consumers, competitors, suppliers or governmental entities. As a government contractor selling to federal, state and local governmental entities, the Company is also subject to governmental or regulatory inquiries or audits or other proceedings, including those related to contract administration or to pricing compliance. It is not expected that the ultimate resolution of any of these matters will have, either individually or in the aggregate, a material adverse effect on the Company's consolidated financial position or results of operations.

### TCPA Matter

As previously disclosed, on April 5, 2013, David Davies filed a putative class action lawsuit in the Circuit Court of Cook County, Illinois and sought certification of a class of persons who may have received one or more of approximately 400,000 faxes Grainger sent in connection with a 2009 marketing campaign. The complaint alleges, among other things, that the Company violated the Telephone Consumer Protection Act of 1991, as amended by the Junk Fax Prevention Act of 2005 (the "TCPA"), by sending fax advertisements that either were unsolicited and/or did not contain a valid opt-out notice. The TCPA provides for penalties of \$500 to \$1,500 for each noncompliant individual fax.

On May 13, 2013, the Company removed the case to the Federal District Court for the Northern District of Illinois (the "District Court"). On June 27, 2014, the District Court found that Davies was not an adequate class representative. The United States Court of Appeals for the Seventh Circuit denied Davies' petition for immediate review of the ruling. Davies subsequently moved the District Court for reconsideration of its ruling and his motion was denied on September 28, 2016. Davies may seek to pursue an appeal of the June 27, 2014, ruling at the conclusion of the District Court proceeding.

On April 4, 2016, the District Court denied the Company's motion to dismiss Davies' individual claims and subsequently the parties filed cross-motions for summary judgment. On November 21, 2016, the District Court denied Plaintiff's motion and granted, in part, Grainger's motion for summary judgment. The District Court entered judgment for Grainger on Davies' common law claim for conversion while granting partial summary judgment for Grainger on Davies' TCPA claim, finding that Grainger had an established business relationship with Davies and that Grainger properly obtained Davies' fax number from public directories. The District Court denied Grainger's motion for summary judgment on the ground that Davies lacks standing to bring his TCPA claim. The District Court further held that the issue of whether the opt-out notice Grainger used on the faxes is clear and conspicuous, as required by the TCPA, is a contested issue of fact to be resolved by a jury at trial. Trial is currently set for February 5, 2018.

The Company believes it has strong legal and factual defenses and intends to continue defending itself vigorously in the pending lawsuit. While the Company is unable to predict the outcome of this proceeding, the Company believes that the ultimate outcome of this matter will not have a material adverse effect on the Company's consolidated financial position or results of operations.

### Unclaimed Property

Grainger regularly performs unclaimed property assessments pursuant to U.S. multi-state escheat laws, which generally require entities to report and remit abandoned and unclaimed property. Failure to timely report and remit the property can result in assessments that include substantial interest and penalties, in addition to the payment of the escheat liability itself. During the fourth quarter of 2016, Grainger identified an obligation associated with unclaimed property for escheatable items for years 2008 through 2012 and estimated statutory interest costs. The aggregate balance of these unrecorded liabilities amounted to approximately \$36 million (\$23 million, net of tax). Operating expenses for the twelve months ended December 31, 2016, included a pre-tax charge of approximately \$36 million related to this event.

The Company evaluated the materiality of these unrecorded obligations quantitatively and qualitatively and concluded they were not material to any of the prior periods impacted and that correction of operating expenses as an out-of-period adjustment in the quarter ended December 31, 2016, would not be material to the Consolidated Financial Statements for the year ending December 31, 2016. Accordingly, Grainger determined not to revise previously issued financial statements.

**NOTE 18 - SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)**

A summary of selected quarterly information for 2016 and 2015 is as follows (in thousands of dollars, except for per share amounts):

	2016 Quarter Ended				
	March 31	June 30	September 30	December 31	Total
Net sales	\$ 2,506,538	\$ 2,563,668	\$ 2,596,288	\$ 2,470,710	\$ 10,137,204
Cost of merchandise sold	1,461,485	1,523,609	1,556,536	1,481,017	6,022,647
Gross profit	1,045,053	1,040,059	1,039,752	989,693	4,114,557
Warehousing, marketing and administrative expenses	727,961	734,470	717,165	815,464	2,995,060
Operating earnings	317,092	305,589	322,587	174,229	1,119,497
Net earnings attributable to W.W. Grainger, Inc.	186,713	172,676	185,873	60,666	605,928
Earnings per share - basic	3.00	2.81	3.07	1.02	9.94
Earnings per share - diluted	\$ 2.98	\$ 2.79	\$ 3.05	\$ 1.01	\$ 9.87

	2015 Quarter Ended				
	March 31	June 30	September 30	December 31	Total
Net sales	\$ 2,439,661	\$ 2,522,565	\$ 2,532,900	\$ 2,478,258	\$ 9,973,384
Cost of merchandise sold	1,345,918	1,449,133	1,471,021	1,475,884	5,741,956
Gross profit	1,093,743	1,073,432	1,061,879	1,002,374	4,231,428
Warehousing, marketing and administrative expenses	742,496	716,715	721,150	750,747	2,931,108
Operating earnings	351,247	356,717	340,729	251,627	1,300,320
Net earnings attributable to W.W. Grainger, Inc.	211,015	220,548	192,201	145,232	768,996
Earnings per share - basic	3.11	3.28	2.94	2.32	11.69
Earnings per share - diluted	\$ 3.07	\$ 3.25	\$ 2.92	\$ 2.30	\$ 11.58

## 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.

DATE: February 28, 2017

### W.W. GRAINGER, INC.

By:     /s/ D. G. Macpherson      
D. G. Macpherson  
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Grainger on February 28, 2017, in the capacities indicated.

    /s/ D. G. Macpherson      
D. G. Macpherson  
Chief Executive Officer, Director  
(Principal Executive Officer)

    /s/ Ronald L. Jadin      
Ronald L. Jadin  
Senior Vice President  
and Chief Financial Officer  
(Principal Financial Officer)

    /s/ Eric R. Tapia      
Eric R. Tapia  
Vice President and Controller  
(Principal Accounting Officer)

    /s/ James T. Ryan      
James T. Ryan  
Chairman of the Board

    /s/ Brian P. Anderson      
Brian P. Anderson  
Director

    /s/ V. Ann Hailey      
V. Ann Hailey  
Director

    /s/ Neil S. Novich      
Neil S. Novich  
Director

    /s/ E. Scott Santi      
E. Scott Santi  
Director

## EXHIBIT INDEX (1)

EXHIBIT NO.	DESCRIPTION
2.1	Share Purchase Agreement, dated as of July 30, 2015, by and among Grainger, GWW UK Holdings Limited, Gregory Family Office Limited and Michael Gregory, incorporated by reference to Exhibit 2.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated July 31, 2015.
3.1	Restated Articles of Incorporation, incorporated by reference to Exhibit 3(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 1998.
3.2	Bylaws, as amended on October 1, 2016, incorporated by reference to Exhibit 3.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated August 8, 2016.
4.1	No instruments which define the rights of holders of W.W. Grainger, Inc.'s Industrial Development Revenue Bonds are filed herewith, pursuant to the exemption contained in Regulation S-K, Item 601(b)(4)(iii). W.W. Grainger, Inc. hereby agrees to furnish to the Securities and Exchange Commission, upon request, a copy of any such instrument.
4.2	Indenture, dated as of June 11, 2015, between W.W. Grainger, Inc. and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated June 11, 2015.
4.3	First Supplemental Indenture, dated as of June 11, 2015, between W.W. Grainger, Inc. and U.S. Bank National Association, as trustee, and Form of 4.60% Senior Notes due 2045, incorporated by reference to Exhibit 4.2 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated June 11, 2015.
4.4	Second Supplemental Indenture, dated as of May 16, 2016, between W.W. Grainger, Inc., and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 16, 2016.
4.5	Form of 3.75% Senior Notes due 2046 (included in Exhibit 4.4), incorporated by reference to Exhibit 4.2 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 16, 2016.
10.1	Credit Agreement dated as of May 8, 2012, by and among W.W. Grainger, Inc., the lenders parties thereto, and U.S. Bank National Association, as Administrative Agent, incorporated by reference to Exhibit 10.1 to W.W. Grainger, Inc.'s Current Report on Form 8-K dated May 8, 2012.
10.2	Director Stock Plan, as amended, incorporated by reference to Exhibit 10(c) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.3	1990 Long-Term Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10(a) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.4	2001 Long-Term Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10(b) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.5	Form of Indemnification Agreement between W.W. Grainger, Inc. and each of its directors and certain of its executive officers, incorporated by reference to Exhibit 10(b)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2009.*
10.6	Frozen Executive Death Benefit Plan, as amended, incorporated by reference to Exhibit 10(b)(v) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.7	First amendment to the Frozen Executive Death Benefit Plan, incorporated by reference to Exhibit 10(b)(v)(1) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2008.*
10.8	Second amendment to the Frozen Executive Death Benefit Plan, incorporated by reference to Exhibit 10(b)(iv)(2) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.*
10.9	Supplemental Profit Sharing Plan, as amended, incorporated by reference to Exhibit 10(viii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2003.*
10.10	Supplemental Profit Sharing Plan II, as amended, incorporated by reference to Exhibit 10(b)(ix) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.11	Voluntary Salary and Incentive Deferral Plan, as amended, incorporated by reference to Exhibit 10(b)(xi) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.*
10.12	Summary Description of the 2016 Directors Compensation Program.*
10.13	2005 Incentive Plan, as amended, incorporated by reference to Exhibit 10(d) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.*
10.14	2010 Incentive Plan, incorporated by reference to Exhibit B of W.W. Grainger, Inc.'s Proxy Statement dated March 12, 2010.*

- 10.15 Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(xiv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2005.\*
- 10.16 Form of Stock Option Award and Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(xv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2005.\*
- 10.17 Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xvi) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.\*
- 10.18 Form of Stock Option and Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xvii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.\*
- 10.19 Form of Restricted Stock Unit Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xviii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010.\*
- 10.20 Form of 2012 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xix) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2012.\*
- 10.21 Letter of Agreement - Long-Term International Assignment to Mr. Court D. Carruthers dated December 22, 2011, incorporated by reference to Exhibit 10(b)(xxi) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2011.\*
- 10.22 Summary Description of the 2017 Management Incentive Program.\*
- 10.23 Incentive Program Recoupment Agreement, incorporated by reference to Exhibit 10(b)(xxv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009.\*
- 10.24 Form of Change in Control Employment Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxvii) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010.\*
- 10.25 Form of 2013 Performance Share Award Agreement between Grainger and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxiii) to Grainger's Annual Report on Form 10-K for the year ended December 31, 2013.\*
- 10.26 Separation Agreement and General Release by and between W.W. Grainger, Inc. and Michael A. Pulick dated October 4, 2013, incorporated by reference to Exhibit 10(b)(xxiv) to W.W. Grainger, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2013.\*
- 10.27 Form of 2014 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10(b)(xxiv) to Grainger's Annual Report on Form 10-K for the year ended December 31, 2014.\*
- 10.28 Form of 2015 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers.\*
- 10.29 W.W. Grainger, Inc. 2015 Incentive Plan, incorporated by reference to Exhibit B of W.W. Grainger, Inc.'s Proxy Statement dated March 13, 2015.\*
- 10.30 Separation Agreement and General Release by and between W.W. Grainger, Inc. and Court Carruthers dated July 22, 2015, incorporated by reference to Exhibit 10(b)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.\*
- 10.31 £180,000,000 Facilities Agreement, dated as of August 26, 2015, by and among GWW UK Holdings Ltd, W.W. Grainger, Inc., the lender parties thereto, Lloyds Bank PLC and Lloyds Securities Inc., as Arrangers, and Lloyds Bank PLC, as Agent, incorporated by reference to W.W. Grainger, Inc.'s Current Report on Form 8-K dated September 1, 2015.
- 10.32 Credit Agreement, dated as of August 22, 2013, by and among W.W. Grainger, Inc., the borrowing subsidiaries parties thereto, the lenders parties thereto, and U.S. Bank National Association, as Administrative Agent, incorporated by reference to Exhibit 10(a)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2015.
- 10.33 Amendment No. 1, dated as of April 7, 2015, to Credit Agreement, dated as of August 22, 2013, by and among W.W. Grainger, Inc., the borrowing subsidiaries parties thereto, the lenders parties thereto, and U.S. Bank National Association, as Administrative Agent, incorporated by reference to Exhibit 10(a)(i) to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2015.
- 10.34 Form of Stock Option Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.1 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.\*
- 10.35 Form of Restricted Stock Unit Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.2 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.\*



10.36	Form of 2016 Performance Share Award Agreement between W.W. Grainger, Inc. and certain of its executive officers, incorporated by reference to Exhibit 10.3 to W.W. Grainger, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.*
21	Subsidiaries of Grainger.
23	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

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(\*) Management contract or compensatory plan or arrangement.

(1) Certain instruments defining the rights of holders of long-term debt securities of the Registrant are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in the Registration Statements (Form S-8 No.'s 33-43902, 333-24215, 333-61980, 333-105185, 333-124356, 333-166345, 333-203715, Form S-4 No. 33-32091 and Form S-3 No. 333-203444) for W.W. Grainger, Inc. and in the related prospectuses of our reports dated February 28, 2017, with respect to the consolidated financial statements of W.W. Grainger, Inc. and the effectiveness of internal control over financial reporting of W.W. Grainger, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2016.

/s/ Ernst & Young LLP

Chicago, Illinois  
February 28, 2017

## CERTIFICATION

**Exhibit 31.1**

I, D.G. Macpherson, certify that:

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

Date: February 28, 2017

By: /s/ D.G. Macpherson  
Name: D.G. Macpherson  
Title: Chief Executive Officer

## CERTIFICATION

**Exhibit 31.2**

I, R. L. Jadin, certify that:

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

Date: February 28, 2017

By: /s/ R. L. Jadin  
Name: R. L. Jadin  
Title: Senior Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of W.W. Grainger, Inc. ("Grainger") for the annual period ended December 31, 2016, (the "Report"), D.G. Macpherson, as Chief Executive Officer of Grainger, and R. L. Jadin, as Chief Financial Officer of Grainger, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ D.G. Macpherson

D.G. Macpherson

Chief Executive Officer

February 28, 2017

/s/ R. L. Jadin

R. L. Jadin

Senior Vice President and  
Chief Financial Officer

February 28, 2017

## Board of Directors

### **Rodney C. Adkins**

Former Senior Vice President of International Business Machines Corporation, President of 3RAM Group LLC, Miami Beach, Fla.

(2, 3)

### **Brian P. Anderson**

Former Executive Vice President and Chief Financial Officer, OfficeMax Incorporated, Itasca, Ill.

(1, 2)

### **V. Ann Hailey**

Former Executive Vice President and Chief Financial Officer, L Brands (formerly Limited Brands, Inc.), Columbus, Ohio

(1, 2)

### **Stuart L. Levenick**

Retired Group President, Caterpillar Inc., Peoria, Ill.

(2, 3, †)

### **D.G. Macpherson**

Chief Executive Officer, W.W. Grainger, Inc.

### **Neil S. Novich**

Former Chairman, President and Chief Executive Officer, Ryerson Inc., Chicago, Ill.

(1, 2)

### **Michael J. Roberts**

Former Global President and COO of McDonalds Corporation, Chicago, Ill.

(2, 3)

### **Gary L. Rogers**

Former Vice Chairman, General Electric Company, Fairfield, Conn.

(2, 3)

### **James T. Ryan**

Chairman of the Board, W.W. Grainger, Inc.

### **E. Scott Santi**

Chairman and Chief Executive Officer, Illinois Tool Works Inc., Glenview, Ill.

(1, 2)

### **James D. Slavik**

Chairman, Mark IV Capital, Inc., Newport Beach, Calif.

(2, 3)

(1) Member of Audit Committee

(2) Member of Board Affairs and Nominating Committee

(3) Member of Compensation Committee

† Lead Director

## Grainger Leadership Team

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### **D.G. Macpherson**

Chief Executive Officer

### **Joseph C. High**

Senior Vice President and Chief People Officer

### **Debra S. Oler**

Vice President and President, Large Customer and Direct Sales

### **Laura D. Brown**

Senior Vice President, Communications and Investor Relations

### **John L. Howard**

Senior Vice President and General Counsel

### **David L. Rawlinson II**

President, Online Business

### **Fred Costello**

Vice President and President, Grainger International

### **Ronald L. Jadin**

Senior Vice President and Chief Financial Officer

### **Paige K. Robbins**

Senior Vice President, Global Supply Chain, Branch Network, Contact Centers, and Corporate Strategy

### **Matthew E. Fortin**

Vice President and President, Global Product Management

### **John B. Kaul**

Vice President and President, Acklands–Grainger Inc.

### **Elizabeth B. Ubell**

Vice President and President, Medium Customers, Marketing and eCommerce

### **Gregory J. Harman**

Vice President, Chief Information Officer

### **Deidra C. Merriwether**

Vice President, Pricing and Indirect Procurement

# Shareholder and Media Information

## Company Headquarters

W.W. Grainger, Inc.  
100 Grainger Parkway  
Lake Forest, Illinois 60045-5201  
847.535.1000

## Annual Meeting

The 2017 Annual Meeting of Shareholders will be held at the company's headquarters in Lake Forest, Illinois, at 10:00 a.m. CDT on Wednesday, April 26, 2017.

## Auditors

Ernst & Young LLP  
155 North Wacker Drive  
Chicago, Illinois 60606-1787

## Common Stock Listing

The company's common stock is listed on the New York Stock Exchange under the trading symbol GWW.

## Transfer Agent, Registrar and Dividend Disbursing Agent

Instructions and inquiries regarding transfers, certificates, changes of title or address, lost or missing dividend checks, consolidation of accounts and elimination of multiple mailings should be directed to:

Computershare Trust Company, N.A.  
P.O. Box 43078  
Providence, RI 02940-3078  
800.446.2617

## Dividend Direct Deposit

Shareholders of record have the opportunity to have their quarterly dividends electronically deposited directly into their checking, money market or savings accounts at financial institutions that participate in the automated clearinghouse system.

Shareholders who are interested in taking advantage of this service or would like more information on the program should contact Computershare.

## Investor Relations Contacts

Laura D. Brown  
Senior Vice President, Communications and Investor Relations  
847.535.0409

William D. Chapman (*retiring 4/30/17*)  
Senior Director, Investor Relations  
847.535.0881

Irene Holman  
Senior Director, Investor Relations  
847.535.0809

Michael P. Ferreter  
Senior Manager, Investor Relations  
847.535.1439

Upon written request to Investor Relations, we will provide, free of charge, a copy of our Form 10-K for the fiscal year ended December 31, 2016.

Grainger's Annual Report, Form 10-K, Form 10-Q, proxy statement and other filings with the Securities and Exchange Commission, as well as the Fact Book and news releases including quarterly earnings and monthly sales, can be accessed free of charge at the Investor Relations section of the company's website at [www.grainger.com/investor](http://www.grainger.com/investor). For more information, contact Investor Relations at 847.535.1000.

Requests for other company-related information should be made to Hugo Dubovoy, Jr., Vice President, Corporate Secretary, at the company's headquarters.

## Media Relations Contact

Joseph Micucci  
Director, External Relations  
847.535.0879

## Trademarks

The registered and unregistered trademarks contained in this document are the property of their respective owners and the use of such trademarks shall inure to the benefit of the trademark owner.

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## Forward-Looking Statements

From time to time, in this Annual Report and Form 10-K, as well as in other written reports and verbal statements, Grainger makes forward-looking statements that are not historical in nature but concern forecasts of future results, business plans, analyses, prospects, strategies, objectives and other matters that may be deemed to be "forward-looking statements" under the federal securities laws. Such forward-looking statements are identified by words such as "anticipate," "estimate," "believe," "expect," "could," "forecast," "may," "intend," "plan," "predict," "project," and similar terms and expressions.

Grainger cannot guarantee that any forward-looking statement will be realized, although Grainger does believe that its assumptions underlying its forward-looking statements are reasonable. Achievement of future results is subject to risks and uncertainties, many of which are beyond the Company's control, which could cause Grainger's results to differ materially from those which are presented.

Important factors that could cause actual results to differ materially from those presented or implied in a forward-looking statement include, without limitation: higher product costs or other expenses; a major loss of customers; loss or disruption of source of supply; increased competitive pricing pressures; failure to develop or implement new technologies or business strategies; the outcome of pending and future litigation or governmental or regulatory proceedings, including with respect to wage and hour, anti-bribery and corruption, environmental, advertising, privacy and cybersecurity matters; investigations, inquiries, audits and changes in laws and regulations; disruption of information technology or data security systems; general industry or market conditions; general global economic conditions; currency exchange rate fluctuations; market volatility; commodity price volatility; labor shortages; facilities disruptions or shutdowns; higher fuel costs or disruptions in transportation services; natural and other catastrophes; unanticipated weather conditions; loss of key members of management; the Company's ability to operate, integrate and leverage acquired businesses; changes in credit ratings; changes in effective tax rates; and the factors identified under Item 1A: Risk Factors and elsewhere in the Form 10-K.

Caution should be taken not to place undue reliance on Grainger's forward-looking statements and Grainger undertakes no obligation to publicly update the forward-looking statements, whether as a result of new information, future events or otherwise.



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For 90 years, Grainger has remained committed to helping professionals keep their operations running and their people safe by staying ahead of customer needs. As North America's leading broad line maintenance, repair and operating (MRO) products distributor, with operations also in Europe, Asia and Latin America, Grainger has built an advantaged supply chain network to support its multichannel offering which includes branches, eCommerce channels and comprehensive inventory management capabilities. With customers as a central focus and a continued commitment to innovation, Grainger is well-positioned for the long term. Grainger will uphold its legacy of making responsible decisions for its customers, team members, shareholders and the communities it serves now and in the future.