

ARROW ELECTRONICS INC  
Form 10-K  
February 06, 2018  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2017

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 1-4482

ARROW ELECTRONICS, INC.  
(Exact name of registrant as specified in its charter)  
New York 11-1806155  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification Number)  
9201 East Dry Creek Road, Centennial, Colorado 80112  
(Address of principal executive offices) (Zip Code)  
(303) 824-4000  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:  
Title of each class Name of each exchange on which registered  
Common Stock, \$1 par value New York Stock Exchange

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange 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 Web site, 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 (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the 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, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer  (do not check if a smaller reporting company) Smaller reporting company

Emerging growth company

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

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

The aggregate market value of voting stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter was \$6,807,202,729.

There were 87,709,565 shares of Common Stock outstanding as of February 2, 2018.

#### DOCUMENTS INCORPORATED BY REFERENCE

The definitive proxy statement related to the registrant's Annual Meeting of Shareholders, to be held May 10, 2018 is incorporated by reference in Part III to the extent described therein.

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## PART I

### Item 1. Business.

Arrow Electronics, Inc. (the "company" or "Arrow") is a global provider of products, services, and solutions to industrial and commercial users of electronic components and enterprise computing solutions. The company has one of the world's broadest portfolios of product offerings available from leading electronic components and enterprise computing solutions suppliers, coupled with a range of services, solutions, and tools that help industrial and commercial customers introduce innovative products, reduce their time to market, and enhance their overall competitiveness. Arrow was incorporated in New York in 1946 and serves over 150,000 customers.

Arrow's diverse worldwide customer base consists of original equipment manufacturers ("OEMs"), value-added resellers ("VARs"), Managed Service Providers ("MSPs"), contract manufacturers ("CMs"), and other commercial customers. These customers include manufacturers of industrial equipment (such as machine tools, factory automation, and robotic equipment) and consumer products serving industries ranging from telecommunications, automotive and transportation, aerospace and defense, medical, professional services, and alternative energy, among others.

The company has two business segments, the global components business and the global enterprise computing solutions ("ECS") business. The company distributes electronic components to OEMs and CMs through its global components business segment and provides enterprise computing solutions to VARs and MSPs through its global ECS business segment. For 2017, approximately 68% of the company's sales were from the global components business segment, and approximately 32% of the company's sales were from the global ECS business segment. The financial information about the company's business segments and geographic operations is found in Note 16 of the Notes to the Consolidated Financial Statements.

The company maintains over 300 sales facilities and 45 distribution and value-added centers, serving over 80 countries. Both business segments have operations in each of the three largest electronics markets; the Americas; Europe, Middle East, and Africa ("EMEA"); and Asia Pacific regions. Through this network, Arrow guides innovation forward by helping its customers deliver new technologies, new materials, new ideas, and new electronics that impact the business community and consumers.

The company's financial objectives are to grow sales faster than the market, increase the markets served, grow profits faster than sales, and increase return on invested capital. To achieve its objectives, the company seeks to capture significant opportunities to grow across products, markets, and geographies. To supplement its organic growth strategy, the company continually evaluates strategic acquisitions to broaden its product and value-added service offerings, increase its market penetration, and expand its geographic reach.

#### Global Components

Global components markets and distributes electronic components and provides a comprehensive range of value-added capabilities throughout the entire life cycle of technology products and services. The company provides customers with the ability to deliver the latest technologies to the market through design engineering, global marketing and integration, global logistics, and supply chain management. The company offers the convenience of accessing, from a single source, multiple technologies and products from its suppliers with rapid or scheduled deliveries. Additionally, the company offers expertise in sustainable technology solutions to guide enterprise customers through the entire technology life cycle. Most of the company's customers require delivery of their orders on schedules or volumes that are generally not available on direct purchases from manufacturers.

Within the global components business segment, sales of approximately 69% consist of semiconductor products and related services; approximately 17% consist of passive, electro-mechanical, and interconnect products, consisting primarily of capacitors, resistors, potentiometers, power supplies, relays, switches, and connectors; approximately 10% consist of computing and memory; and approximately 4% consist of other products and services.

Over the past three years, the global components business segment completed 14 strategic acquisitions to broaden its product and service offerings, to further expand its geographic reach in the Asia Pacific region, and to increase its digital capabilities to meet the evolving needs of customers and suppliers. These acquisitions also expanded the company's global components business segment's portfolio of products and services across the full product lifecycle including new product development, reverse logistics, and electronics asset disposition.

## Global ECS

The company's global ECS business segment is a leading value-added provider of comprehensive computing solutions and services. Global ECS' portfolio of computing solutions includes data-center, cloud, security, and analytics solutions. Global ECS brings broad market access, extensive supplier relationships, scale, and resources to help its VARs and MSPs meet the needs of their end-users. Global ECS works with VARs and MSPs to tailor complex IT solutions for their end-users. Customers have access to various services including engineering and integration support, warehousing and logistics, marketing resources, and authorized hardware and software training. Global ECS' suppliers benefit from demand creation, speed to market, and efficient supply chain management.

Within the global ECS business segment, sales of approximately 42% consist of software, 33% consist of storage, 11% consist of industry standard servers, 7% consist of proprietary servers, and 7% consist of other products and services.

Over the past three years, the global ECS business segment completed two strategic acquisitions to further expand its portfolio of products. Aligned with the vision of guiding innovation forward in the IT channel, the company is investing in emerging and adjacent markets, such as managed services and unified computing, within the ECS business.

## Customers and Suppliers

The company and its affiliates serve over 150,000 industrial and commercial customers. Industrial customers range from major OEMs and CMs to small engineering firms, while commercial customers primarily include VARs, MSPs, and OEMs. No single customer accounted for more than 2% of the company's 2017 consolidated sales.

The company's sales teams focus on an extensive portfolio of products and services to support customers' material management and production needs, including connecting customers to the company's field application engineers that provide technical support and serve as a gateway to the company's supplier partners. The company's sales representatives generally focus on a specific customer segment, particular product lines or a specific geography, and provide end-to-end product offerings and solutions with an emphasis on helping customers introduce innovative products, reduce their time to market, and enhance their overall competitiveness.

Substantially all of the company's sales are made on an order-by-order basis, rather than through long-term sales contracts. As such, the nature of the company's business does not provide visibility of material forward-looking information from its customers and suppliers beyond a few months.

No single supplier accounted for more than 8% of the company's consolidated sales in 2017. The company believes that many of the products it sells are available from other sources at competitive prices. However, certain parts of the company's business, such as the company's global ECS business segment, rely on a limited number of suppliers with the strategy of providing focused support, extensive product knowledge, and customized service to suppliers and VARs. Most of the company's purchases are pursuant to distributor agreements, which are typically non-exclusive and cancelable by either party at any time or on short notice.

## Distribution Agreements

Generally, agreements with suppliers protect the company against the potential write-down of inventories due to technological change or suppliers' price reductions. These contractual provisions typically provide certain protections to the company for product obsolescence and price erosion in the form of return privileges, scrap allowances, and price protection. Under the terms of the related distributor agreements and assuming the company complies with certain conditions, such suppliers are required to credit the company for reductions in suppliers' list prices. As of

December 31, 2017, this type of arrangement covered approximately 52% of the company's consolidated inventories. In addition, under the terms of many such agreements, the company has the right to return to the supplier, for credit, a defined portion of those inventory items purchased within a designated period of time.

A supplier, which elects to terminate a distribution agreement, is generally required to purchase from the company the total amount of its products carried in inventory. As of December 31, 2017, this type of repurchase arrangement covered approximately 64% of the company's consolidated inventories.

While these inventory practices do not wholly protect the company from inventory losses, the company believes that they currently provide substantial protection from such losses.

## Competition

The company operates in a highly competitive environment, both in the United States and internationally. The company competes with other large multinational and national electronic components and enterprise computing solutions distributors, as well as numerous other smaller, specialized competitors who generally focus on narrower markets, products, or particular sectors. The company also competes for customers with its suppliers. The size of the company's competitors vary across markets sectors, as do the resources the company has allocated to the sectors in which it does business. Therefore, some of the company's competitors may have a more extensive customer and/or supplier base than the company in one or more of its market sectors. There is significant competition within each market sector and geography served that creates pricing pressure and the need to continually improve services. Other competitive factors include rapid technological changes, product availability, credit availability, speed of delivery, ability to tailor solutions to customer needs, quality and depth of product lines and training, as well as service and support provided by the distributor to the customer.

The company also faces competition from companies entering or expanding into the logistics and product fulfillment, electronic catalog distribution, and e-commerce supply chain services markets. As the company seeks to expand its business into new areas in order to stay competitive in the market, the company may encounter increased competition from its current and/or new competitors.

The company believes that it is well equipped to compete effectively with its competitors in all of these areas due to its comprehensive product and service offerings, highly-skilled work force, and global distribution network.

## Employees

The company and its affiliates employed approximately 18,800 employees worldwide as of December 31, 2017.

## Available Information

The company files its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements, and other documents with the U.S. Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934. A copy of any document the company files with the SEC is available for review at the SEC's public reference room, 100 F Street, N.E., Washington, D.C. 20549. The SEC is reachable at 1-800-SEC-0330 for further information on the public reference room. The company's SEC filings are also available to the public on the SEC's Web site at <http://www.sec.gov> and through the New York Stock Exchange ("NYSE"), 11 Wall Street, New York, New York 10005, on which the company's common stock is listed.

A copy of any of the company's filings with the SEC, or any of the agreements or other documents that constitute exhibits to those filings, can be obtained by request directed to the company at the following address and telephone number:

Arrow Electronics, Inc.  
9201 East Dry Creek Road  
Centennial, Colorado 80112  
(303) 824-4000  
Attention: Corporate Secretary

The company also makes these filings available, free of charge, through its website (<http://www.arrow.com>) as soon as reasonably practicable after the company files such materials with the SEC. The company does not intend this internet address to be an active link or to otherwise incorporate the contents of the website into this Annual Report on Form 10-K.





Executive Officers

The following table sets forth the names, ages, and the positions held by each of the executive officers of the company as of February 6, 2018:

Name	Age	Position
Michael J. Long	59	Chairman, President, and Chief Executive Officer
Matt Anderson	39	Senior Vice President, Chief Digital Officer
Sean J. Kerins	55	President, Arrow Global Enterprise Computing Solutions
Andy King	54	President, Arrow Global Components
Chuck Kostalnick	52	Senior Vice President, Chief Supply Chain Officer
Vincent P. Melvin	54	Senior Vice President, Chief Information Officer
M. Catherine Morris	59	Senior Vice President, Chief Strategy Officer
Chris D. Stansbury	52	Senior Vice President, Chief Financial Officer
Gregory P. Tarpinian	56	Senior Vice President, Chief Legal Officer
Gretchen K. Zech	48	Senior Vice President, Chief Human Resources Officer

Set forth below is a brief account of the business experience during the past five years of each executive officer of the company.

Michael J. Long has been Chairman of the Board of Directors and Chief Executive Officer of the company for more than five years. He has been a Director and President of the company for more than five years.

Matt Anderson was appointed Senior Vice President, Chief Digital Officer in July 2017. Prior thereto he served as Chief Digital Officer from October 2014 to June 2017. Prior to joining Arrow he served as General Manager and Chief Digital Officer at Hibu from January 2013 to September 2014.

Sean J. Kerins was appointed President of Arrow Global Enterprise Computing Solutions in May 2014. Prior thereto he served as President of North America Enterprise Computing Solutions from July 2010 to May 2014.

Andy King was appointed President of Arrow Global Components in November 2015. Prior thereto he served as President of EMEA Components from November 2013 to November 2015 and Vice President of Sales in EMEA Components from November 2011 to November 2013.

Chuck Kostalnick was appointed Senior Vice President, Chief Supply Chain Officer in July 2017. Prior thereto he served as President, Arrow Sustainable Technology Solutions from August 2016 to July 2017. Before joining Arrow he served as Executive Vice President and Chief Business Officer at Sanmina from September 2013 to July 2016, and he served as Senior Vice President at Avnet Electronics from October 2005 to August 2013.

Vincent P. Melvin was appointed Senior Vice President of the company in December 2013. Prior thereto he served as Vice President of the company from September 2006 to December 2013. He has been the Chief Information Officer of the company for more than five years.

M. Catherine Morris has been Senior Vice President and Chief Strategy Officer of the company for more than five years.

Chris D. Stansbury was appointed Senior Vice President and Chief Financial Officer in May 2016. Prior thereto he served as Vice President, Finance and Chief Accounting Officer from August 2014 to May 2016. Prior to joining Arrow he served as the Vice President, Finance and Chief Financial Officer for Hewlett Packard's Global Networking business from September 2013 to July 2014, and prior thereto he served as a Vice President of Finance for Hewlett

Packard from August 2010 to August 2013.

Gregory P. Tarpinian was appointed Senior Vice President and Chief Legal Officer of the company effective January 2015. Prior thereto he served as the Vice President of Legal Affairs for more than five years.

Gretchen K. Zech has been Senior Vice President and Chief Human Resources Officer of the company for more than five years.

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Item 1A. Risk Factors.

Described below and throughout this report are certain risks that the company's management believes are applicable to the company's business and the industries in which it operates. If any of the described events occur, the company's business, results of operations, financial condition, liquidity, or access to the capital markets could be materially adversely affected. When stated below that a risk may have a material adverse effect on the company's business, it means that such risk may have one or more of these effects. There may be additional risks that are not presently material or known. There are also risks within the economy, the industry, and the capital markets that could materially adversely affect the company, including those associated with an economic recession, inflation, a global economic slowdown, political instability, employee attraction and retention, and those associated with customers' inability or refusal to pay for the products and services provided by the company. There are also risks associated with the occurrence of natural disasters such as tsunamis, hurricanes, tornadoes, and floods. These factors affect businesses generally, including the company's customers and suppliers and, as a result, are not discussed in detail below except to the extent such conditions could materially affect the company and its customers and suppliers in particular ways. Included below are some risks pertaining to specific government regulation, however, not all regulations applicable to the company or unanticipated regulation changes (such as changes in tax regulations in the various geographies we operate) have been described. The continuing expansion of government laws and regulations, some that may apply specifically to the company's industry and others to the market generally, as well as any actions taken by activist investors, could negatively impact the company's profitability.

If the company is unable to maintain its relationships with its suppliers or if the suppliers materially change the terms of their existing agreements with the company, the company's business could be materially adversely affected.

A substantial portion of the company's inventory is purchased from suppliers with which the company has entered into non-exclusive distribution agreements. These agreements are typically cancelable on short notice (generally 30 to 90 days). Some of the company's businesses rely on a limited number of suppliers to provide a high percentage of their revenues. For example, sales of products from one of the company's suppliers accounted for approximately 7.8% of the company's consolidated sales. To the extent that the company's significant suppliers reduce the number of products they sell through distribution, are unwilling to continue to do business with the company, or are unable to continue to meet or significantly alter their obligations, the company's business could be materially adversely affected. In addition, to the extent that the company's suppliers modify the terms of their contracts to the detriment of the company, limit supplies due to capacity constraints, or other factors, there could be a material adverse effect on the company's business. Further, the supplier landscape has experienced a consolidation, which could negatively impact the company if the surviving, consolidated suppliers decide to exclude the company from their supply chain efforts.

The competitive pressures the company faces could have a material adverse effect on the company's business.

The company operates in a highly competitive international environment. The company competes with other large multinational and national electronic components and enterprise computing solutions distributors, as well as numerous other smaller, specialized competitors who generally focus on narrower markets, products, industries, or particular sectors. The company also competes for customers with its suppliers. The size of the company's competitors vary across market sectors, as do the resources the company has allocated to the sectors in which it does business. Therefore, some of the company's competitors may have a more extensive customer and/or supplier base than the company in one or more of its market sectors. There is significant competition within each market sector and geography that creates pricing pressure and the need for constant attention to improve services. Other competitive factors include rapid technological changes, product availability, credit availability, speed of delivery, ability to tailor solutions to customer needs, quality and depth of product lines and training, as well as service and support provided by the distributor to the customer. The company also faces competition from companies in the logistics and product fulfillment, catalog distribution, and e-commerce supply chain services markets. As the company continues to expand its business into new areas in order to stay competitive in the market, such as in the area of the "Internet of Things"

and its expansion in the digital market, the company may encounter increased competition from its current and/or new competitors. The company's failure to maintain and enhance its competitive position could have a material adverse effect on its business.

The company was the victim of fraud and may not be able to adequately anticipate, prevent, or mitigate damage resulting from criminal and other illegal or fraudulent activities committed against it.

The company determined that it was the target of criminal fraud by persons impersonating a company executive, which resulted in unauthorized transfers of cash from a company account in Europe to outside bank accounts in Asia in January 2016. This was an isolated event not associated with a security breach or loss of data. The company determined that its internal controls did not operate effectively to prevent or timely detect the unauthorized cash disbursements. As a result, company management initiated a thorough and detailed remediation plan. The company does not believe that these deficiencies had an adverse effect on its reported operating results or financial condition.

It is clear that global businesses like ours are facing increasing risks of criminal, illegal, and other fraudulent acts. The evolving nature of such threats, in light of new and sophisticated methods used by criminals, including phishing, misrepresentation, social engineering and forgery, are making it increasingly difficult for us to anticipate and adequately mitigate these risks. In addition, designing and implementing measures to defend against, prevent, and detect these types of activities are increasingly costly and invasive into the operations of the business. As a result, we could experience a material loss in the future to the extent that controls and other measures we implement to address these threats fail to prevent or detect such acts.

Products sold by the company may be found to be defective and, as a result, warranty and/or product liability claims may be asserted against the company, which may have a material adverse effect on the company.

The company sells its components at prices that are significantly lower than the cost of the equipment or other goods in which they are incorporated. As a result, the company may face claims for damages (such as consequential damages) that are disproportionate to the revenues and profits it receives from the components involved in the claims. While the company typically has provisions in its supplier agreements that hold the supplier accountable for defective products, and the company and its suppliers generally exclude consequential damages in their standard terms and conditions, the company's ability to avoid such liabilities may be limited as a result of differing factors, such as the inability to exclude such damages due to the laws of some of the countries where it does business. The company's business could be materially adversely affected as a result of a significant quality or performance issue in the products sold by the company, if it is required to pay for the associated damages. Although the company currently has product liability insurance, such insurance is limited in coverage and amount. Further, when relying on contractual liability exclusions, the company could lose customers if their claims are not addressed to their satisfaction.

Declines in value and other factors pertaining to the company's inventory could materially adversely affect its business.

The market for the company's products and services is subject to rapid technological change, evolving industry standards, changes in end-market demand, oversupply of product, and regulatory requirements, which can contribute to the decline in value or obsolescence of inventory. Although most of the company's suppliers provide the company with certain protections from the loss in value of inventory (such as price protection and certain rights of return), the company cannot be sure that such protections will fully compensate it for the loss in value, or that the suppliers will choose to, or be able to, honor such agreements. For example, many of the company's suppliers will not allow products to be returned after they have been held in inventory beyond a certain amount of time, and, in most instances, the return rights are limited to a certain percentage of the amount of product the company purchased in a particular time frame. All of these factors pertaining to inventory could have a material adverse effect on the company's business.

The company is subject to environmental laws and regulations that could materially adversely affect its business.

A number of jurisdictions in which the company's products are sold have enacted laws addressing environmental and other impacts from product disposal, use of hazardous materials in products, use of chemicals in manufacturing, recycling of products at the end of their useful life, and other related matters. These laws prohibit the use of certain substances in the manufacture of the company's products and impose a variety of requirements for modification of manufacturing processes, registration, chemical testing, labeling, and other matters. Failure to comply with these laws or any other applicable environmental regulations could result in fines or suspension of sales. Additionally, these directives and regulations may result in the company having non-compliant inventory that may be less readily salable or have to be written off.

Some environmental laws impose liability, sometimes without fault, for investigating or cleaning up contamination on or emanating from the company's currently or formerly owned, leased, or operated property, as well as for damages to

property or natural resources and for personal injury arising out of such contamination. As the distribution business, in general, does not involve the manufacture of products, it is typically not subject to significant liability in this area. However, there may be occasions, including through acquisitions, where environmental liability arises. Two sites for which the company assumed responsibility as part of the Wyle Electronics ("Wyle") acquisition are known to have environmental issues, one at Norco, California and the other at Huntsville, Alabama. The company was also named as a defendant in a private lawsuit filed in connection with alleged contamination at a small industrial building formerly leased by Wyle Laboratories in El Segundo, California. The lawsuit was settled, but the possibility remains that government entities or others may attempt to involve the company in further characterization or remediation of groundwater issues in the area. The presence of environmental contamination could also interfere with ongoing operations or adversely affect the company's ability to sell or lease its properties. The discovery of contamination for which the company is responsible, the enactment of new laws and regulations, or changes in how existing requirements are enforced, could require the company to incur costs for compliance or subject it to unexpected liabilities.

Expansion into the electronic asset disposition market has broadened the company's risk profile.

The company provides services related to electronic devices being disposed of by business customers. These services include, the data sanitation of storage devices from customer equipment and either recycling the equipment through resale or disposing of it in an environmentally compliant manner. The company may also hold equipment in order to protect and preserve customer data. If the company does not meet its contractual and regulatory obligations with respect to such data, it could be subject to financial damages, penalties, and damage to reputation. Also, the company's or its subcontractors' failure to comply with applicable environmental laws and regulations in disposing of the equipment could result in liability. Such environmental liability may be joint and several, meaning that the company could be held responsible for more than its share of the liability involved. To the extent that company fails to comply with its obligations and such failure is not covered by insurance, the company's business could be adversely affected.

The company may not have adequate or cost-effective liquidity or capital resources.

The company requires cash or committed liquidity facilities for general corporate purposes, such as funding its ongoing working capital, acquisitions, and capital expenditure needs, as well as to refinance indebtedness. At December 31, 2017, the company had cash and cash equivalents of \$730.1 million. In addition, the company currently has access to committed credit lines of \$1.8 billion and a committed asset securitization program of \$910.0 million, of which the company had outstanding borrowings of \$490.0 million at December 31, 2017. The company's ability to satisfy its cash needs depends on its ability to generate cash from operations and to access the financial markets, both of which are subject to general economic, financial, competitive, legislative, regulatory, and other factors that are beyond its control.

The company may, in the future, need to access the financial markets to satisfy its cash needs. The company's ability to obtain external financing is affected by various factors including general financial market conditions and the company's debt ratings. Further, any increase in the company's level of debt, change in status of its debt from unsecured to secured debt, or deterioration of its operating results may cause a reduction in its current debt ratings. Any downgrade in the company's current debt rating or tightening of credit availability could impair the company's ability to obtain additional financing or renew existing credit facilities on acceptable terms. Under the terms of any external financing, the company may incur higher financing expenses and become subject to additional restrictions and covenants. For example, the company's existing debt agreements contain restrictive covenants, including covenants requiring compliance with specified financial ratios, and a failure to comply with these or any other covenants may result in an event of default. The company's lack of access to cost-effective capital resources, an increase in the company's financing costs, or a breach of debt covenants could have a material adverse effect on the company's business.

The agreements governing some of the company's financing arrangements contain various covenants and restrictions that limit some of management's discretion in operating the business and could prevent the company from engaging in some activities that may be beneficial to its business.

The agreements governing the company's financings contain various covenants and restrictions that, in certain circumstances, could limit its ability to:

- grant liens on assets;
- make investments;
- merge, consolidate, or transfer all or substantially all of its assets;
- incur additional debt; or
- engage in certain transactions with affiliates.



As a result of these covenants and restrictions, the company may be limited in how it conducts its business and may be unable to raise additional debt, compete effectively, or make investments.

The company's failure to have long-term sales contracts may have a material adverse effect on its business.

Most of the company's sales are made on an order-by-order basis, rather than through long-term sales contracts. The company generally works with its customers to develop non-binding forecasts for future orders. Based on such non-binding forecasts, the company makes commitments regarding the level of business that it will seek and accept, the inventory that it purchases, and the levels of utilization of personnel and other resources. A variety of conditions, both specific to each customer and generally affecting each customer's industry may cause customers to cancel, reduce, or delay orders that were either previously made or anticipated, file for bankruptcy protection or fail, or default on their payments. Generally, customers cancel, reduce, or delay purchase orders and commitments without penalty. The company seeks to mitigate these risks, in some cases, by entering into noncancelable/nonreturnable sales agreements, but there is no guarantee that such agreements will adequately protect the company. Significant

or numerous cancellations, reductions, delays in orders by customers, loss of customers, and/or customer defaults on payments could materially adversely affect the company's business.

The company's revenues originate primarily from the sales of semiconductor, PEMCO (passive, electro-mechanical and interconnect), IT hardware and software products, the sales of which are traditionally cyclical.

The semiconductor industry historically has experienced fluctuations in product supply and demand, often associated with changes in technology and manufacturing capacity and subject to significant economic market upturns and downturns. Sales of semiconductor products and related services represented approximately 46%, 42%, and 41% of the company's consolidated sales in 2017, 2016, and 2015, respectively. The sale of the company's PEMCO products closely tracks the semiconductor market. Accordingly, the company's revenues and profitability, particularly in its global components business segment, tend to closely follow the strength or weakness of the semiconductor market. Further, economic weakness could cause a decline in spending in information technology, which could have a negative impact on the company's ECS business. A cyclical downturn in the technology industry could have a material adverse effect on the company's business and negatively impact its ability to maintain historical profitability levels.

The company's non-U.S. sales represent a significant portion of its revenues, and consequently, the company is exposed to risks associated with operating internationally.

In 2017, 2016, and 2015, approximately 58%, 56%, and 54%, respectively, of the company's sales came from its operations outside the United States. As a result of the company's international sales and locations, its operations are subject to a variety of risks that are specific to international operations, including the following:

- import and export regulations that could erode profit margins or restrict exports;
- the burden and cost of compliance with international laws, treaties, and technical standards and changes in those regulations;
- potential restrictions on transfers of funds;
- import and export duties and value-added taxes;
- transportation delays and interruptions;
- the burden and cost of compliance with complex multi-national tax laws and regulations;
- uncertainties arising from local business practices and cultural considerations;
- enforcement of the Foreign Corrupt Practices Act, or similar laws of other jurisdictions;
- foreign laws that potentially discriminate against companies which are headquartered outside that jurisdiction;
- volatility associated with sovereign debt of certain international economies;
- the uncertainty surrounding the implementation and effects of Brexit;
- potential military conflicts and political risks; and
- currency fluctuations, which the company attempts to minimize through traditional hedging instruments.

Furthermore, products the company sells which are either manufactured in the United States or based on U.S. technology ("U.S. Products") are subject to the Export Administration Regulations ("EAR") when exported and re-exported to and from all international jurisdictions, in addition to the local jurisdiction's export regulations applicable to individual shipments. Licenses or proper license exemptions may be required by local jurisdictions' export regulations, including EAR, for the shipment of certain U.S. Products to certain countries, including China, India, Russia, and other countries in which the company operates. Non-compliance with the EAR or other applicable export regulations can result in a wide range of penalties including the denial of export privileges, fines, criminal penalties, and the seizure of inventories. In the event that any export regulatory body determines that any shipments made by the company violate the applicable export regulations, the company could be fined significant sums and/or its export capabilities could be restricted, which could have a material adverse effect on the company's business.

Also, the company's gross margins in the components business in the Asia/Pacific region tend to be lower than those in the other markets in which the company sells products and services. If sales in this market increase as a percentage of overall sales, consolidated gross margins will be lower. The financial impact of lower gross profit on returns on working capital is offset, in part, by lower working capital requirements. While the company has and will continue to adopt measures to reduce the potential impact of losses resulting from the risks of doing business abroad, it cannot ensure that such measures will be adequate and, therefore, could have a material adverse effect on its business.

Certain tax policy efforts, including the Organisation for Economic Co-operation and Development's ("OECD") Base Erosion and Profit Shifting ("BEPS") Project, the European Commission's state aid investigations, and other initiatives could have an adverse effect on the taxation of international businesses. Furthermore, many of the countries where we are subject to taxes are independently evaluating their tax policy and some have already passed tax legislation which affect international businesses. For

instance, on December 22, 2017, the U.S. federal government enacted tax legislation ("Tax Act"), which significantly changed the existing tax laws by favorably reducing the corporate federal tax rate (35% to 21%) and moving to a territorial system, while simultaneously imposing an unfavorable one-time tax on accumulated foreign earnings, limiting deductibility of certain import related costs, including interest expense, and creating a new tax on certain international activities. Such tax changes, to the extent they are brought into tax legislation, regulations, policies, or practices, could increase our effective tax rates in many of the countries where we have operations and have an adverse effect on our overall tax rate, along with increasing the complexity, burden and cost of tax compliance, all of which could impact our operating results, cash flows, and financial condition.

When the company makes acquisitions, it may take on additional liabilities or not be able to successfully integrate such acquisitions.

As part of the company's history and growth strategy, it has acquired other businesses. Acquisitions involve numerous risks, including the following:

- effectively combining the acquired operations, technologies, or products;
- unanticipated costs or assumed liabilities, including those associated with regulatory actions or investigations;
- not realizing the anticipated financial benefit from the acquired companies;
- diversion of management's attention;
- negative effects on existing customer and supplier relationships; and
- potential loss of key employees, especially those of the acquired companies.

Further, the company has made, and may continue to make acquisitions of, or investments in new services, businesses or technologies to expand its current service offerings and product lines. Some of these may involve risks that may differ from those traditionally associated with the company's core distribution business, including undertaking product or service warranty responsibilities that in its traditional core business would generally reside primarily with its suppliers. If the company is not successful in mitigating or insuring against such risks, it could have a material adverse effect on the company's business.

The company's goodwill and identifiable intangible assets could become impaired, which could reduce the value of its assets and reduce its net income in the year in which the write-off occurs.

Goodwill represents the excess of the cost of an acquisition over the fair value of the assets acquired. The company also ascribes value to certain identifiable intangible assets, which consist primarily of customer relationships and trade names, among others, as a result of acquisitions. The company may incur impairment charges on goodwill or identifiable intangible assets if it determines that the fair values of the goodwill or identifiable intangible assets are less than their current carrying values. The company evaluates, on a regular basis, whether events or circumstances have occurred that indicate all, or a portion, of the carrying amount of goodwill or identifiable intangible assets may no longer be recoverable, in which case an impairment charge to earnings would become necessary.

Refer to Notes 1 and 3 of the Notes to the Consolidated Financial Statements and 'Critical Accounting Policies' in Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion of the impairment testing of goodwill and identifiable intangible assets.

A decline in general economic conditions or global equity valuations could impact the judgments and assumptions about the fair value of the company's businesses and the company could be required to record impairment charges on its goodwill or other identifiable intangible assets in the future, which could impact the company's consolidated balance sheet, as well as the company's consolidated statement of operations. If the company is required to recognize an impairment charge in the future, the charge would not impact the company's consolidated cash flows, current liquidity, or capital resources.

If the company fails to maintain an effective system of internal controls or discovers material weaknesses in its internal controls over financial reporting, it may not be able to report its financial results accurately or timely or detect fraud, which could have a material adverse effect on its business.

An effective internal control environment is necessary for the company to produce reliable financial reports, safeguard assets, and is an important part of its effort to prevent financial fraud. The company is required to annually evaluate the effectiveness of the design and operation of its internal controls over financial reporting. Based on these evaluations, the company may conclude that enhancements, modifications, or changes to internal controls are necessary or desirable. While management evaluates the effectiveness of the company's internal controls on a regular basis, these controls may not always be effective. There are inherent limitations on the effectiveness of internal controls, including collusion, management override, and failure in human judgment. In addition, control procedures are designed to reduce rather than eliminate financial statement risk. If the company fails to

maintain an effective system of internal controls, or if management or the company's independent registered public accounting firm discovers material weaknesses in the company's internal controls, it may be unable to produce reliable financial reports or prevent fraud, which could have a material adverse effect on the company's business. In addition, the company may be subject to sanctions or investigation by regulatory authorities, such as the SEC or the NYSE. Any such actions could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of the company's financial statements, which could cause the market price of its common stock to decline or limit the company's access to capital.

Cyber security and privacy breaches may hurt the company's business, damage its reputation, increase its costs, and cause losses.

The company's information technology systems could be subject to invasion, cyber-attack, or data privacy breaches by employees, others with authorized access, and unauthorized persons. Such attacks could result in disruption to the company's operations, loss or disclosure of, or damage to, the company's or any of its customer's or supplier's data or confidential information. The company's information technology systems security measures may also be breached due to employee error, malfeasance, or otherwise. Additionally, outside parties may attempt to fraudulently induce employees, customers or suppliers to disclose sensitive information in order to gain access to the company's data and information technology systems. Any such breach could result in significant legal and financial exposure, damage to the company's reputation, loss of competitive advantage, and a loss of confidence in the security of the company's information technology systems that could potentially have an impact on the company's business. Because the techniques used to obtain unauthorized access, disable or degrade, or sabotage the company's information technology systems change frequently and often are not recognized until launched, the company may be unable to anticipate these techniques or to implement adequate preventive measures. Further, third parties, such as hosted solution providers, that provide services for the company's operations, could also be a source of security risk in the event of a failure of their own security systems and infrastructure. In addition, sophisticated hardware and operating system software and applications that the company procures from third parties may contain defects in design or manufacture, including "bugs" and other problems that could unexpectedly interfere with the operation of the company's information technology systems. Although the company has developed systems and processes that are designed to protect information and prevent data loss and other security breaches, including systems and processes designed to reduce the impact of a security breach, such measures cannot provide absolute security. Such breaches, whether successful or unsuccessful, could result in the company incurring costs related to, for example, rebuilding internal systems, defending against litigation, responding to regulatory inquiries or actions, paying damages, or taking other remedial steps.

Also, global privacy legislation, enforcement, and policy activity are rapidly expanding and creating a complex compliance environment. The company's failure to comply with federal, state, or international privacy related or data protection laws and regulations could result in proceedings against the company by governmental entities or others. Although the company has insurance coverage for protecting against loss from cyber security risks, it may not be sufficient to cover all possible claims, and the company may suffer losses that could have a material adverse effect on its business.

The company relies heavily on its internal information systems, which, if not properly functioning, could materially adversely affect the company's business.

The company's current global operations reside on multiple technology platforms. The size and complexity of the company's computer systems make them potentially vulnerable to breakdown, malicious intrusion, and random attack.

In January 2018, the company completed the process of implementing a global enterprise resource planning ("ERP") system to standardize its global components processes worldwide and adopt best-in-class capabilities. The company has committed significant resources to this new ERP system, which replaces multiple legacy systems of the company.

This conversion has been extremely complex, in part, because of the wide range of processes and the multiple legacy systems that must be integrated globally. The company used a controlled project plan that it believes will provide for the adequate allocation of resources and appropriate support. To date, the company has not experienced any identifiable significant issues. However, there may be negative implications of which the company is not yet aware. Failure to properly or adequately address any such issues could impact the company's ability to perform necessary business operations, which could materially adversely affect the company's business.

The company may be subject to intellectual property rights claims, which are costly to defend, could require payment of damages or licensing fees and could limit the company's ability to use certain technologies in the future.

Certain of the company's products and services include intellectual property owned primarily by the company's third party suppliers and, to a lesser extent, the company itself. Substantial litigation and threats of litigation regarding intellectual property rights exist in the semiconductor/integrated circuit, software and some service industries. From time to time, third parties (including certain companies in the business of acquiring patents not for the purpose of developing technology but with the intention of aggressively seeking licensing revenue from purported infringers) may assert patent, copyright and/or other intellectual property rights to

technologies that are important to the company's business. In some cases, depending on the nature of the claim, the company may be able to seek indemnification from its suppliers for itself and its customers against such claims, but there is no assurance that it will be successful in obtaining such indemnification or that the company is fully protected against such claims. In addition, the company is exposed to potential liability for technology that it develops itself or combines multiple technologies of its suppliers for which it may have limited or no indemnification protections. In any dispute involving products or services that incorporate intellectual property from multiple sources or is developed, licensed by the company, or obtained through acquisition, the company's customers could also become the targets of litigation. The company is obligated in many instances to indemnify and defend its customers if the products or services the company sells are alleged to infringe any third party's intellectual property rights. Any infringement claim brought against the company, regardless of the duration, outcome, or size of damage award, could:

- result in substantial cost to the company;
- divert management's attention and resources;
- be time consuming to defend;
- result in substantial damage awards; or
- cause product shipment delays.

Additionally, if an infringement claim is successful, the company may be required to pay damages or seek royalty or license arrangements, which may not be available on commercially reasonable terms. The payment of any such damages or royalties may significantly increase the company's operating expenses and harm the company's operating results and financial condition. Also, royalty or license arrangements may not be available at all. The company may have to stop selling certain products or using technologies, which could affect the company's ability to compete effectively.

Compliance with government regulations regarding the use of "conflict minerals" may result in increased costs and risks to the company.

As part of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Act"), the SEC has promulgated disclosure requirements regarding the use of certain minerals, which are mined from the Democratic Republic of Congo and adjoining countries, known as conflict minerals. The disclosure rules were effective in May 2014. The company must publicly disclose the process it took to determine whether it manufactures (as defined in the Act) any products that contain conflict minerals. Customers typically rely on the company to provide critical data regarding the parts they purchase, including conflict mineral information. The company's material sourcing is broad-based and multi-tiered, and it is not able to easily verify the origins for conflict minerals used in all of the products it sells. The company has many suppliers and each provides conflict mineral information in a different manner, if at all. Accordingly, because the supply chain is complex, the company may face reputational challenges if it is unable to sufficiently verify the origins of conflict minerals used in its products. Additionally, customers may demand that the products they purchase be free of conflict minerals. This may limit the number of suppliers that can provide products in sufficient quantities to meet customer demand or at competitive prices.

#### Item 1B. Unresolved Staff Comments.

None.

#### Item 2. Properties.

The company owns and leases sales offices, distribution centers, and administrative facilities worldwide. Its executive office is located in Centennial, Colorado and occupies a 129,000 square foot facility under a long-term lease expiring in 2033. The company owns 15 locations throughout the Americas, EMEA, and Asia Pacific regions and occupies approximately 600 additional locations under leases due to expire on various dates through 2033. The company



believes its facilities are well maintained and suitable for company operations.

Item 3. Legal Proceedings.

Environmental and Related Matters

In connection with the purchase of Wyle in August 2000, the company acquired certain of the then outstanding obligations of Wyle, including Wyle's indemnification obligations to the purchasers of its Wyle Laboratories division for environmental clean-up costs associated with any then existing contamination or violation of environmental regulations. Under the terms of the company's purchase of Wyle from the sellers, the sellers agreed to indemnify the company for certain costs associated with the Wyle environmental obligations, among other things. In 2012, the company entered into a settlement agreement with the sellers pursuant to which the sellers paid \$110.0 million and the company released the sellers from their indemnification obligation. As part of the settlement agreement the company accepted responsibility for any potential subsequent costs incurred related to the Wyle matters. The company is aware of two Wyle Laboratories facilities (in Huntsville, Alabama and Norco, California) at which contaminated groundwater was identified and will require environmental remediation. As further discussed in Note 15 of the Notes to the Consolidated Financial Statements, the Huntsville, Alabama site is subject to a consent decree, entered into in February 2015, between the company and the Alabama Department of Environmental Management ("ADEM"). The Norco, California site is subject to a consent decree, entered in October 2003, between the company, Wyle Laboratories, and the California Department of Toxic Substance Control. In addition, the company was named as a defendant in several lawsuits related to the Norco facility and a third site in El Segundo, California which have now been settled to the satisfaction of the parties.

The company expects these environmental liabilities to be resolved over an extended period of time. Costs are recorded for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated. Accruals for environmental liabilities are adjusted periodically as facts and circumstances change, assessment and remediation efforts progress, or as additional technical or legal information becomes available. Environmental liabilities are difficult to assess and estimate due to various unknown factors such as the timing and extent of remediation, improvements in remediation technologies, and the extent to which environmental laws and regulations may change in the future. Accordingly, the company cannot presently fully estimate the ultimate potential costs related to these sites until such time as a substantial portion of the investigation at the sites is completed and remedial action plans are developed and, in some instances implemented. To the extent that future environmental costs exceed amounts currently accrued by the company, net income would be adversely impacted and such impact could be material.

Accruals for environmental liabilities are included in "Accrued expenses" and "Other liabilities" in the company's consolidated balance sheets.

As successor-in-interest to Wyle, the company is the beneficiary of various Wyle insurance policies that covered liabilities arising out of operations at Norco and Huntsville. To date, the company has recovered approximately \$37.0 million from certain insurance carriers relating to environmental clean-up matters at the Norco site. The company is considering the best way to pursue its potential claims against insurers regarding liabilities arising out of operations at Huntsville. The resolution of these matters will likely take several years. The company has not recorded a receivable for any potential future insurance recoveries related to the Norco and Huntsville environmental matters, as the realization of the claims for recovery are not deemed probable at this time.

The company believes the settlement amount together with potential recoveries from various insurance policies covering environmental remediation and related litigation will be sufficient to cover any potential future costs related to the Wyle acquisition; however, it is possible unexpected costs beyond those anticipated could occur.

Other

From time to time, in the normal course of business, the company may become liable with respect to other pending and threatened litigation, environmental, regulatory, labor, product, and tax matters. While such matters are subject to inherent uncertainties, it is not currently anticipated that any such matters will materially impact the company's consolidated financial position, liquidity, or results of operations.

Item 4. Mine Safety Disclosures.

Not applicable.

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## PART II

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

## Market Information

The company's common stock is listed on the NYSE (trading symbol: "ARW"). The high and low sales prices during each quarter of 2017 and 2016 are as follows:

Year	High	Low
2017:		
Fourth Quarter	\$84.35	\$76.68
Third Quarter	84.53	73.71
Second Quarter	80.35	69.67
First Quarter	75.88	68.55

2016:		
Fourth Quarter	\$72.44	\$59.25
Third Quarter	67.21	59.88
Second Quarter	67.99	59.06
First Quarter	65.32	46.66

## Record Holders

On February 2, 2018, there were approximately 1,515 shareholders of record of the company's common stock.

## Dividend History

The company did not pay cash dividends on its common stock during 2017 or 2016. While from time to time the Board of Directors (the "Board") considers the payment of dividends on the common stock, the declaration of future dividends is dependent upon the company's earnings, financial condition, and other relevant factors, including debt covenants.

## Equity Compensation Plan Information

The following table summarizes information, as of December 31, 2017, relating to the Omnibus Incentive Plan, which was approved by the company's shareholders and under which cash-based awards, non-qualified stock options, incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance share units, covered employee annual incentive awards, and other stock-based awards may be granted.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance
Equity compensation plans approved by security holders	2,881,482	\$ 59.75	4,896,220
Total	2,881,482	\$ 59.75	4,896,220

Performance Graph

The following graph compares the performance of the company's common stock for the periods indicated with the performance of the Standard & Poor's 500 Stock Index ("S&P 500 Stock Index") and the average performance of a group consisting of the company's peer companies ("Peer Group") on a line-of-business basis. During 2017, the companies included in the Peer Group are Anixter International Inc., Avnet, Inc., Celestica Inc., Flextronics International Ltd., Jabil Circuit, Inc., Tech Data Corporation, and WESCO International, Inc.. The graph assumes \$100 invested on December 31, 2012 in the company, the S&P 500 Stock Index, and the Peer Group. Total return indices reflect reinvestment of dividends and are weighted on the basis of market capitalization at the time of each reported data point.

	2012	2013	2014	2015	2016	2017
Arrow Electronics	100	142	152	142	187	211
Peer Group	100	129	148	142	176	191
S&P 500 Stock Index	100	132	151	153	171	208

## Issuer Purchases of Equity Securities

The following table shows the company's share-repurchase programs with activity in the years ended December 31, 2015, 2016, and 2017 (in thousands):

Month of Board Approval	Dollar Value Approved for Repurchase	Dollar Value of Shares Repurchased	Approximate Dollar Value of Shares that May be Purchased Under the Program
May 2014	\$ 200,000	\$ 200,000	\$ —
December 2014	200,000	200,000	—
September 2015	400,000	400,000	—
December 2016	400,000	41,079	358,921
Total	\$ 1,200,000	\$ 841,079	\$ 358,921

The following table shows the share-repurchase activity for the quarter ended December 31, 2017 (in thousands except per share data):

Month	Total Number of Shares Purchased(a)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program(b)	Approximate Dollar Value of Shares that May be Purchased Under the Program
October 1 through October 28, 2017	\$ —	\$ —	—\$ —	\$ 383,919
October 29 through November 25, 2017	319,071	78.35	319,071	358,921
November 26 through December 31, 2017	1,489	78.30	—	358,921
Total	\$ 320,560		\$ 319,071	

Includes share repurchases under the Share-Repurchase Programs and those associated with shares withheld from (a) employees for stock-based awards, as permitted by the Omnibus Incentive Plan, in order to satisfy the required tax withholding obligations.

The difference between the "total number of shares purchased" and the "total number of shares purchased as part of publicly announced program" for the quarter ended December 31, 2017 is 1,489 shares, which relate to shares (b) withheld from employees for stock-based awards, as permitted by the Omnibus Incentive Plan, in order to satisfy the required tax withholding obligations. The purchase of these shares were not made pursuant to any publicly announced repurchase plan.

## Item 6. Selected Financial Data.

The following table sets forth certain selected consolidated financial data and must be read in conjunction with the company's consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K (dollars in thousands except per share data):

For the years ended December 31:	2017 (a)	2016 (b)	2015 (c)	2014 (d)	2013 (e)
Sales	\$26,812,508	\$23,825,261	\$23,282,020	\$22,768,674	\$21,357,285
Gross profit	3,357,339	3,144,199	3,035,250	2,995,895	2,790,929
Operating income	928,450	858,539	824,482	762,257	693,500
Net income attributable to shareholders	401,962	522,750	497,726	498,045	399,420
Net income per share:					
Basic	\$4.53	\$5.75	\$5.26	\$5.05	\$3.89
Diluted	\$4.48	\$5.68	\$5.20	\$4.98	\$3.85

## At December 31:

Accounts receivable and inventories, net	\$11,473,610	\$9,602,332	\$8,627,908	\$8,379,107	\$7,937,046
Total assets	16,462,809	14,206,366	13,021,930	12,435,301	12,051,562
Long-term debt	2,933,045	2,696,334	2,380,575	2,067,898	2,216,811
Shareholders' equity	4,951,539	4,413,438	4,142,443	4,153,970	4,180,232

(a) Operating income and net income attributable to shareholders include identifiable intangible asset amortization of \$50.1 million, impairment of assets held for sale of \$21.0 million, and restructuring, integration, and other charges of \$91.3 million. Net income attributable to shareholders includes a loss on extinguishment of debt of \$59.5 million, a loss on investment of \$14.2 million, and the impact of the Tax Act of \$124.7 million.

(b) Operating income and net income attributable to shareholders include identifiable intangible asset amortization of \$54.9 million and restructuring, integration, and other charges of \$73.6 million.

(c) Operating income and net income attributable to shareholders include identifiable intangible asset amortization of \$51.0 million and restructuring, integration, and other charges of \$68.8 million. Net income attributable to shareholders includes a loss on extinguishment of debt of \$2.9 million and a loss on investment of \$1.0 million.

(d) Operating income and net income attributable to shareholders include identifiable intangible asset amortization of \$44.1 million, restructuring, integration, and other charges of \$39.8 million, and a non-cash impairment charge associated with discontinuing the use of a trade name of \$78.0 million. Net income attributable to shareholders also includes a gain on investment of \$29.7 million.

(e) Operating income and net income attributable to shareholders include identifiable intangible asset amortization of \$36.8 million and restructuring, integration, and other charges of \$92.7 million. Net income attributable to shareholders also includes a loss on extinguishment of debt of \$4.3 million, an increase in the provision of income taxes of \$20.8 million, and interest expense of \$1.6 million relating to the settlement of certain international tax matters.



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

Overview

The company is a global provider of products, services, and solutions to industrial and commercial users of electronic components and enterprise computing solutions. The company has one of the world's broadest portfolios of product offerings available from leading electronic components and enterprise computing solutions suppliers, coupled with a range of services, solutions and tools that help industrial and commercial customers introduce innovative products, reduce their time to market, and enhance their overall competitiveness. The company has two business segments, the global components business segment and the global ECS business segment. The company distributes electronic components to OEMs and CMs through its global components business segment and provides enterprise computing solutions to VARs and MSPs through its global ECS business segment. For 2017, approximately 68% of the company's sales were from the global components business segment and approximately 32% of the company's sales were from the global ECS business segment.

The company's financial objectives are to grow sales faster than the market, increase the markets served, grow profits faster than sales, and increase return on invested capital. To achieve its objectives, the company seeks to capture significant opportunities to grow across products, markets, and geographies. To supplement its organic growth strategy, the company continually evaluates strategic acquisitions to broaden its product and value-added service offerings, increase its market penetration, and/or expand its geographic reach.

Executive Summary

Consolidated sales for 2017 increased by 12.5%, compared with the year-earlier period, due to a 19.0% increase in global components business segment sales and a 0.8% increase in global ECS business segment sales. Adjusted for the change in foreign currencies and acquisitions, consolidated sales increased 11.6% compared with the year-earlier period.

Net income attributable to shareholders decreased to \$402.0 million in 2017 compared with net income attributable to shareholders of \$522.8 million in the year-earlier period. The following items impacted the comparability of the company's results for the years ended December 31, 2017 and 2016:

- a loss on extinguishment of debt of \$59.5 million in 2017;
- restructuring, integration, and other charges of \$91.3 million in 2017 and \$73.6 million in 2016;
- impairment of assets held for sale of \$21.0 million in 2017;
- identifiable intangible asset amortization of \$50.1 million in 2017 and \$54.9 million in 2016;
- a loss on investment of \$14.2 million in 2017; and
- impact of the U.S. federal government enacted tax legislation ("Tax Act") of \$124.7 million.

Excluding the aforementioned items, net income attributable to shareholders increased to \$679.0 million in 2017 compared with \$609.8 million in the year-earlier period.

Certain Non-GAAP Financial Information

In addition to disclosing financial results that are determined in accordance with accounting principles generally accepted in the United States ("GAAP"), the company also discloses certain non-GAAP financial information, including:

• Sales, income, or expense items as adjusted for the impact of changes in foreign currencies (referred to as "impact of changes in foreign currencies") and the impact of acquisitions by adjusting the company's prior periods to include the

operating results of businesses acquired, including the amortization expense related to acquired intangible assets, as if the acquisitions had occurred at the beginning of the earliest period presented (referred to as "impact of acquisitions");  
• Operating income as adjusted to exclude identifiable intangible asset amortization, restructuring, integration, and other charges, and impairment of assets held for sale; and

Net income attributable to shareholders as adjusted to exclude identifiable intangible asset amortization, restructuring, integration, and other charges, impairment of assets held for sale, loss on investment, loss on extinguishment of debt, and impact of the Tax Act.

Management believes that providing this additional information is useful to the reader to better assess and understand the company's operating performance, especially when comparing results with previous periods, primarily because management typically monitors the business adjusted for these items in addition to GAAP results. However, analysis of results on a non-GAAP basis should be used as a complement to, and in conjunction with, data presented in accordance with GAAP.

## Sales

Substantially all of the company's sales are made on an order-by-order basis, rather than through long-term sales contracts. As such, the nature of the company's business does not provide for the visibility of material forward-looking information from its customers and suppliers beyond a few months.

Following is an analysis of net sales by business segment for the years ended December 31 (in millions):

	2017	2016	% Change
Consolidated sales, as reported	\$26,813	\$23,825	12.5 %
Impact of changes in foreign currencies	—	142	
Impact of acquisitions	—	48	
Consolidated sales, as adjusted*	\$26,813	\$24,016	11.6 %
Global components sales, as reported	\$18,330	\$15,409	19.0 %
Impact of changes in foreign currencies	—	87	
Impact of acquisitions	—	10	
Global components sales, as adjusted*	\$18,330	\$15,505	18.2 %
Global ECS sales, as reported	\$8,482	\$8,416	0.8 %
Impact of changes in foreign currencies	—	56	
Impact of acquisitions	—	38	
Global ECS sales, as adjusted	\$8,482	\$8,510	(0.3 )%

\* The sum of the components for sales, as adjusted, may not agree to totals, as presented, due to rounding.

Consolidated sales for 2017 increased by \$3.0 billion, or 12.5%, compared with the year-earlier period. The increase in 2017 was driven by an increase in global components business segment sales of \$2.9 billion, or 19.0%, and an increase in global ECS business segment sales of \$65.6 million, or 0.8%, compared with the year-earlier period. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's consolidated sales increased by 11.6% in 2017, compared with the year-earlier period.

In the global components business segment, sales for 2017 increased 19.0% compared with the year-earlier period, with double-digit sales growth in Arrow's core businesses across all three regions (Americas, EMEA, and Asia), as well as high double digit growth coming from Arrow's strategic investments in its Digital and Sustainable Technology Solutions businesses. The increase for 2017 is attributable to suppliers awarding additional business to the company, and reflects strong growth in the industrial, transportation, aerospace and defense, consumer, and communications verticals year over year. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's global components business segment sales increased by 18.2% in 2017, compared with the year-earlier period.

In the global ECS business segment, sales growth for 2017 was relatively flat, increasing 0.8% compared with the year-earlier period, with declining revenue in the first half of the year offset by growth in the second half of the year. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's global ECS business segment sales decreased by 0.3% in 2017, compared with the year-earlier period.



Following is an analysis of net sales by business segment for the years ended December 31 (in millions):

	2016	2015	% Change	
Consolidated sales, as reported	\$23,825	\$23,282	2.3	%
Impact of changes in foreign currencies	—	(202)		
Impact of acquisitions	48	681		
Consolidated sales, as adjusted	\$23,873	\$23,761	0.5	%
Global components sales, as reported	\$15,409	\$14,406	7.0	%
Impact of changes in foreign currencies	—	(79)		
Impact of acquisitions	10	339		
Global components sales, as adjusted*	\$15,419	\$14,665	5.1	%
Global ECS sales, as reported	\$8,416	\$8,876	(5.2)	%
Impact of changes in foreign currencies	—	(123)		
Impact of acquisitions	38	342		
Global ECS sales, as adjusted*	\$8,455	\$9,096	(7.0)	%

\* The sum of the components for sales, as adjusted, may not agree to totals, as presented, due to rounding.

Consolidated sales for 2016 increased by \$543.2 million, or 2.3%, compared with the year-earlier period. The increase in 2016 was driven by an increase in global components business segment sales of \$1.0 billion, or 7.0%, offset partially by a decrease in global ECS business segment sales of \$459.8 million, or 5.2%, compared with the year-earlier period. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's consolidated sales increased by 0.5% in 2016, compared with the year-earlier period.

In the global components business segment, sales for 2016 increased 7.0% compared with the year-earlier period, primarily driven by increased demand in the Asia regions and the impact of recently acquired businesses. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's global components business segment sales increased by 5.1% in 2016, compared with the year-earlier period.

In the global ECS business segment, sales for 2016 decreased 5.2% compared with the year-earlier period, primarily driven by a decrease in hardware sales offset by an increase in software sales, a significant portion of which are recognized on a net basis, and the impact of change in foreign currencies. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's global ECS business segment sales decreased by 7.0% in 2016, compared with the year-earlier period.

#### Gross Profit

Following is an analysis of gross profit for the years ended December 31 (in millions):

	2017	2016	% Change	
Consolidated gross profit, as reported	\$3,357	\$3,144	6.8	%
Impact of changes in foreign currencies	—	18		
Impact of acquisitions	—	13		
Consolidated gross profit, as adjusted	\$3,357	\$3,175	5.7	%

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Consolidated gross profit as a percentage of sales, as reported	12.5	%	13.2	%	(70)	bps
Consolidated gross profit as a percentage of sales, as adjusted	12.5	%	13.2	%	(70)	bps

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The company recorded gross profit of \$3.36 billion and \$3.14 billion for 2017 and 2016, respectively. The increase in gross profit was primarily due to increased demand and supplier awards in the components business. Gross profit margins for 2017 decreased by approximately 70 basis points, compared with the year-earlier period, primarily due to an increase in lower margin distribution services in the Americas and EMEA Components businesses. The increase in supplier awards initially drive lower margin fulfillment volume.

Following is an analysis of gross profit for the years ended December 31 (in millions):

	2016	2015	% Change
Consolidated gross profit, as reported	\$3,144	\$3,035	3.6%
Impact of changes in foreign currencies	—	(27 )	
Impact of acquisitions	13	95	
Consolidated gross profit, as adjusted	\$3,157	\$3,103	1.7%
Consolidated gross profit as a percentage of sales, as reported	13.2 %	13.0 %	20 bps
Consolidated gross profit as a percentage of sales, as adjusted	13.2 %	13.1 %	10 bps

The company recorded gross profit of \$3.14 billion and \$3.04 billion for 2016 and 2015, respectively. The increase in gross profit was primarily due to increased demand for the Asia/Pacific and Europe regions of the components business, offset partially by a shift in the overall percentage of sales attributable to the Asia/Pacific region. The company's gross margins in the components business in the Asia/Pacific region tend to be lower than those in the other markets in which the company sells products and services.

Gross profit margins for 2016 increased by approximately 20 basis points, compared with the year-earlier period, primarily due to a more favorable product mix in the global ECS business. Adjusted for the impact of changes in foreign currencies and acquisitions, the company's consolidated gross profit margin increased approximately 10 basis points in 2016, compared with the year-earlier period.

#### Selling, General, and Administrative Expenses and Depreciation and Amortization

Following is an analysis of operating expenses for the years ended December 31 (in millions):

	2017	2016	% Change
Selling, general, and administrative expenses, as reported	\$2,163	\$2,053	5.4 %
Depreciation and amortization, as reported	154	159	(3.5)%
Operating expenses, as reported	2,317	2,212	4.7 %
Impact of changes in foreign currencies	—	9	
Impact of acquisitions	—	9	
Operating expenses, as adjusted	\$2,317	\$2,230	3.9 %
Operating expenses as a percentage of sales, as reported	8.6 %	9.3 %	(70 ) bps
Operating expenses as a percentage of sales, as adjusted	8.6 %	9.3 %	(70 ) bps

Selling, general, and administrative expenses increased by \$110.1 million, or 5.4%, in 2017, on a sales increase of 12.5%, compared with the year-earlier period. Selling, general, and administrative expenses, as a percentage of sales, was 8.1% and 8.6% for 2017 and 2016, respectively.

Depreciation and amortization expense as a percentage of operating expenses was 6.6% for 2017 compared with 7.2% in the year-earlier period. Included in depreciation and amortization expense is identifiable intangible asset amortization of \$50.1 million for 2017 compared to \$54.9 million for 2016.





Adjusted for the impact of changes in foreign currencies and acquisitions, operating expenses for 2017 increased 3.9%, on a sales increase, as adjusted, of 11.6%. Adjusted for the impact of changes in foreign currencies and acquisitions, operating expenses as a percentage of sales for 2017 were 8.6% compared to 9.3% for 2016. The decline in operating expense as a percentage of sales reflects the operational efficiencies the company achieved to align costs to the business mix.

Following is an analysis of operating expenses for the years ended December 31 (in millions):

	2016	2015	% Change
Selling, general, and administrative expenses, as reported	\$2,053	\$1,986	3.4%
Depreciation and amortization, as reported	159	156	2.2%
Operating expenses, as reported	2,212	2,142	3.3%
Impact of changes in foreign currencies	—	(19 )	
Impact of acquisitions	9	69	
Operating expenses, as adjusted*	\$2,221	\$2,191	1.3%
Operating expenses as a percentage of sales, as reported	9.3 %	9.2 %	10 bps
Operating expenses as a percentage of sales, as adjusted	9.3 %	9.2 %	10 bps

\* The sum of the components for operating expenses, as adjusted may not agree to totals, as presented, due to rounding.

Selling, general, and administrative expenses increased \$66.6 million, or 3.4%, in 2016, on a sales increase of 2.3%, compared with the year-earlier period. Selling, general, and administrative expenses, as a percentage of sales, was 8.6% and 8.5%, for 2016 and 2015, respectively.

Depreciation and amortization expense as a percentage of operating expenses was 7.2% for 2016 compared with 7.3% in the year-earlier period. Included in depreciation and amortization expense is identifiable intangible asset amortization of \$54.9 million for 2016 compared to \$51.0 million for 2015.

Adjusted for the impact of changes in foreign currencies and acquisitions, operating expenses for 2016 increased 1.3%, on a sales increase, as adjusted, of 0.5%. Adjusted for the impact of changes in foreign currencies and acquisitions, operating expenses as a percentage of sales for 2016 were 9.3% compared to 9.2% for 2015.

#### Restructuring, Integration, and Other Charges

##### 2017 Charges

In 2017, the company recorded restructuring, integration, and other charges of \$91.3 million. Included in the restructuring, integration, and other charges for 2017 is a restructuring and integration charge of \$46.8 million related to initiatives taken by the company to improve operating efficiencies, which includes personnel costs of \$37.6 million, facilities costs of \$8.2 million, and other costs of \$1.0 million. These restructuring initiatives are due to the company's continued efforts to lower cost and drive operational efficiency. Integration costs are primarily related to the integration of acquired businesses within the company's pre-existing business and the consolidation of certain operations. Also included is a charge of \$6.2 million related to restructuring and integration actions taken in prior periods.

Included in restructuring, integration, and other charges for 2017 are other expenses of \$38.3 million, which include the following charges and credits. In 2017, the company recorded a pension settlement expense of \$16.7 million (see Note 13), additional expense of \$2.1 million to increase its accrual for the Wyle Laboratories ("Wyle") environmental obligation (see Note 15), acquisition related charges of \$7.7 million related to contingent consideration for

acquisitions completed in prior years, and a net loss on real estate transactions of \$3.1 million.

#### 2016 Charges

In 2016, the company recorded restructuring, integration, and other charges of \$73.6 million. Included in the restructuring, integration, and other charges for 2016 is a restructuring and integration charge of \$32.9 million related to initiatives taken by the company to improve operating efficiencies, which includes personnel costs of \$25.8 million, facilities costs of \$5.8 million, and other costs of \$1.3 million. These restructuring initiatives are due to the company's continued efforts to lower cost and drive operational efficiency. Integration costs are primarily related to the integration of acquired businesses within the company's pre-

existing business and the consolidation of certain operations. Also included is a charge of \$3.6 million related to restructuring and integration actions taken in prior periods.

Included in restructuring, integration, and other charges for 2016 are other expenses of \$37.1 million, which includes the following charges and credits. In 2016, the company recorded a pension settlement charge of \$12.2 million (see Note 13), additional expenses of \$11.8 million to increase its accrual for the Wyle environmental obligation (see Note 15), acquisition related charges of \$8.7 million related to contingent consideration for acquisitions completed in prior years, and a fraud loss, net of insurance recoveries, of \$4.3 million. Also in 2016, the company released a \$2.4 million legal reserve.

#### 2015 Charges

In 2015, the company recorded restructuring, integration, and other charges of \$68.8 million. Included in the restructuring, integration, and other charges for 2015 is a restructuring and integration charge of \$39.1 million related to initiatives taken by the company to improve operating efficiencies. Also included in the restructuring, integration, and other charges for 2015 is a charge of \$4.1 million related to restructuring and integration actions taken in prior periods and acquisition-related expenses of \$25.6 million.

The restructuring and integration charge of \$39.1 million in 2015 includes personnel costs of \$33.9 million, facilities costs of \$4.2 million, and other costs of \$1.0 million. These restructuring initiatives are due to the company's continued efforts to lower cost and drive operational efficiency. Integration costs are primarily related to the integration of acquired businesses within the company's pre-existing business and the consolidation of certain operations.

As of December 31, 2017, the company does not anticipate there will be any material adjustments relating to the aforementioned restructuring plans. Refer to Note 9, "Restructuring, Integration, and Other Charges" of the Notes to the Consolidated Financial Statements for further discussion of the company's restructuring and integration activities.

#### Operating Income

Following is an analysis of operating income for the years ended December 31 (in millions):

	2017	2016	% Change
Consolidated operating income, as reported	\$928	\$859	8.1 %
Identifiable intangible asset amortization	50	55	
Impairment of assets held for sale	21	—	
Restructuring, integration, and other charges	91	74	
Consolidated operating income, as adjusted*	\$1,091	\$987	10.5 %
Consolidated operating income as a percentage of sales, as reported	3.5 %	3.6 %	(10 ) bps
Consolidated operating income, as adjusted, as a percentage of sales, as reported	4.1 %	4.1 %	flat

\* The sum of the components for consolidated operating income, as adjusted, may not agree to totals, as presented, due to rounding.

The company recorded operating income of \$928.5 million, or 3.5% of sales, in 2017 compared with operating income of \$858.5 million, or 3.6% of sales, in 2016. Included in operating income for 2017 and 2016 were the previously discussed identifiable intangible asset amortization of \$50.1 million and \$54.9 million, respectively, and restructuring, integration, and other charges of \$91.3 million and \$73.6 million, respectively. Included in operating income for 2017 is an impairment of assets held for sale of \$21.0 million. Excluding these items, operating income, as adjusted, was \$1.1 billion, or 4.1% of sales, in 2017 compared with operating income, as adjusted, of \$987.0 million, or 4.1% of sales, in 2016. Operating margins, as adjusted, were unchanged compared with the year-earlier period,

despite a 70 basis point decrease in gross margins due to the company's ability to efficiently manage operating costs.

Following is an analysis of operating income for the years ended December 31 (in millions):

	2016	2015	% Change
Consolidated operating income, as reported	\$859	\$824	4.1 %
Identifiable intangible asset amortization	55	51	
Restructuring, integration, and other charges	74	69	
Consolidated operating income, as adjusted*	\$987	\$944	4.5 %
Consolidated operating income as a percentage of sales, as reported	3.6 %	3.5 %	10 bps
Consolidated operating income, as adjusted, as a percentage of sales, as reported	4.1 %	4.1 %	flat

\* The sum of the components for consolidated operating income, as adjusted, may not agree to totals, as presented, due to rounding.

The company recorded operating income of \$858.5 million, or 3.6% of sales, in 2016 compared with operating income of \$824.5 million, or 3.5% of sales, in 2015. Included in operating income for 2016 and 2015 were the previously discussed identifiable intangible asset amortization of \$54.9 million and \$51.0 million, respectively, and restructuring, integration, and other charges of \$73.6 million and \$68.8 million, respectively. Excluding these items, operating income, as adjusted, was \$987.0 million, or 4.1% of sales, in 2016 compared with operating income, as adjusted, of \$944.3 million, or 4.1% of sales, in 2015.

#### Loss on Investment

During 2017, the company recorded a loss on investment of \$15.0 million related to a full impairment of a cost method investment.

During 2015, the company recorded a loss on investment of \$3.0 million, partially offset by a gain on sale of investment of \$2.0 million.

#### Loss on Extinguishment of Debt

During 2017, the company recorded a loss on extinguishment of debt of \$59.5 million related to the redemption of the company's 6.875% senior debenture due 2018 and refinance of a portion of the company's 6.00% notes due April 2020, 5.125% notes due March 2021, and 7.50% notes due January 2027.

During 2015, the company recorded a loss on extinguishment of debt of \$2.9 million related to the redemption of \$250.0 million principal amount of its 3.375% notes due November 2015.

#### Interest and Other Financing Expense, Net

Net interest and other financing expense increased 8.7% in 2017 to \$163.8 million, compared with \$150.7 million in 2016, primarily due to higher average debt outstanding.

Net interest and other financing expense increased by 11.3% in 2016 to \$150.7 million, compared with \$135.4 million in 2015, primarily due to higher average debt outstanding and an increase in variable interest rates.

#### Income Taxes

For the year ended December 31, 2017, the company recorded provision for income taxes of \$287.1 million, equivalent to an effective tax rate of 41.4%. The company's provision for income taxes and effective tax rates are impacted by such costs as restructuring, integration, and other charges, identifiable intangible asset amortization, loss on extinguishment of debt, impairment of assets held for sale, loss on investment, and tax law changes. Excluding the

impact of the aforementioned items, the company's effective tax rate for 2017 was 26.4%.

For the years ended December 31, 2016 and 2015, the company reported provision for income taxes of \$190.7 million (an effective tax rate of 26.7%) and \$191.7 million (an effective tax rate of 27.7%), respectively. Excluding restructuring, integration and other charges, identifiable intangible asset amortization, loss on extinguishment of debt, impairment of assets held for sale, and loss on investment, the company's effective tax rates for 2016 and 2015 would have been 27.4% and 27.1%, respectively.

The company's effective tax rate deviates from the statutory U.S. federal income tax rate mainly due to the mix of foreign taxing jurisdictions in which the company operates and where its foreign subsidiaries generate taxable income. In 2017, the effective tax

rate increased significantly primarily due to the change in the U.S. tax law. Specifically, on December 22, 2017, the U.S. federal government enacted comprehensive tax legislation (the “Tax Act”), which significantly revises the U.S. corporate income tax law by, among other things, lowering the U.S. federal corporate income tax rate from 35% to 21%, implementing a territorial tax system, imposing a one-time transition tax on foreign unremitted earnings, and setting limitations on deductibility of certain costs (e.g., interest expense).

The lower U.S. corporate income tax rate is effective January 1, 2018, however the U.S. deferred tax assets and liabilities were adjusted in 2017 when the new tax law was enacted. Additionally, in 2017, as part of the transition to the new territorial tax system, the Tax Act imposes a one-time tax on deemed repatriation of foreign subsidiaries’ earnings. The estimated impact of the Tax Act summarized below is further described in the accompanying Notes to Consolidated Finance Statements (Note 8).

	2017
Transition tax on non-U.S subsidiaries' earnings	\$(196.0)
Re-measurement of U.S. deferred tax assets and liabilities	71.3
Total impact of the Tax Act on the provision for income taxes	\$(124.7)

Due to the complexities involved in accounting for the recently enacted Tax Act, the U.S. Securities and Exchange Commission’s Staff Accounting Bulletin (“SAB”) 118 requires that the company include in its financial statements the reasonable estimate of the impact of the Tax Act on earnings to the extent such reasonable estimate has been determined. Accordingly, the U.S. provision for income tax for 2017 is based on the reasonable estimate guidance provided by SAB 118. The company is continuing to assess the impact from the Tax Act and will record adjustments in 2018.

#### Net Income Attributable to Shareholders

Following is an analysis of net income attributable to shareholders for the years ended December 31 (in millions):

	2017	2016
Net income attributable to shareholders, as reported	\$402	\$523
Identifiable intangible asset amortization*	49	53
Impairment of assets held for sale	21	—
Restructuring, integration, and other charges	91	74
Loss on investment, net	14	—
Loss on extinguishment of debt	60	—
Tax effect of adjustments above	(83 )	(40 )
Impact of the Tax Act	125	—
Net income attributable to shareholders, as adjusted	\$679	\$610

\* Identifiable intangible asset amortization does not include amortization related to the noncontrolling interest

The company recorded net income attributable to shareholders of \$402.0 million for 2017, compared with net income attributable to shareholders of \$522.8 million in the year-earlier period. Net income attributable to shareholders, as adjusted, was \$679.0 million for 2017, compared with \$609.8 million in the year-earlier period.

Following is an analysis of net income attributable to shareholders for the years ended December 31 (in millions):

	2016	2015
Net income attributable to shareholders, as reported	\$523	\$498
Identifiable intangible asset amortization*	53	51
Restructuring, integration, and other charges	74	69
Gain/loss on investment	—	1
Loss on extinguishment of debt	—	3
Tax effect of adjustments above	(40 )	(29 )
Net income attributable to shareholders, as adjusted**	\$610	\$592

\* Identifiable intangible asset amortization does not include amortization related to the noncontrolling interest

\*\* The sum of the components for net income attributable to shareholders, as adjusted, may not agree to totals, as presented, due to rounding.

The company recorded net income attributable to shareholders of \$522.8 million for 2016, compared with net income attributable to shareholders of \$497.7 million in the year-earlier period. Net income attributable to shareholders, as adjusted, was \$609.8 million for 2016, compared with \$592.3 million in the year-earlier period.

#### Liquidity and Capital Resources

At December 31, 2017 and 2016, the company had cash and cash equivalents of \$730.1 million and \$534.3 million, respectively, of which \$465.4 million and \$320.0 million, respectively, were held outside the United States. Liquidity is affected by many factors, some of which are based on normal ongoing operations of the company's business and some of which arise from fluctuations related to global economics and markets. Cash balances are generated and held in many locations throughout the world. It is the company's current intent to permanently reinvest these funds outside the United States and its current plans do not demonstrate a need to repatriate cash to fund its United States operations. If these funds were to be needed for the company's operations in the United States, the company would be required to pay withholding and other taxes related to distributions to repatriate these funds. Additionally, local government regulations may restrict the company's ability to move cash balances to meet cash needs under certain circumstances. The company currently does not expect such regulations and restrictions to impact its ability to make acquisitions or to conduct operations throughout the global organization.

During 2017, the net amount of cash provided by the company's operating activities was \$124.6 million, the net amount of cash used for investing activities was \$188.8 million, and the net amount of cash provided by financing activities was \$256.7 million. The effect of exchange rate changes on cash was an increase of \$3.2 million.

During 2016, the net amount of cash provided by the company's operating activities was \$359.7 million, the net amount of cash used for investing activities was \$241.4 million, and the net amount of cash provided by financing activities was \$162.2 million. The effect of exchange rate changes on cash was a decrease of \$19.2 million.

During 2015, the net amount of cash provided by the company's operating activities was \$660.0 million, the net amount of cash used for investing activities was \$664.0 million, and the net amount of cash used for financing activities was \$89.1 million. The effect of exchange rate changes on cash was a decrease of \$34.1 million.

#### Cash Flows from Operating Activities

The company maintains a significant investment in accounts receivable and inventories. As a percentage of total assets, accounts receivable and inventories were approximately 69.7% and 67.6% at December 31, 2017 and 2016, respectively.



The net amount of cash provided by the company's operating activities during 2017 was \$124.6 million and was primarily due to earnings from operations, adjusted for non-cash items, offset, in part, by an increase in net working capital to support the increase in sales.

The net amount of cash provided by the company's operating activities during 2016 was \$359.7 million and was primarily due to earnings from operations, adjusted for non-cash items, offset, in part, by an increase in net working capital to support the increase in sales.

The net amount of cash provided by the company's operating activities during 2015 was \$660.0 million and was primarily due to earnings from operations, adjusted for non-cash items.

Working capital, as a percentage of sales, which the company defines as accounts receivable, net, plus inventory, net, less accounts

payable, divided by annualized sales, was 17.6%, 16.1%, and 14.8% in 2017, 2016, and 2015, respectively.

#### Cash Flows from Investing Activities

The net amount of cash used for investing activities during 2017 was \$188.8 million, primarily reflecting \$203.9 million for capital expenditures and \$24.4 million of proceeds from the sale of property, plant, and equipment. Included in capital expenditures for 2017 is \$62.5 million related to the company's global ERP initiative.

The net amount of cash used for investing activities during 2016 was \$241.4 million, primarily reflecting \$64.8 million of cash consideration paid, net of cash acquired, for the acquisition of three businesses, \$164.7 million for capital expenditures, and \$12.0 million for the acquisition of an equity method investment. Included in capital expenditures for 2016 is \$57.7 million related to the company's global ERP initiative.

The net amount of cash used for investing activities during 2015 was \$664.0 million, primarily reflecting \$514.7 million of cash consideration paid for acquired businesses, \$154.8 million for capital expenditures, \$3.5 million of proceeds from sale of property, plant, and equipment, and \$2.0 million of proceeds from sale of investment. Included in capital expenditures for 2015 is \$48.8 million related to the company's global ERP initiative.

During 2015, the company completed ten acquisitions, inclusive of a 53.7% acquisition of Data Modul AG. The aggregate consideration paid for these ten acquisitions was \$514.7 million, net of cash acquired, contingent consideration, and other amounts withheld.

#### Cash Flows from Financing Activities

The net amount of cash provided by financing activities during 2017 was \$256.7 million. The uses of cash from financing activities included \$558.9 million of payments for the redemption of notes, \$174.2 million of repurchases of common stock, \$41.3 million of net payments from short-term bank borrowings, and \$23.4 million of payments to acquire additional shares of Data Modul AG. The sources of cash from financing activities included \$986.2 million of net proceeds from note offerings, \$47.8 million of proceeds from long-term bank borrowings, and \$22.2 million of proceeds from the exercise of stock options.

The net amount of cash provided by financing activities during 2016 was \$162.2 million. The uses of cash from financing activities included \$216.4 million of repurchases of common stock and \$2.0 million of other acquisition related payments. The sources of cash from financing activities during 2016 were \$48.7 million of increase in short-term and other borrowings, \$313.0 million of net proceeds from long-term bank borrowings, and \$19.0 million of proceeds from the exercise of stock options and other benefits related to stock-based compensation arrangements.

The net amount of cash used for financing activities during 2015 was \$89.1 million. The uses of cash from financing activities included \$356.4 million of repurchases of common stock, a \$46.6 million decrease in short-term and other borrowings, \$254.3 million of redemption of notes, \$128.0 million of net repayments of long-term borrowings, and \$2.1 million of other acquisition related payments. The sources of cash from financing activities during 2015 were \$688.2 million of net proceeds from a note offering and \$14.9 million of proceeds from the exercise of stock options and other benefits related to stock-based compensation arrangements.

During 2017, the company completed the sale of \$500.0 million principal amount of 3.875% notes due 2028. The net proceeds of the offering of \$494.6 million were used to redeem the company's 6.875% senior debenture due 2018 and refinance a portion of the company's 6.00% notes due April 2020, 5.125% notes due March 2021, and 7.50% notes due January 2027. The company recorded a loss on extinguishment of debt of \$59.5 million for the year ended December 31, 2017.

During 2017, the company completed the sale of \$500.0 million principal amount of 3.25% notes due 2024. The net proceeds of the offering of \$493.8 million are expected to be used to redeem the company's debt obligations and for general corporate purposes.

During 2015, the company completed the sale of \$350.0 million principal amount of 3.50% notes due in 2022 and \$350.0 million principal amount of 4.00% notes due in 2025. The net proceeds of the offering of \$688.2 million were used to refinance the company's 3.375% notes due November 2015 and for general corporate purposes.

During 2015, the company redeemed \$250.0 million principal amount of its 3.375% notes due November 2015. The related loss on the redemption for the year-ended December 31, 2015 aggregated \$2.9 million and was recognized as a loss on extinguishment of debt in the company's consolidated statements of operations.

The company has a revolving credit facility that may be used by the company for general corporate purposes including working capital in the ordinary course of business, letters of credit, repayment, extinguishment or purchase of long-term indebtedness, acquisitions, and as support for the company's commercial paper program, as applicable. In December 2016, the company amended its revolving credit facility and, among other things, increased its borrowing capacity from \$1.5 billion to \$1.8 billion and extended its term to mature in December 2021. Interest on borrowings under the revolving credit facility is calculated using a base rate or a euro currency rate plus a spread (1.18% at December 31, 2017), which is based on the company's credit ratings, for an effective interest rate of 2.61% at December 31, 2017. The facility fee is .20%. There were no outstanding borrowings under the revolving credit facility at December 31, 2017 and 2016. During the years ended December 31, 2017 and 2016, the average daily balance outstanding under the revolving credit facility was \$18.9 million and \$8.8 million, respectively.

The company has a commercial paper program and the maximum aggregate balance of commercial paper may not exceed the borrowing capacity of \$1.2 billion. The company had no outstanding borrowings under this program as of December 31, 2017 and 2016. During the years ended December 31, 2017 and 2016, the average daily balance outstanding under the commercial paper program was \$625.7 million and \$285.9 million, respectively. The commercial paper program had an effective interest rate of 1.78% for the year-ended December 31, 2017.

The company has an asset securitization program collateralized by accounts receivable of certain of its subsidiaries. In September 2016, the company amended its asset securitization program and, among other things, increased its borrowing capacity from \$900.0 million to \$910.0 million and extended its term to mature in September 2019. The asset securitization program is conducted through Arrow Electronics Funding Corporation ("AFC"), a wholly-owned, bankruptcy remote subsidiary. The asset securitization program does not qualify for sale treatment. Accordingly, the accounts receivable and related debt obligation remain on the company's consolidated balance sheets. Interest on borrowings is calculated using a base rate or a commercial paper rate plus a spread (.40% at December 31, 2017), which is based on the company's credit ratings, for an effective interest rate of 1.91% at December 31, 2017. The facility fee is .40%. The company had \$490.0 million and \$460.0 million in outstanding borrowings under the asset securitization program at December 31, 2017 and 2016, respectively. During the years ended December 31, 2017 and 2016, the average daily balance outstanding under the asset securitization program was \$692.4 million and \$661.6 million, respectively.

Both the revolving credit facility and asset securitization program include terms and conditions that limit the incurrence of additional borrowings and require that certain financial ratios be maintained at designated levels. The company was in compliance with all covenants as of December 31, 2017 and is currently not aware of any events that would cause non-compliance with any covenants in the future.

The company has a \$100.0 million uncommitted line of credit. There were no outstanding borrowings under the uncommitted line of credit at December 31, 2017 and 2016. During 2017 and 2016, the average daily balance outstanding under the uncommitted line of credit was \$5.2 million and \$34.3 million, respectively.

In the normal course of business certain of the company's subsidiaries have agreements to sell, without recourse, selected trade receivables to financial institutions. The company does not retain financial or legal interests in these receivables, and accordingly they are accounted for as sales of the related receivables and the receivables are removed from the company's consolidated balance sheets. Financing costs related to these transactions were not material and are included in "Interest and other financing expense, net" in the company's consolidated statements of operations.

The company filed a shelf registration statement with the SEC in September 2015, as amended in June 2017, registering debt securities, preferred stock, common stock, and warrants of Arrow Electronics, Inc. that may be issued by the company from time to time. As set forth in the shelf registration statement, the net proceeds from the sale of the offered securities may be used by the company for general corporate purposes, including repayment of borrowings, working capital, capital expenditures, acquisitions and stock repurchases, or for such other purposes as may be specified in the applicable prospectus supplement.

Management believes that the company's current cash availability, its current borrowing capacity under its revolving credit facility and asset securitization program, its expected ability to generate future operating cash flows, and the company's access to capital markets are sufficient to meet its projected cash flow needs for the foreseeable future. The company continually evaluates its liquidity requirements and would seek to amend its existing borrowing capacity or access the financial markets as deemed necessary.

## Contractual Obligations

Payments due under contractual obligations at December 31, 2017 are as follows (in thousands):

	Within 1 Year	1-3 Years	4-5 Years	After 5 Years	Total
Debt	\$355,588	\$712,803	\$480,188	\$1,738,723	\$3,287,302
Interest on long-term debt	111,861	206,361	162,766	192,838	673,826
Capital leases	1,218	1,331	—	—	2,549
Operating leases	75,058	114,013	65,121	135,079	389,271
Purchase obligations (a)	4,919,481	107,500	1,557	36	5,028,574
Other (b)	36,823	36,453	32,030	118,294	223,600
	\$5,500,029	\$1,178,461	\$741,662	\$2,184,970	\$9,605,122

(a) Amounts represent an estimate of non-cancelable inventory purchase orders and other contractual obligations related to information technology and facilities as of December 31, 2017. Most of the company's inventory purchases are pursuant to authorized distributor agreements, which are typically cancelable by either party at any time or on short notice, usually within a few months.

(b) Includes estimates of contributions required to meet the requirements of the Wyle defined benefit plan. Amounts are subject to change based upon the performance of plan assets, as well as the discount rate used to determine the obligation. Also included are amounts relating to the Tax Act transition tax payable and personnel, facilities, and certain other costs resulting from restructuring and integration activities.

Under the terms of various joint venture agreements, the company is required to pay its pro-rata share of the third party debt of the joint ventures in the event that the joint ventures are unable to meet their obligations. There were no outstanding borrowings under the third party agreements of the joint ventures as of December 31, 2017.

At December 31, 2017, the company had a liability for unrecognized tax positions of \$24.4 million. The timing of the resolution of these uncertain tax positions is dependent on the tax authorities' income tax examination processes. Material changes are not expected, however, it is possible that the amount of unrecognized tax benefits with respect to uncertain tax positions could increase or decrease during 2018. Currently, the company is unable to make a reasonable estimate of when tax cash settlement would occur and how it would impact the effective tax rate.

## Share-Repurchase Programs

The following table shows the company's share-repurchase programs with activity in the years ended December 31, 2015, 2016, and 2017 (in thousands):

Month of Board Approval	Dollar Value Approved for Repurchase	Dollar Value of Shares Repurchased	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program
May 2014	\$ 200,000	\$ 200,000	\$ —
December 2014	200,000	200,000	—
September 2015	400,000	400,000	—
December 2016	400,000	41,079	358,921
Total	\$ 1,200,000	\$ 841,079	\$ 358,921

## Off-Balance Sheet Arrangements

The company has no off-balance sheet financing or unconsolidated special purpose entities.

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## Critical Accounting Policies and Estimates

The company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires the company to make significant estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses and the related disclosure of contingent assets and liabilities. The company evaluates its estimates on an ongoing basis. The company bases its estimates on historical experience and on various other assumptions that are believed reasonable under the circumstances; the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The company believes the following critical accounting policies involve the more significant judgments and estimates used in the preparation of its consolidated financial statements:

### Revenue Recognition

The company recognizes revenue when there is persuasive evidence of an arrangement, delivery has occurred or services are rendered, the sales price is fixed or determinable, and collectability is reasonably assured. Revenue typically is recognized at time of shipment. Sales are recorded net of discounts, rebates, and returns, which historically have not been material.

A portion of the company's business involves shipments directly from its suppliers to its customers. In these transactions, the company is responsible for negotiating price both with the supplier and customer, payment to the supplier, establishing payment terms with the customer, product returns, and has risk of loss if the customer does not make payment. As the principal with the customer, the company recognizes the sale and cost of sale of the product upon receiving notification from the supplier that the product was shipped.

The company has certain business with select customers and suppliers that is accounted for on an agency basis (that is, the company recognizes the fees associated with serving as an agent in sales with no associated cost of sales). Generally, these transactions relate to the sale of supplier service contracts to customers where the company has no future obligation to perform under these contracts or the rendering of logistics services for the delivery of inventory for which the company does not assume the risks and rewards of ownership.

### Accounts Receivable

The company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The allowances for doubtful accounts are determined using a combination of factors, including the length of time the receivables are outstanding, the current business environment, and historical experience.

### Inventories

Inventories are stated at the lower of cost or net realizable value. Write-downs of inventories to market value are based upon contractual provisions governing price protection, stock rotation, and obsolescence, as well as assumptions about future demand and market conditions. If assumptions about future demand change and/or actual market conditions are less favorable than those projected by the company, additional write-downs of inventories may be required. Due to the large number of transactions and the complexity of managing the process around price protections and stock rotations, estimates are made regarding adjustments to the book cost of inventories. Actual amounts could be different from those estimated.



## Investments

The company accounts for available-for-sale investments at fair value, using quoted market prices, and the related holding gains and losses are included in "Accumulated other comprehensive loss" in the shareholders' equity section in the company's consolidated balance sheets. The company assesses its long-term investments on an ongoing basis to determine whether declines in market value below cost are other-than-temporary. When the decline is determined to be other-than-temporary, the cost basis for the individual security is reduced and a loss is realized in the company's consolidated statement of operations in the period in which it occurs. The company makes such determination after considering the length of time and the extent to which the market value of the investment is less than its cost, the financial condition and operating results of the investee, and the company's intent and ability to retain the investment over time to potentially allow for any recovery in market value. In addition, the company assesses the following factors:

- broad economic factors impacting the investee's industry;

publicly available forecasts for sales and earnings growth for the industry and investee; and the cyclical nature of the investee's industry.

The company could incur an impairment charge in future periods if, among other factors, the investee's future earnings differ from currently available forecasts.

#### Income Taxes

Income taxes are accounted for under the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of differences between the tax bases of assets and liabilities and their financial reporting amounts using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The carrying value of the company's deferred tax assets is dependent upon the company's ability to generate sufficient future taxable income in certain tax jurisdictions. Should the company determine that it is more likely than not that some portion or all of its deferred tax assets will not be realized, a valuation allowance to the deferred tax assets would be established in the period such determination was made.

It is also the company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the company's effective tax rate in a given financial statement period may be affected.

On December 22, 2017, the U.S. government enacted the Tax Act, which significantly revises the ongoing U.S. corporate income tax law by lowering the U.S. federal corporate income tax rate from 35% to 21%, implementing a territorial tax system, imposing one-time tax on foreign unremitted earnings and setting limitations on deductibility of certain costs (e.g., interest expense), among other things.

On December, 22, 2017, SAB 118 was issued due to the complexities involved in accounting for the recently enacted Tax Act. SAB 118 requires the company to include in its financial statements a reasonable estimate of the impact of the Tax Act on earnings to the extent such estimate has been determined. Accordingly, the U.S. provision for income tax for 2017 is based on the reasonable estimate guidance provided by SAB 118. The company is continuing to assess the impact from the Tax Act and will record adjustments in 2018. The final impact on the company from the Tax Act's transition tax legislation may differ from the reasonable estimate reasonable estimate due to the complexity of calculating and supporting with primary evidence such U.S. tax attributes as accumulated foreign earnings and profits, foreign tax paid, and other tax components involved in foreign tax credit calculations for prior years back to 1986. Such differences could be material, due to, among other things, changes in interpretations of the Tax Act, future legislative action to address questions that arise because of the Tax Act, changes in accounting standards for income taxes or related interpretations in response to the Tax Act, or any updates or changes to estimates the company has utilized to calculate the transition tax's reasonable estimate.

#### Financial Instruments

The company uses various financial instruments, including derivative instruments, for purposes other than trading. Certain derivative instruments are designated at inception as hedges and measured for effectiveness both at inception and on an ongoing basis. Derivative instruments not designated as hedges are marked-to-market each reporting period with any unrealized gains or losses recognized in earnings.

The company occasionally enters into interest rate swap transactions that convert certain fixed-rate debt to variable-rate debt or variable-rate debt to fixed-rate debt in order to manage its targeted mix of fixed- and floating-rate debt. The company also occasionally enters into forward starting interest rate swaps to fix the rate on an anticipated future long-term debt issuance. The company uses the hypothetical derivative method to assess the effectiveness of its interest rate swaps on a quarterly basis. The effective portion of the change in the fair value of interest rate swaps designated as fair value hedges is recorded as a change to the carrying value of the related hedged debt, and the effective portion of the change in fair value of interest rate swaps designated as cash flow hedges is recorded in the shareholders' equity section in the company's consolidated balance sheets in "Accumulated other comprehensive loss," and is reclassified into earnings when the hedged transaction impacts earnings. The ineffective portion of the interest rate swaps, if any, is recorded in "Interest and other financing expense, net" in the company's consolidated statements of operations.

## Contingencies and Litigation

The company is subject to proceedings, lawsuits, and other claims related to environmental, regulatory, labor, product, tax, and other matters and assesses the likelihood of an adverse judgment or outcome for these matters, as well as the range of potential losses. A determination of the reserves required, if any, is made after careful analysis. The reserves may change in the future due to new developments impacting the probability of a loss, the estimate of such loss, and the probability of recovery of such loss from third parties.

## Stock-Based Compensation

The company records share-based payment awards exchanged for employee services at fair value on the date of grant and expenses the awards in the consolidated statements of operations over the requisite employee service period. Stock-based compensation expense includes an estimate for forfeitures. Stock-based compensation expense related to awards with a market or performance condition, which cliff vest, are recognized over the vesting period on a straight-line basis. Stock-based compensation awards with service conditions only are also recognized on a straight-line basis. The fair value of stock options is determined using the Black-Scholes valuation model and the assumptions shown in Note 12 of the Notes to the Consolidated Financial Statements. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates. The company's estimates may be impacted by certain variables including, but not limited to, stock price volatility, employee stock option exercise behaviors, additional stock option grants, estimates of forfeitures, the company's performance, and related tax impacts.

## Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The company tests goodwill for impairment annually as of the first day of the fourth quarter and/or when an event occurs or circumstances change such that it is more likely than not that an impairment may exist. Examples of such events and circumstances that the company would consider include the following:

- macroeconomic conditions such as deterioration in general economic conditions, limitations on accessing capital, fluctuations in foreign exchange rates, or other developments in equity and credit markets;
- industry and market considerations such as a deterioration in the environment in which the company operates, an increased competitive environment, a decline in market-dependent multiples or metrics (considered in both absolute terms and relative to peers), a change in the market for the company's products or services, or a regulatory or political development;
- cost factors such as increases in raw materials, labor, or other costs that have a negative effect on earnings and cash flows;
- overall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods;
- other relevant entity-specific events such as changes in management, key personnel, strategy, or customers;
- contemplation of bankruptcy; or litigation;
- events affecting a reporting unit such as a change in the composition or carrying amount of its net assets, a more-likely-than-not expectation of selling or disposing all, or a portion, of a reporting unit, the testing for recoverability of a significant asset group within a reporting unit, or recognition of a goodwill impairment loss in the financial statements of a subsidiary that is a component of a reporting unit; and
- a sustained decrease in share price (considered in both absolute terms and relative to peers).

Goodwill is tested at a level of reporting referred to as "the reporting unit." The company's reporting units are defined as each of the three regional businesses within the global components business segment, which are the Americas, EMEA, and Asia/Pacific and each of the two regional businesses within the global ECS business segment, which are

North America and EMEA.

An entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (that is, a likelihood of more than 50%) that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then the quantitative goodwill impairment test is unnecessary. The company has elected not to perform the qualitative assessment and performed the quantitative goodwill impairment test. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value of a reporting unit with its carrying amount, including goodwill. If the carrying amount of the reporting unit is less than its fair value, no impairment exists. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit.

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The company estimates the fair value of a reporting unit using the income approach. For the purposes of the income approach, fair value is determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate. The assumptions included in the income approach include forecasted revenues, gross profit margins, operating income margins, working capital cash flow, forecasted capital expenditures, perpetual growth rates, and long-term discount rates, among others, all of which require significant judgments by management. Actual results may differ from those assumed in the company's forecasts. The company also reconciles its discounted cash flow analysis to its current market capitalization allowing for a reasonable control premium. As of the first day of the fourth quarters of 2017, 2016, and 2015, the company's annual impairment testing did not indicate impairment at any of the company's reporting units.

A decline in general economic conditions or global equity valuations could impact the judgments and assumptions about the fair value of the company's businesses, and the company could be required to record an impairment charge in the future, which could impact the company's consolidated balance sheet, as well as the company's consolidated statement of operations. If the company was required to recognize an impairment charge in the future, the charge would not impact the company's consolidated cash flows, current liquidity, capital resources, and covenants under its existing revolving credit facility, asset securitization program, and other outstanding borrowings.

As of December 31, 2017, the company has \$2.5 billion of goodwill, of which approximately \$1.1 billion, \$87.7 million and \$61.2 million was allocated to the Americas, EMEA, and Asia/Pacific reporting units within the global components business segment, respectively and \$795.8 million and \$409.4 million was allocated to the North America and EMEA reporting units within the global ECS business segment, respectively. As of the date of the company's latest impairment test, the fair value of the Americas, EMEA, and Asia/Pacific reporting units within the global components business segment and the fair value of the North America and EMEA reporting units within the global ECS business segment exceeded their carrying values by approximately 11%, 126%, 25%, 538%, and 159%, respectively.

#### Impairment of Long-Lived Assets

The company reviews long-lived assets, including property, plant, and equipment and identifiable intangible assets, for impairment whenever changes in circumstances or events may indicate that the carrying amounts are not recoverable. The company also tests indefinite-lived intangible assets, consisting of acquired trade names, for impairment at least annually as of the first day of the fourth quarter. If the fair value is less than the carrying amount of the asset, a loss is recognized for the difference.

Factors which may cause an impairment of long-lived assets include significant changes in the manner of use of these assets, negative industry or market trends, a significant underperformance relative to historical or projected future operating results, or a likely sale or disposal of the asset before the end of its estimated useful life. If any of these factors exist, the company is required to test the long-lived asset for recoverability and may be required to recognize an impairment charge for all or a portion of the asset's carrying value.

As of the first day of the fourth quarters of 2017, 2016, and 2015, the company's review of long-lived assets did not indicate impairment.

#### Impact of Recently Issued Accounting Standards

In August 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815) ("ASU No. 2017-12"). ASU No. 2017-12 simplifies certain aspects of hedge accounting and results in a more accurate portrayal of the economics of an entity's risk management activities in its financial statements. ASU No. 2017-12 is effective for the company in the first quarter of 2019, with early adoption permitted, and is to be applied on a modified retrospective basis. The company is currently evaluating the potential

effects of adopting the provisions of ASU No. 2017-12.

In May 2017, the FASB issued Accounting Standards Update No. 2017-09, Compensation - Stock Compensation (Topic 718)("ASU No. 2017-09"). ASU No. 2017-09 clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. Effective April 2, 2017, the company adopted the provisions of ASU No. 2017-09 on a prospective basis. The adoption of the provisions of ASU No. 2017-09 did not materially impact the company's consolidated financial position or results of operations.

In March 2017, the FASB issued Accounting Standards Update No. 2017-07, Compensation - Retirement Benefits (Topic 715) ("ASU No. 2017-07"). ASU No. 2017-07 requires that the service cost component of pension expense be included in the same line item as other compensation costs arising from services rendered by employees, with the other components of pension expense being classified outside of a subtotal of income from operations. ASU No. 2017-07 is effective for the company in the first quarter

of 2018, and is to be applied retrospectively for the presentation requirements and prospectively for the capitalization of the service cost component requirements. The adoption of the provisions of ASU No. 2017-07 is not expected to have a material impact on the company's consolidated financial position or results of operations.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, Intangibles - Goodwill and Other (Topic 350) ("ASU No. 2017-04"). ASU No. 2017-04 eliminates step 2 from the annual goodwill impairment test. Effective January 1, 2017, the company adopted the provisions of ASU No. 2017-04 on a prospective basis. The adoption of the provisions of ASU No. 2017-04 would not materially impact the company's consolidated financial position or results of operations unless step 1 of the annual goodwill impairment test fails.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, Income Taxes - Intra-Entity Transfers of Assets Other Than Inventory (Topic 740) ("ASU No. 2016-16"). ASU No. 2016-16 clarifies the accounting for the current and deferred income taxes for an intra-entity transfer of an asset other than inventory. Effective April 2, 2017, the company adopted the provisions of ASU No. 2016-16 on a modified retrospective basis. The adoption of the provisions of ASU No. 2016-16 did not materially impact the company's consolidated financial position or results of operations.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230) ("ASU No. 2016-15"). ASU No. 2016-15 addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows. Effective January 1, 2017, the company adopted the provisions of ASU No. 2016-15 on a retrospective basis. The adoption of the provisions of ASU No. 2016-15 did not materially impact the company's consolidated financial position or results of operations.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, Financial Instruments - Credit Losses (Topic 326) ("ASU No. 2016-13"). ASU No. 2016-13 revises the methodology for measuring credit losses on financial instruments and the timing of when such losses are recorded. ASU No. 2016-13 is effective for the company in the first quarter of 2020, with early adoption permitted, and is to be applied using a modified retrospective approach. The company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-13.

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, Stock Compensation - Improvements to Employee Share-Based Payment Accounting (Topic 718) ("ASU No. 2016-09"). ASU No. 2016-09 revises the accounting treatment for excess tax benefits, minimum statutory tax withholding requirements, and forfeitures related to share-based awards. Effective January 1, 2017, the company adopted the recognition of excess tax benefits and tax deficiencies on a prospective basis and reclassified excess tax benefits in the consolidated statements of cash flows on a retrospective basis. The company elected to continue to estimate forfeitures expected to occur to determine the amount of compensation cost to be recognized in each period. The adoption of the provisions of ASU No. 2016-09 did not materially impact the company's consolidated financial position or results of operations.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) ("ASU No. 2016-02"). ASU

No. 2016-02 requires the entity to recognize the assets and liabilities for the rights and obligations created by leased assets. Leases will be classified as either finance or operating, with classification affecting expense recognition in the income statement. ASU No. 2016-02 is effective for the company in the first quarter of 2019, with early adoption permitted, and is to be applied using a modified retrospective approach. While the company continues to evaluate the effects of adopting the provisions of ASU No. 2016-02, the company expects most existing operating lease commitments will be recognized as operating lease liabilities and right-of-use assets upon adoption.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01, Financial Instruments - Recognition and Measurement of Financial Assets and Financial Liabilities (Topic 825) ("ASU No. 2016-01"). ASU No. 2016-01 revises the classification and measurement of investments in certain equity investments and the presentation of certain



fair value changes for certain financial liabilities measured at fair value. ASU No. 2016-01 requires the change in fair value of many equity investments to be recognized in net income. ASU No. 2016-01 is effective for the company in the first quarter of 2018 and is to be applied prospectively. The company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-01.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU No. 2014-09"). ASU No. 2014-09 supersedes all existing revenue recognition guidance. Under ASU No. 2014-09, 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. ASU No. 2014-09 is effective for the company in the first quarter of 2018. ASU No. 2014-09 allows for either full retrospective or modified retrospective adoption. In March, April, May, and December 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers: Principal versus Agent Considerations (Reporting Revenue Gross versus Net) ("ASU No. 2016-08"); ASU No. 2016-10, Revenue from Contracts

with Customers: Identifying Performance Obligations and Licensing ("ASU No. 2016-10"); ASU No. 2016-12, Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients ("ASU No. 2016-12"); and ASU No. 2016-19, Technical Corrections and Improvements ("ASU No. 2016-19"), respectively. ASU No. 2016-08, ASU No. 2016-10, ASU No. 2016-12, and ASU No. 2016-19 provide supplemental adoption guidance and clarification to ASU No. 2014-09, and must be adopted concurrently with the adoption of ASU No. 2014-09.

In 2014, the company established an implementation team ("team") and engaged external advisers to develop a multi-phase plan to assess the company's business and contracts, as well as any changes to processes or systems to adopt the requirements of the new standard. The team has updated the assessment for new ASU updates and for newly acquired businesses. The company will adopt the provisions of ASU No. 2014-09 and related updates as of January 1, 2018 on a full retrospective basis. The company expects revenue recognition for its components business contracts to remain unchanged. However, the guidance is expected to change some net versus gross classifications on certain ECS business contracts, specifically software renewals, software bundles, antivirus software and services, and fixed-term software licenses. However, the impacts to consolidated sales and net income are not expected to be material. The company continues to identify the appropriate changes to its business processes, systems, and controls to support revenue recognition and disclosure under the new guidance.

#### Information Relating to Forward-Looking Statements

This report includes forward-looking statements that are subject to numerous assumptions, risks, and uncertainties, which could cause actual results or facts to differ materially from such statements for a variety of reasons, including, but not limited to: industry conditions, the company's implementation of its new enterprise resource planning system, changes in product supply, pricing and customer demand, competition, other vagaries in the global components and global ECS markets, changes in relationships with key suppliers, increased profit margin pressure, the effects of additional actions taken to become more efficient or lower costs, risks related to the integration of acquired businesses, changes in legal and regulatory matters, and the company's ability to generate additional cash flow. Forward-looking statements are those statements which are not statements of historical fact. These forward-looking statements can be identified by forward-looking words such as "expects," "anticipates," "intends," "plans," "may," "will," "believes," "seeks," "estimates," and similar expressions. Shareholders and other readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. The company undertakes no obligation to update publicly or revise any of the forward-looking statements.

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

The company is exposed to market risk from changes in foreign currency exchange rates and interest rates.

Foreign Currency Exchange Rate Risk

The company, as a large global organization, faces exposure to adverse movements in foreign currency exchange rates. These exposures may change over time as business practices evolve and could materially impact the company's financial results in the future. The company's primary exposure relates to transactions in which the currency collected from customers is different from the currency utilized to purchase the product sold in Europe, the Asia Pacific region, Canada, and Latin America. The company's policy is to hedge substantially all such currency exposures for which natural hedges do not exist. Natural hedges exist when purchases and sales within a specific country are both denominated in the same currency and, therefore, no exposure exists to hedge with foreign exchange forward, option, or swap contracts (collectively, the "foreign exchange contracts"). In many regions in Asia, for example, sales and purchases are primarily denominated in U.S. dollars, resulting in a "natural hedge." Natural hedges exist in most countries in which the company operates, although the percentage of natural offsets, as compared with offsets that need to be hedged by foreign exchange contracts, will vary from country to country. The company does not enter into foreign exchange contracts for trading purposes. The risk of loss on a foreign exchange contract is the risk of nonperformance by the counterparties, which the company minimizes by limiting its counterparties to major financial institutions. The fair values of the foreign exchange contracts, which are nominal, are estimated using market quotes. The notional amount of the foreign exchange contracts at December 31, 2017 and 2016 was \$504.1 million and \$460.2 million, respectively.

The translation of the financial statements of the non-United States operations is impacted by fluctuations in foreign currency exchange rates. The change in consolidated sales and operating income was impacted by the translation of the company's international financial statements into U.S. dollars. This resulted in increased sales and operating income of \$140.6 million and \$8.1 million, respectively, for 2017, compared with the year-earlier period, based on 2016 sales and operating income at the average rate for 2017. Sales and operating income would decrease by approximately \$764.2 million and \$40.5 million, respectively, if average foreign exchange rates had declined by 10% against the U.S. dollar in 2017. These amounts were determined by considering the impact of a hypothetical foreign exchange rate on the sales and operating income of the company's international operations.

Interest Rate Risk

The company's interest expense, in part, is sensitive to the general level of interest rates in North America, Europe, and the Asia Pacific region. The company historically has managed its exposure to interest rate risk through the proportion of fixed-rate and floating-rate debt in its total debt portfolio. Additionally, the company utilizes interest rate swaps in order to manage its targeted mix of fixed- and floating-rate debt.

At December 31, 2017, approximately 82% of the company's debt was subject to fixed rates and 18% of its debt was subject to floating rates. A one percentage point change in average interest rates would cause net interest and other financing expense in 2017 to increase by \$13.4 million. This was determined by considering the impact of a hypothetical interest rate on the company's average floating rate on investments and average outstanding variable debt. This analysis does not consider the effect of the level of overall economic activity that could exist. In the event of a change in the level of economic activity, which may adversely impact interest rates, the company could likely take actions to further mitigate any potential negative exposure to the change. However, due to the uncertainty of the specific actions that might be taken and their possible effects, the sensitivity analysis assumes no changes in the company's financial structure.



Item 8. Financial Statements and Supplementary Data.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Arrow Electronics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Arrow Electronics, Inc. (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income, equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the “financial statements”). In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, 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) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2017, 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 6, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 1975.  
Denver, Colorado  
February 6, 2018



ARROW ELECTRONICS, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands except per share data)

	Years Ended December 31,		
	2017	2016	2015
Sales	\$26,812,508	\$23,825,261	\$23,282,020
Cost of sales	23,455,169	20,681,062	20,246,770
Gross profit	3,357,339	3,144,199	3,035,250
Operating expenses:			
Selling, general, and administrative expenses	2,162,996	2,052,863	1,986,249
Depreciation and amortization	153,599	159,195	155,754
Impairment of assets held for sale	21,000	—	—
Restructuring, integration, and other charges	91,294	73,602	68,765
	2,428,889	2,285,660	2,210,768
Operating income	928,450	858,539	824,482
Equity in earnings of affiliated companies	3,424	7,573	7,037
Loss on investment, net	14,231	—	992
Loss on extinguishment of debt	59,545	—	2,943
Interest and other financing expense, net	163,810	150,715	135,401
Income before income taxes	694,288	715,397	692,183
Provision for income taxes	287,126	190,674	191,697
Consolidated net income	407,162	524,723	500,486
Noncontrolling interests	5,200	1,973	2,760
Net income attributable to shareholders	\$401,962	\$522,750	\$497,726
Net income per share:			
Basic	\$4.53	\$5.75	\$5.26
Diluted	\$4.48	\$5.68	\$5.20
Weighted-average shares outstanding:			
Basic	88,681	90,960	94,608
Diluted	89,766	92,033	95,686

See accompanying notes.

ARROW ELECTRONICS, INC.  
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME  
 (In thousands)

	Years Ended December 31,		
	2017	2016	2015
Consolidated net income	\$407,162	\$524,723	\$500,486
Other comprehensive income:			
Foreign currency translation adjustment and other	248,510	(109,187 )	(223,268 )
Unrealized gain (loss) on investment securities, net	8,852	(2,439 )	814
Unrealized gain (loss) on interest rate swaps designated as cash flow hedges, net	(2,359 )	373	871
Employee benefit plan items, net	8,853	10,148	2,947
Other comprehensive income (loss)	263,856	(101,105 )	(218,636 )
Comprehensive income	671,018	423,618	281,850
Less: Comprehensive income attributable to noncontrolling interests	10,207	16	4,213
Comprehensive income attributable to shareholders	\$660,811	\$423,602	\$277,637

See accompanying notes.



ARROW ELECTRONICS, INC.  
CONSOLIDATED BALANCE SHEETS

(In thousands except par value)

	December 31,	
	2017	2016
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$730,083	\$534,320
Accounts receivable, net	8,171,092	6,746,687
Inventories	3,302,518	2,855,645
Other current assets	214,066	180,069
Total current assets	12,417,759	10,316,721
Property, plant, and equipment, at cost:		
Land	12,866	23,456
Buildings and improvements	160,664	175,141
Machinery and equipment	1,330,730	1,297,657
	1,504,260	1,496,254
Less: Accumulated depreciation and amortization	(665,785	) (739,955 )
Property, plant, and equipment, net	838,475	756,299
Investments in affiliated companies	88,347	88,401
Intangible assets, net	286,215	336,882
Goodwill	2,470,047	2,392,220
Other assets	361,966	315,843
Total assets	\$16,462,809	\$14,206,366
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Accounts payable	\$6,756,830	\$5,774,151
Accrued expenses	842,933	821,244
Short-term borrowings, including current portion of long-term debt	356,806	93,827
Total current liabilities	7,956,569	6,689,222
Long-term debt	2,933,045	2,696,334
Other liabilities	572,971	355,190
Commitments and contingencies (Notes 14 and 15)		
Equity:		
Shareholders' equity:		
Common stock, par value \$1:		
Authorized - 160,000 shares in both 2017 and 2016		
Issued - 125,424 shares in both 2017 and 2016	125,424	125,424
Capital in excess of par value	1,114,167	1,112,114
Treasury stock (37,733 and 36,511 shares in 2017 and 2016, respectively), at cost	(1,762,239	) (1,637,476 )
Retained earnings	5,599,192	5,197,230
Accumulated other comprehensive loss	(125,005	) (383,854 )
Total shareholders' equity	4,951,539	4,413,438
Noncontrolling interests	48,685	52,182
Total equity	5,000,224	4,465,620
Total liabilities and equity	\$16,462,809	\$14,206,366

See accompanying notes.



ARROW ELECTRONICS, INC.  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Cash flows from operating activities:			
Consolidated net income	\$407,162	\$524,723	\$500,486
Adjustments to reconcile consolidated net income to net cash provided by operations:			
Depreciation and amortization	153,599	159,195	155,754
Amortization of stock-based compensation	39,122	39,825	47,274
Equity in earnings of affiliated companies	(3,424 )	(7,573 )	(7,037 )
Loss on extinguishment of debt	59,545	—	2,943
Deferred income taxes	38,412	28,130	5,833
Loss on investment, net	14,231	—	992
Impairment of assets held for sale	21,000	—	—
Impairment of property, plant, and equipment	4,761	—	—
Other	5,704	5,972	4,951
Change in assets and liabilities, net of effects of acquired businesses:			
Accounts receivable	(1,122,598 )	(636,944 )	(68,990 )
Inventories	(379,835 )	(403,980 )	(42,790 )
Accounts payable	816,602	582,165	33,398
Accrued expenses	(3,838 )	47,020	56,139
Other assets and liabilities	74,114	21,139	(28,945 )
Net cash provided by operating activities	124,557	359,672	660,008
Cash flows from investing activities:			
Cash consideration paid for acquired businesses	(3,628 )	(64,751 )	(514,731 )
Acquisition of property, plant, and equipment	(203,949 )	(164,695 )	(154,800 )
Proceeds from sale of property, plant, and equipment	24,433	—	3,496
Proceeds from sale of investment	—	—	2,008
Other	(5,614 )	(12,000 )	—
Net cash used for investing activities	(188,758 )	(241,446 )	(664,027 )
Cash flows from financing activities:			
Change in short-term and other borrowings	(41,316 )	48,684	(46,645 )
Proceeds from (repayment of) long-term bank borrowings, net	47,760	313,000	(128,000 )
Proceeds from note offering, net	986,203	—	688,162
Redemption of notes	(558,887 )	—	(254,313 )
Proceeds from exercise of stock options	22,195	18,967	14,900
Repurchases of common stock	(174,239 )	(216,446 )	(356,434 )
Purchase of shares from noncontrolling interest	(23,350 )	—	(4,675 )
Other	(1,620 )	(2,007 )	(2,111 )
Net cash provided by (used for) financing activities	256,746	162,198	(89,116 )
Effect of exchange rate changes on cash	3,218	(19,194 )	(34,130 )
Net increase (decrease) in cash and cash equivalents	195,763	261,230	(127,265 )
Cash and cash equivalents at beginning of year	534,320	273,090	400,355
Cash and cash equivalents at end of year	\$730,083	\$534,320	\$273,090

See accompanying notes.



ARROW ELECTRONICS, INC.  
CONSOLIDATED STATEMENTS OF EQUITY

(In thousands)

	Common Stock at Par Value	Capital in Excess of Par Value	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total
Balance at December 31, 2014	\$125,424	\$1,086,082	\$(1,169,673)	\$4,176,754	\$(64,617)	\$4,941	\$4,158,911
Consolidated net income	—	—	—	497,726	—	2,760	500,486
Other comprehensive income (loss)	—	—	—	—	(220,089)	1,453	(218,636)
Amortization of stock-based compensation	—	47,274	—	—	—	—	47,274
Shares issued for stock-based compensation awards	—	(31,138)	46,038	—	—	—	14,900
Tax benefits related to stock-based compensation awards	—	5,795	—	—	—	—	5,795
Repurchases of common stock	—	—	(356,434)	—	—	—	(356,434)
Acquisition of non-controlling interest	—	—	—	—	—	47,451	47,451
Purchase of subsidiary shares from noncontrolling interest	—	(699)	—	—	—	(4,019)	(4,718)
Distributions	—	—	—	—	—	(218)	(218)
Balance at December 31, 2015	125,424	1,107,314	(1,480,069)	4,674,480	(284,706)	52,368	4,194,811
Consolidated net income	—	—	—	522,750	—	1,973	524,723
Other comprehensive loss	—	—	—	—	(99,148)	(1,957)	(101,105)
Amortization of stock-based compensation	—	39,825	—	—	—	—	39,825
Shares issued for stock-based compensation awards	—	(40,072)	59,039	—	—	—	18,967
Tax benefits related to stock-based compensation awards	—	5,047	—	—	—	—	5,047
Repurchases of common stock	—	—	(216,446)	—	—	—	(216,446)
Distributions	—	—	—	—	—	(202)	(202)
Balance at December 31, 2016	125,424	1,112,114	(1,637,476)	5,197,230	(383,854)	52,182	4,465,620
Consolidated net income	—	—	—	401,962	—	5,200	407,162
	—	—	—	—	258,849	5,007	263,856

Other comprehensive income							
Amortization of stock-based compensation	—	39,122	—	—	—	—	39,122
Shares issued for stock-based compensation awards	—	(27,281	) 49,476	—	—	—	22,195
Purchase of subsidiary shares from non-controlling interest	—	(9,788	) —	—	—	(13,562	) (23,350
Repurchases of common stock	—	—	(174,239	) —	—	—	(174,239
Distributions	—	—	—	—	—	(142	) (142
Balance at December 31, 2017	\$ 125,424	\$ 1,114,167	\$ (1,762,239)	\$ 5,599,192	\$ (125,005	) \$ 48,685	\$ 5,000,224

See accompanying notes.

ARROW ELECTRONICS, INC.  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
(Dollars in thousands except per share data)

1. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the company and its majority-owned subsidiaries. All significant intercompany transactions are eliminated.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires the company to make significant estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash equivalents consist of highly liquid investments, which are readily convertible into cash, with original maturities of three months or less.

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost approximates the first-in, first-out method. Substantially all inventories represent finished goods held for sale.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost. Depreciation is computed on the straight-line method over the estimated useful lives of the assets. The estimated useful lives for depreciation of buildings is generally 20 to 30 years, and the estimated useful lives of machinery and equipment is generally three to ten years. Leasehold improvements are amortized over the shorter of the term of the related lease or the life of the improvement. Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. If the carrying value of the asset can not be recovered from estimated future cash flows, undiscounted and without interest, the fair value of the asset is calculated using the present value of estimated net future cash flows. If the fair value is less than the carrying amount of the asset, a loss is recognized for the difference.

Software Development Costs

The company capitalizes certain internal and external costs incurred to acquire or create internal-use software. Capitalized software costs are amortized on a straight-line basis over the estimated useful life of the software, which is generally three to twelve years. At December 31, 2017 and 2016, the company had unamortized software development costs of \$535,203 and \$477,670, respectively, which are included in "Machinery and equipment" in the company's consolidated balance sheets. During 2016, the company changed the useful life on its global ERP software from ten to twelve years. The impact of the change was not material.

Identifiable Intangible Assets

Amortization of definite-lived intangible assets is computed on the straight-line method over the estimated useful lives of the assets, while indefinite-lived intangible assets are not amortized. Identifiable intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. The company also tests indefinite-lived intangible assets, consisting of acquired trade names, for impairment at least annually as of the first day of the fourth quarter. If the fair value is less than the carrying amount of the asset, a loss is recognized for the difference.

#### Investments

Investments are accounted for using the equity method if the investment provides the company the ability to exercise significant influence, but not control, over an investee. Significant influence is generally deemed to exist if the company has an ownership interest in the voting stock of the investee between 20% and 50%, although other factors, such as representation on the investee's



ARROW ELECTRONICS, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

Board of Directors, are considered in determining whether the equity method is appropriate. The company records its investments in equity method investees meeting these characteristics as "Investments in affiliated companies" in the company's consolidated balance sheets.

All other equity investments, which consist of investments for which the company does not possess the ability to exercise significant influence, are accounted for under the cost method or as available-for-sale, and are included in "Other assets" in the company's consolidated balance sheets. Under the cost method of accounting, investments are carried at cost and are adjusted only for other-than-temporary declines in realizable value and additional investments. During the year-ended December, 31, 2017, the company recorded a net loss on investment of \$14,231. The company accounts for available-for-sale investments at fair value, using quoted market prices, and the related holding gains and losses are included in "Accumulated other comprehensive income (loss)" in the shareholders' equity section in the company's consolidated balance sheets. The company assesses its long-term investments on an ongoing basis to determine whether declines in market value below cost are other-than-temporary. When the decline is determined to be other-than-temporary, the cost basis for the individual security is reduced and a loss is realized in the company's consolidated statement of operations in the period in which it occurs. The company makes such determination after considering the length of time and the extent to which the market value of the investment is less than its cost, the financial condition and operating results of the investee, and the company's intent and ability to retain the investment over time to potentially allow for any recovery in market value. In addition, the company assesses the following factors:

- broad economic factors impacting the investee's industry;
- publicly available forecasts for sales and earnings growth for the industry and investee; and
- the cyclical nature of the investee's industry.

The company could incur an impairment charge in future periods if, among other factors, the investee's future earnings differ from currently available forecasts.

#### Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The company tests goodwill for impairment annually as of the first day of the fourth quarter and/or when an event occurs or circumstances change such that it is more likely than not that an impairment may exist. Examples of such events and circumstances that the company would consider include the following:

- macroeconomic conditions such as deterioration in general economic conditions, limitations on accessing capital, fluctuations in foreign exchange rates, or other developments in equity and credit markets;
- industry and market considerations such as a deterioration in the environment in which the company operates, an increased competitive environment, a decline in market-dependent multiples or metrics (considered in both absolute terms and relative to peers), a change in the market for the company's products or services, or a regulatory or political development;
- cost factors such as increases in raw materials, labor, or other costs that have a negative effect on earnings and cash flows;
- overall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods;
- other relevant entity-specific events such as changes in management, key personnel, strategy, or customers;
- contemplation of bankruptcy; or litigation;
-

events affecting a reporting unit such as a change in the composition or carrying amount of its net assets, a more-likely-than-not expectation of selling or disposing all, or a portion, of a reporting unit, the testing for recoverability of a significant asset group within a reporting unit, or recognition of a goodwill impairment loss in the financial statements of a subsidiary that is a component of a reporting unit; and

- sustained decrease in share price (considered in both absolute terms and relative to peers).

Goodwill is tested at a level of reporting referred to as "the reporting unit." The company's reporting units are defined as each of the three regional businesses within the global components business segment, which are the Americas; Europe, the Middle East, and Africa ("EMEA"); and Asia/Pacific and each of the two regional businesses within the global ECS business segment, which are North America and EMEA.

An entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (that is, a likelihood of more than 50%) that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, an entity determines it is not more likely than

ARROW ELECTRONICS, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

not that the fair value of a reporting unit is less than its carrying amount, then the quantitative goodwill impairment test is unnecessary. The company has elected not to perform the qualitative assessment and performed the quantitative goodwill impairment test. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value of a reporting unit with its carrying amount, including goodwill. If the carrying amount of the reporting unit is less than its fair value, no impairment exists. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit.

The company estimates the fair value of a reporting unit using the income approach. For the purposes of the income approach, fair value is determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate. The assumptions included in the income approach include forecasted revenues, gross profit margins, operating income margins, working capital cash flow, forecasted capital expenditures, perpetual growth rates, and long-term discount rates, among others, all of which require significant judgments by management. Actual results may differ from those assumed in the company's forecasts. The company also reconciles its discounted cash flow analysis to its current market capitalization allowing for a reasonable control premium. As of the first day of the fourth quarters of 2017, 2016, and 2015, the company's annual impairment testing did not indicate impairment at any of the company's reporting units.

A decline in general economic conditions or global equity valuations could impact the judgments and assumptions about the fair value of the company's businesses, and the company could be required to record an impairment charge in the future, which could impact the company's consolidated balance sheet, as well as the company's consolidated statement of operations. If the company was required to recognize an impairment charge in the future, the charge would not impact the company's consolidated cash flows, current liquidity, capital resources, and covenants under its existing revolving credit facility, asset securitization program, and other outstanding borrowings.

As of December 31, 2017, the company has \$2.5 billion of goodwill, of which approximately \$1.1 billion, \$87.7 million and \$61.2 million was allocated to the Americas, EMEA, and Asia/Pacific reporting units within the global components business segment, respectively and \$795.8 million and \$409.4 million was allocated to the North America and EMEA reporting units within the global ECS business segment, respectively. As of the date of the company's latest impairment test, the fair value of the Americas, EMEA, and Asia/Pacific reporting units within the global components business segment and the fair value of the North America and EMEA reporting units within the global ECS business segment exceeded their carrying values by approximately 11%, 126%, 25%, 538%, and 159%, respectively.

#### Foreign Currency Translation and Remeasurement

The assets and liabilities of international operations are translated at the exchange rates in effect at the balance sheet date. Revenue and expense accounts are translated at the monthly average exchange rates. Adjustments arising from the translation of the foreign currency financial statements of the company's international operations are reported as a component of "Accumulated other comprehensive loss" in the company's consolidated balance sheets.

For foreign currency remeasurement from each local currency into the appropriate functional currency, monetary assets and liabilities are remeasured to functional currencies using current exchange rates in effect at the balance sheet date. Gains or losses from these remeasurements were not significant and have been included in the company's consolidated statements of operations. Non-monetary assets and liabilities are recorded at historical exchange rates.

#### Income Taxes

Income taxes are accounted for under the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of differences between the tax bases of assets and liabilities and their financial reporting amounts using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The carrying value of the company's deferred tax assets is dependent upon the company's ability to generate sufficient future taxable income in certain tax jurisdictions. Should the company determine that it is more likely than not that some portion or all of its deferred tax assets will not be realized, a valuation allowance to the deferred tax assets would be established in the period such determination was made.

ARROW ELECTRONICS, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

It is also the company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the company's effective tax rate in a given financial statement period may be affected.

#### Net Income Per Share

Basic net income per share is computed by dividing net income attributable to shareholders by the weighted-average number of common shares outstanding for the period. Diluted net income per share reflects the potential dilution that would occur if securities or other contracts to issue common stock were exercised or converted into common stock.

#### Comprehensive Income

Comprehensive income consists of consolidated net income, foreign currency translation adjustment, unrealized gains or losses on post-retirement benefit plans, and unrealized gains or losses on investment securities and interest rate swaps designated as cash flow hedges. Unrealized gains or losses on investment securities and interest rate swaps are net of any reclassification adjustments for realized gains or losses included in consolidated net income. Foreign currency translation adjustments included in comprehensive income were not tax effected as investments in international affiliates are deemed to be permanent. All other comprehensive income items are net of related income taxes.

#### Stock-Based Compensation

The company records share-based payment awards exchanged for employee services at fair value on the date of grant and expenses the awards in the consolidated statements of operations over the requisite employee service period. Stock-based compensation expense includes an estimate for forfeitures. Stock-based compensation expense related to awards with a market or performance condition which cliff vest, are recognized over the vesting period on a straight line basis. Stock-based compensation awards with service conditions only are also recognized on a straight-line basis.

#### Segment Reporting

Operating segments are defined as components of an enterprise for which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The company's operations are classified into two reportable business segments: global components and global ECS.

#### Revenue Recognition

The company recognizes revenue when there is persuasive evidence of an arrangement, delivery has occurred or services are rendered, the sales price is fixed or determinable, and collectibility is reasonably assured. Revenue typically is recognized at time of shipment. Sales are recorded net of discounts, rebates, tax, and returns, which historically have not been material.

A portion of the company's business involves shipments directly from its suppliers to its customers. In these transactions, the company is responsible for negotiating price both with the supplier and customer, payment to the supplier, establishing payment terms with the customer, product returns, and has risk of loss if the customer does not

make payment. As the principal with the customer, the company recognizes the sale and cost of sale of the product upon receiving notification from the supplier that the product was shipped.

The company has certain business with select customers and suppliers that is accounted for on an agency basis (that is, the company recognizes the fees associated with serving as an agent in sales with no associated cost of sales). Generally, these transactions relate to the sale of supplier service contracts to customers where the company has no future obligation to perform under these contracts or the rendering of logistics services for the delivery of inventory for which the company does not assume the risks and rewards of ownership.

ARROW ELECTRONICS, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

### Shipping and Handling Costs

The company reports shipping and handling costs, primarily related to outbound freight, in the consolidated statements of operations as a component of selling, general, and administrative expenses. Shipping and handling costs included in selling, general, and administrative expenses totaled \$90,709, \$79,257, and \$77,399 in 2017, 2016, and 2015, respectively.

### Impact of Recently Issued Accounting Standards

In August 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815) ("ASU No. 2017-12"). ASU No. 2017-12 simplifies certain aspects of hedge accounting and results in a more accurate portrayal of the economics of an entity's risk management activities in its financial statements. ASU No. 2017-12 is effective for the company in the first quarter of 2019, with early adoption permitted, and is to be applied on a modified retrospective basis. The company is currently evaluating the potential effects of adopting the provisions of ASU No. 2017-12.

In May 2017, the FASB issued Accounting Standards Update No. 2017-09, Compensation - Stock Compensation (Topic 718) ("ASU No. 2017-09"). ASU No. 2017-09 clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. Effective April 2, 2017, the company adopted the provisions of ASU No. 2017-09 on a prospective basis. The adoption of the provisions of ASU No. 2017-09 did not materially impact the company's consolidated financial position or results of operations.

In March 2017, the FASB issued Accounting Standards Update No. 2017-07, Compensation - Retirement Benefits (Topic 715) ("ASU No. 2017-07"). ASU No. 2017-07 requires that the service cost component of pension expense be included in the same line item as other compensation costs arising from services rendered by employees, with the other components of pension expense being classified outside of a subtotal of income from operations. ASU No. 2017-07 is effective for the company in the first quarter of 2018 and is to be applied retrospectively for the presentation requirements and prospectively for the capitalization of the service cost component requirements. The adoption of the provisions of ASU No. 2017-07 is not expected to have a material impact on the company's consolidated financial position or results of operations.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, Intangibles - Goodwill and Other (Topic 350) ("ASU No. 2017-04"). ASU No. 2017-04 eliminates step 2 from the annual goodwill impairment test. Effective January 1, 2017, the company adopted the provisions of ASU No. 2017-04 on a prospective basis. The adoption of the provisions of ASU No. 2017-04 would not materially impact the company's consolidated financial position or results of operations unless step 1 of the annual goodwill impairment test fails.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, Income Taxes - Intra-Entity Transfers of Assets Other Than Inventory (Topic 740) ("ASU No. 2016-16"). ASU No. 2016-16 clarifies the accounting for the current and deferred income taxes for an intra-entity transfer of an asset other than inventory. Effective April 2, 2017, the company adopted the provisions of ASU No. 2016-16 on a modified retrospective basis. The adoption of the provisions of ASU No. 2016-16 did not materially impact the company's consolidated financial position or results of operations.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230) ("ASU No. 2016-15"). ASU No. 2016-15 addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows. Effective January 1, 2017, the company adopted the provisions of ASU No.

2016-15 on a retrospective basis. The adoption of the provisions of ASU No. 2016-15 did not materially impact the company's consolidated financial position or results of operations.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, Financial Instruments - Credit Losses (Topic 326) ("ASU No. 2016-13"). ASU No. 2016-13 revises the methodology for measuring credit losses on financial instruments and the timing of when such losses are recorded. ASU No. 2016-13 is effective for the company in the first quarter of 2020, with early adoption permitted, and is to be applied using a modified retrospective approach. The company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-13.

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, Stock Compensation - Improvements to Employee Share-Based Payment Accounting (Topic 718) ("ASU No. 2016-09"). ASU No. 2016-09 revises the accounting treatment for excess tax benefits, minimum statutory tax withholding requirements, and forfeitures related to share-based awards. Effective January 1,



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2017, the company adopted the recognition of excess tax benefits and tax deficiencies on a prospective basis and reclassified excess tax benefits in the consolidated statements of cash flows on a retrospective basis. The company elected to continue to estimate forfeitures expected to occur to determine the amount of compensation cost to be recognized in each period. The adoption of the provisions of ASU No. 2016-09 did not materially impact the company's consolidated financial position or results of operations.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) ("ASU No. 2016-02"). ASU No. 2016-02 requires the entity to recognize the assets and liabilities for the rights and obligations created by leased assets. Leases will be classified as either finance or operating, with classification affecting expense recognition in the income statement. ASU No. 2016-02 is effective for the company in the first quarter of 2019, with early adoption permitted, and is to be applied using a modified retrospective approach. While the company continues to evaluate the effects of adopting the provisions of ASU No. 2016-02, the company expects most existing operating lease commitments will be recognized as operating lease liabilities and right-of-use assets upon adoption.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01, Financial Instruments - Recognition and Measurement of Financial Assets and Financial Liabilities (Topic 825) ("ASU No. 2016-01"). ASU No. 2016-01 revises the classification and measurement of investments in certain equity investments and the presentation of certain fair value changes for certain financial liabilities measured at fair value. ASU No. 2016-01 requires the change in fair value of many equity investments to be recognized in net income. ASU No. 2016-01 is effective for the company in the first quarter of 2018 and is to be applied prospectively. The company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-01.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU No. 2014-09"). ASU No. 2014-09 supersedes all existing revenue recognition guidance. Under ASU No. 2014-09, 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. ASU No. 2014-09 is effective for the company in the first quarter of 2018. ASU No. 2014-09 allows for either full retrospective or modified retrospective adoption. In March, April, May, and December 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers: Principal versus Agent Considerations (Reporting Revenue Gross versus Net) ("ASU No. 2016-08"); ASU No. 2016-10, Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing ("ASU No. 2016-10"); ASU No. 2016-12, Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients ("ASU No. 2016-12"); and ASU No. 2016-19, Technical Corrections and Improvements ("ASU No. 2016-19"), respectively. ASU No. 2016-08, ASU No. 2016-10, ASU No. 2016-12, and ASU No. 2016-19 provide supplemental adoption guidance and clarification to ASU No. 2014-09, and must be adopted concurrently with the adoption of ASU No. 2014-09.

In 2014, the company established an implementation team ("team") and engaged external advisers to develop a multi-phase plan to assess the company's business and contracts, as well as any changes to processes or systems to adopt the requirements of the new standard. The team has updated the assessment for new ASU updates and for newly acquired businesses. The company will adopt the provisions of ASU No. 2014-09 and related updates as of January 1, 2018 on a full retrospective basis. The company expects revenue recognition for its components business contracts to remain unchanged. However, the guidance is expected to change some net versus gross classifications on certain ECS business contracts, specifically software renewals, software bundles, antivirus software and services, and fixed-term software licenses. However, the impacts to consolidated sales and net income are not expected to be material. The company continues to identify the appropriate changes to its business processes, systems, and controls to support revenue recognition and disclosure under the new guidance.

## Reclassification

Certain prior year amounts were reclassified to conform to the current year presentation.

## 2. Acquisitions

The company accounts for acquisitions using the acquisition method of accounting. The results of operations of acquisitions are included in the company's consolidated results from their respective dates of acquisition. The company allocates the purchase price of each acquisition to the tangible assets, liabilities, and identifiable intangible assets acquired based on their estimated fair values. In certain circumstances, a portion of purchase price may be contingent upon the achievement of certain operating results. The fair values assigned to identifiable intangible assets acquired and contingent consideration were determined primarily by using an income approach which was based on assumptions and estimates made by management. Significant assumptions utilized in the income approach were based on company specific information and projections, which are not observable in the market and

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are thus considered Level 3 measurements by authoritative guidance (see Note 7). The excess of the purchase price over the fair value of the identified assets and liabilities has been recorded as goodwill. Any change in the estimated fair value of the net assets prior to the finalization of the allocation for acquisitions could change the amount of the purchase price allocable to goodwill. The company is not aware of any information that indicates the final purchase price allocations will differ materially from the preliminary estimates.

## 2017 Acquisitions

During 2017, the company acquired an additional 11.9% of the noncontrolling interest common shares of Data Modul AG for \$23,350, increasing the company's ownership interest in Data Modul to 69.2%. The impact of this acquisition was not material to the company's consolidated financial position or results of operations.

During 2017, the company completed two acquisitions for \$3,628, net of cash acquired. The impact of these acquisitions was not material to the company's consolidated financial position or results of operations. The pro forma impact of the 2017 acquisitions on the consolidated results of operations of the company for 2017, as though the acquisitions occurred on January 1, 2017, was also not material.

## 2016 Acquisitions

During 2016, the company completed three acquisitions for \$63,869, net of cash acquired. The impact of these acquisitions was not material to the company's consolidated financial position or results of operations. The pro forma impact of the 2016 acquisitions on the consolidated results of operations of the company for 2016, as though the acquisitions occurred on January 1, 2016, was also not material.

## 2015 Acquisitions

On March 31, 2015, the company acquired immixGroup, Inc. ("immixGroup"), for a purchase price of \$280,454, which included \$28,205 of cash acquired. immixGroup is a value-added provider supporting value-added resellers, solution providers, service providers, and other public sector channel partners with specialized resources to accelerate their government sales. immixGroup has operations in North America.

immixGroup sales of \$384,926 were included in the company's consolidated results of operations for 2015 after the date of the acquisition.

The following table summarizes the allocation of the net consideration paid to the fair value of the assets acquired and liabilities assumed for the immixGroup acquisition:

Accounts receivable, net	\$ 145,130
Other current assets	24,181
Property, plant, and equipment	1,569
Other assets	5,313
Identifiable intangible assets	46,400
Goodwill	183,840
Accounts payable	(136,921 )
Accrued expenses	(11,736 )
Other liabilities	(5,527 )
Cash consideration paid, net of cash acquired	\$ 252,249

In connection with the immixGroup acquisition, the company allocated \$44,000 to customer relationships with a useful life of 13 years and \$2,400 to amortizable trade name with a life of five years.

The goodwill related to the immixGroup acquisition was recorded in the company's global ECS business segment. The intangible assets related to the immixGroup acquisition are deductible for income tax purposes.

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During 2015, the company completed nine additional acquisitions for an aggregate purchase price of approximately \$263,341, net of cash acquired, inclusive of a 53.7% acquisition of Data Modul AG, and an additional 3.6% was acquired subsequent to the date of acquisition. The company also assumed \$84,487 in debt in connection with these acquisitions. The impact of these acquisitions was not material, individually or in the aggregate, to the company's consolidated financial position or results of operations.

The following table summarizes the company's consolidated results of operations for 2015, as well as the unaudited pro forma consolidated results of operations of the company, as though the 2015 acquisitions occurred on January 1:

	For the Year Ended	
	December 31, 2015	
	As Reported	Pro Forma
Sales	\$23,282,020	\$23,684,746
Net income attributable to shareholders	497,726	500,554
Net income per share:		
Basic	\$5.26	\$5.29
Diluted	\$5.20	\$5.23

The unaudited pro forma consolidated results of operations do not purport to be indicative of the results obtained had these acquisitions occurred as of the beginning of 2015 or of those results that may be obtained in the future. Additionally, the above table does not reflect any anticipated cost savings or cross-selling opportunities expected to result from these acquisitions.

### 3. Goodwill and Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The company tests goodwill and other indefinite-lived intangible assets for impairment annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist.

As of the first day of the fourth quarters of 2017, 2016, and 2015, the company's annual impairment testing did not result in any indicators of impairment of goodwill of companies acquired.

Goodwill of companies acquired, allocated to the company's business segments, is as follows:

	Global Components	Global ECS	Total
Balance as of December 31, 2015 (a)	\$1,230,832	\$1,138,000	\$2,368,832
Acquisitions	20,724	36,430	57,154
Foreign currency translation adjustment	(11,815 )	(21,951 )	(33,766 )
Balance as of December 31, 2016 (a)	\$1,239,741	\$1,152,479	\$2,392,220
Acquisitions	6,149	—	6,149
Impairment of assets held for sale	—	(7,922 )	(7,922 )
Foreign currency translation adjustment	18,979	60,621	79,600
Balance as of December 31, 2017 (b)	\$1,264,869	\$1,205,178	\$2,470,047

(a) The total carrying value of goodwill of companies acquired as of December 31, 2016 and December 31, 2015 in the table above is reflected net of \$1,018,780 of accumulated impairment charges, of which \$716,925 was recorded

in the global components business segment and \$301,855 was recorded in the global ECS business segment.

The total carrying value of goodwill of companies acquired as of December 31, 2017 in the table above is reflected (b) net of \$1,026,702 of accumulated impairment charges, of which \$716,925 was recorded in the global components business segment and \$309,777 was recorded in the global ECS business segment.

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Intangible assets, net, are comprised of the following as of December 31, 2017:

	Weighted-Average Life	Gross Carrying Amount	Accumulated Amortization	Net
Non-amortizable trade names	indefinite	\$ 101,000	\$ —	\$ 101,000
Customer relationships	10 years	440,167	(259,337 )	180,830
Developed technology	5 years	6,340	(3,043 )	3,297
Amortizable trade name	5 years	2,409	(1,321 )	1,088
		\$ 549,916	\$ (263,701 )	\$ 286,215

Intangible assets, net, are comprised of the following as of December 31, 2016:

	Weighted-Average Life	Gross Carrying Amount	Accumulated Amortization	Net
Non-amortizable trade names	indefinite	\$ 101,000	\$ —	\$ 101,000
Customer relationships	10 years	476,176	(247,206 )	228,970
Developed technology	5 years	9,140	(4,435 )	4,705
Other intangible assets	(c)	6,721	(4,514 )	2,207
		\$ 593,037	\$ (256,155 )	\$ 336,882

(c) Consists of non-competition agreements with useful lives ranging from two to five years.

Amortization expense related to identifiable intangible assets was \$50,071, \$54,886, and \$51,036 for the years ended December 31, 2017, 2016, and 2015, respectively. Amortization expense for each of the years 2018 through 2022 is estimated to be approximately \$40,916, \$34,497, \$28,492, \$22,534, and \$20,462, respectively, which does not include the 2018 subsequent acquisitions (see Note 19).

## 4. Investments in Affiliated Companies

The company owns a 50% interest in several joint ventures with Marubun Corporation (collectively "Marubun/Arrow") and several interests ranging from 43% to 50% in other joint ventures. These investments are accounted for using the equity method.

The following table presents the company's investment in the following joint ventures at December 31:

	2017	2016
Marubun/Arrow	\$ 70,167	\$ 65,237
Other	18,180	23,164
	\$ 88,347	\$ 88,401

The equity in earnings of affiliated companies for the years ended December 31 consists of the following:

	2017	2016	2015
Marubun/Arrow	\$ 6,842	\$ 7,629	\$ 6,212

Other	(3,418 )	(56 )	825
	\$3,424	\$7,573	\$7,037

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Under the terms of various joint venture agreements, the company is required to pay its pro-rata share of the third party debt of the joint ventures in the event that the joint ventures are unable to meet their obligations. There were no outstanding borrowings under the third party debt agreements of the joint ventures as of December 31, 2017 and 2016.

#### 5. Accounts Receivable

Accounts receivable, net, consists of the following at December 31:

	2017	2016
Accounts receivable	\$8,227,383	\$6,798,943
Allowances for doubtful accounts	(56,291 )	(52,256 )
Accounts receivable, net	\$8,171,092	\$6,746,687

The company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The allowances for doubtful accounts are determined using a combination of factors, including the length of time the receivables are outstanding, the current business environment, and historical experience. The company also has notes receivables with certain customers. As of December 31, 2017, the company has one customer with a combined gross note and accounts receivable balance of approximately \$24,600. The customer became delinquent on its repayment of the note during the fourth quarter of 2016. The company believes that it has adequately reserved for potential losses; however, it is possible that it could incur a loss in excess of the reserve.

#### 6. Debt

Short-term borrowings, including current portion of long-term debt, consists of the following at December 31:

	2017	2016
3.00% note, due 2018	\$299,857	\$—
Other short-term borrowings	56,949	93,827
	\$356,806	\$93,827

Other short-term borrowings are primarily utilized to support working capital requirements. The weighted-average interest rate on these borrowings was 2.6% and 2.4% at December 31, 2017 and 2016, respectively.

Long-term debt consists of the following at December 31:

	2017	2016
Asset securitization program	\$490,000	\$460,000
6.875% senior debentures, due 2018	—	199,348
3.00% notes, due 2018	—	299,013
6.00% notes, due 2020	208,971	299,183
5.125% notes, due 2021	130,400	248,843
3.50% notes, due 2022	346,518	345,776
4.50% notes, due 2023	297,122	296,646
3.25% notes, due 2024	493,161	—
4.00% notes, due 2025	345,182	344,625
7.50% senior debentures, due 2027	109,694	198,514
3.875% notes, due 2028	493,563	—

Other obligations with various interest rates and due dates	18,434	4,386
	\$2,933,045	\$2,696,334

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The 7.50% senior debentures are not redeemable prior to their maturity. The 3.00% notes, 6.00% notes, 5.125% notes, 3.50% notes, 4.50% notes, 3.25% notes, 4.00%, and 3.875% notes may be called at the option of the company subject to "make whole" clauses.

The estimated fair market value of long-term debt at December 31, using quoted market prices, is as follows:

	2017	2016
6.875% senior debentures, due 2018	\$	—\$212,500
3.00% notes, due 2018	300,500	303,500
6.00% notes, due 2020	224,000	325,500
5.125% notes, due 2021	139,000	265,500
3.50% notes, due 2022	355,000	349,500
4.50% notes, due 2023	315,500	305,500
3.25% notes, due 2024	491,000	—
4.00% notes, due 2025	356,500	345,000
7.50% senior debentures, due 2027	138,500	238,000
3.875% notes, due 2028	501,000	—

The carrying amount of the company's short-term borrowings in various countries, revolving credit facility, asset securitization program, and other obligations approximate their fair value.

The company has a revolving credit facility that may be used by the company for general corporate purposes including working capital in the ordinary course of business, letters of credit, repayment, prepayment or purchase of long-term indebtedness, acquisitions, and as support for the company's commercial paper program, as applicable. In December 2016, the company amended its revolving credit facility and, among other things, increased its borrowing capacity from \$1,500,000 to \$1,800,000 and extended its term to mature in December 2021. Interest on borrowings under the revolving credit facility is calculated using a base rate or a euro currency rate plus a spread (1.18% at December 31, 2017), which is based on the company's credit ratings, for an effective interest rate of 2.61% at December 31, 2017. The facility fee, which is based on the company's credit ratings, was .20% at December 31, 2017. There were no outstanding borrowings under the revolving credit facility at December 31, 2017 and 2016.

The company has a commercial paper program and the maximum aggregate balance of commercial paper notes outstanding may not exceed the borrowing capacity of \$1,200,000. The company had no outstanding borrowings under this program as of December 31, 2017 and 2016. The commercial paper program had an effective interest rate of 1.78% for the year-ended December 31, 2017.

The company has an asset securitization program collateralized by accounts receivable of certain of its subsidiaries. In September 2016, the company amended its asset securitization program and, among other things, increased its borrowing capacity from \$900,000 to \$910,000 and extended its term to mature in September 2019. The asset securitization program is conducted through Arrow Electronics Funding Corporation ("AFC"), a wholly-owned, bankruptcy remote subsidiary. The asset securitization program does not qualify for sale treatment. Accordingly, the accounts receivable and related debt obligation remain on the company's consolidated balance sheets. Interest on borrowings is calculated using a base rate or a commercial paper rate plus a spread (.40% at December 31, 2017), which is based on the company's credit ratings, for an effective interest rate of 1.91% at December 31, 2017. The facility fee is .40%.

At December 31, 2017 and 2016, the company had \$490,000 and \$460,000, respectively, in outstanding borrowings under the asset securitization program, which was included in "Long-term debt" in the company's consolidated balance sheets, and total collateralized accounts receivable of approximately \$2,270,500 and \$2,045,464, respectively, were held by AFC and were included in "Accounts receivable, net" in the company's consolidated balance sheets. Any accounts receivable held by AFC would likely not be available to other creditors of the company in the event of bankruptcy or insolvency proceedings before repayment of any outstanding borrowings under the asset securitization program.

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Both the revolving credit facility and asset securitization program include terms and conditions that limit the incurrence of additional borrowings and require that certain financial ratios be maintained at designated levels. The company was in compliance with all covenants as of December 31, 2017 and is currently not aware of any events that would cause non-compliance with any covenants in the future.

The company has a \$100,000 uncommitted line of credit. There were no outstanding borrowings under the uncommitted line of credit at December 31, 2017 and 2016.

During 2017, the company completed the sale of \$500,000 principal amount of 3.875% notes due in 2028. The net proceeds of the offering of \$494,625 were used to redeem the company's 6.875% senior debenture due June 2018 and refinance a portion of the company's 6.00% notes due April 2020, 5.125% notes due March 2021, and 7.50% notes due January 2027. The company recorded a loss on extinguishment of debt of \$59,545 for 2017.

During 2017, the company completed the sale of \$500,000 principal amount of 3.25% notes due in 2024. The net proceeds of the offering of \$493,810 are expected to be used to redeem the company's debt obligations and for general corporate purposes.

During 2015, the company completed the sale of \$350,000 principal amount of 3.50% notes due in 2022 and \$350,000 principal amount of 4.00% notes due in 2025. The net proceeds of the offering of \$688,162 were used to refinance the company's 3.375% notes due November 2015 and for general corporate purposes.

During 2015, the company redeemed \$250,000 principal amount of its 3.375% notes due November 2015. The related loss on the redemption for 2015 was \$2,943 and was recognized as a loss on extinguishment of debt in the company's consolidated statements of operations.

Annual payments of borrowings during each of the years 2018 through 2022 are \$355,588, \$499,371, \$213,432, \$133,384, and \$346,804, respectively, and \$1,738,723 for all years thereafter.

Interest and other financing expense, net, includes interest and dividend income of \$32,599, \$18,680, and \$6,301 in 2017, 2016, and 2015, respectively. Interest paid, net of interest and dividend income, amounted to \$156,974, \$141,816, and \$133,390 in 2017, 2016, and 2015, respectively.

## 7. Financial Instruments Measured at Fair Value

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The company utilizes a fair value hierarchy, which maximizes the use of observable inputs and minimizes the use of unobservable inputs when measuring fair value. The fair value hierarchy has three levels of inputs that may be used to measure fair value:

Level 1 Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Level 2 Quoted prices in markets that are not active; or other inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability.

Level 3

Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable.

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The following table presents assets (liabilities) measured at fair value on a recurring basis at December 31, 2017:

	Balance Sheet Location	Level 1	Level 2	Level 3	Total
Cash equivalents (a)	Cash and cash equivalents / other assets	\$3,267	\$286,671	\$—	\$289,938
Available-for-sale securities	Other assets	52,683	—	—	52,683
Interest rate swaps	Other liabilities	—	(149 )	—	(149 )
Foreign exchange contracts	Other current assets	—	5,499	—	5,499
Foreign exchange contracts	Accrued expenses	—	(8,581 )	—	(8,581 )
Contingent consideration	Accrued expenses	—	—	(3,176 )	(3,176 )
		\$55,950	\$283,440	\$(3,176)	\$336,214

(a) Cash equivalents include \$286,671 invested in certificates of deposit, with an original maturity of less than three months, held in anticipation of our acquisition of eInfochips, which closed in January 2018 (see Note 19).

The following table presents assets (liabilities) measured at fair value on a recurring basis at December 31, 2016:

	Balance Sheet Location	Level 1	Level 2	Level 3	Total
Cash equivalents	Other assets	\$2,660	\$—	\$—	\$2,660
Available-for-sale securities	Other assets	37,915	—	—	37,915
Interest rate swaps	Other assets	—	152	—	152
Foreign exchange contracts	Other current assets	—	4,685	—	4,685
Foreign exchange contracts	Accrued expenses	—	(3,444 )	—	(3,444 )
Contingent consideration	Accrued expenses	—	—	(4,027 )	(4,027 )
		\$40,575	\$1,393	\$(4,027)	\$37,941

Assets and liabilities that are measured at fair value on a nonrecurring basis relate primarily to goodwill, identifiable intangible assets, and assets held for sale (see Notes 2, 3, and 18). The company tests these assets for impairment if indicators of potential impairment exist or at least annually if indefinite lived.

During 2017, 2016, and 2015 there were no transfers of assets (liabilities) measured at fair value between the three levels of the fair value hierarchy.

## Available-For-Sale Securities

The company has an 8.4% equity ownership interest in Marubun Corporation ("Marubun") and a portfolio of mutual funds with quoted market prices, all of which are accounted for as available-for-sale securities.

The fair value of the company's available-for-sale securities is as follows at December 31:

	2017		2016	
	Marubun	Mutual Funds	Marubun	Mutual Funds
Cost basis	\$10,016	\$18,454	\$10,016	\$18,097
Unrealized holding gain	14,157	10,056	3,806	5,996
Fair value	\$24,173	\$28,510	\$13,822	\$24,093

The unrealized holding gains or losses are included in "Accumulated other comprehensive loss" in the shareholders' equity section in the company's consolidated balance sheets.

Derivative Instruments

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The company uses various financial instruments, including derivative instruments, for purposes other than trading. Certain derivative instruments are designated at inception as hedges and measured for effectiveness both at inception and on an ongoing basis. Derivative instruments not designated as hedges are marked-to-market each reporting period with any unrealized gains or losses recognized in earnings.

## Interest Rate Swaps

The company occasionally enters into interest rate swap transactions that convert certain fixed-rate debt to variable-rate debt or variable-rate debt to fixed-rate debt in order to manage its targeted mix of fixed- and floating-rate debt. The company uses the hypothetical derivative method to assess the effectiveness of its interest rate swaps designated as fair value hedges on a quarterly basis. The effective portion of the change in the fair value of interest rate swaps designated as fair value hedges is recorded as a change to the carrying value of the related hedged debt, and the effective portion of the change in fair value of interest rate swaps designated as cash flow hedges is recorded in the shareholders' equity section in the company's consolidated balance sheets in "Accumulated other comprehensive loss." The ineffective portion of the interest rate swaps, if any, is recorded in "Interest and other financing expense, net" in the company's consolidated statements of operations. As of December 31, 2017, all outstanding interest rate swaps were designated as fair value hedges.

The terms of outstanding interest rate swap contracts at December 31, 2017 are as follows:

Maturity Date	Notional Amount	Interest rate due from counterparty	Interest rate due to counterparty
April 2020	50,000	6.000%	6 mo. USD LIBOR + 3.896

## Foreign Exchange Contracts

The company's foreign currency exposure relates primarily to international transactions where the currency collected from customers can be different from the currency used to purchase the product. The company's transactions in its foreign operations are denominated primarily in the following currencies: Euro, Chinese Renminbi, British Pound, Taiwan Dollar, and Australian Dollar. The company enters into foreign exchange forward, option, or swap contracts (collectively, the "foreign exchange contracts") to mitigate the impact of changes in foreign currency exchange rates. These contracts are executed to facilitate the hedging of foreign currency exposures resulting from inventory purchases and sales and generally have terms of no more than six months. Gains or losses on these contracts are deferred and recognized when the underlying future purchase or sale is recognized or when the corresponding asset or liability is revalued. The company does not enter into foreign exchange contracts for trading purposes. The risk of loss on a foreign exchange contract is the risk of nonperformance by the counterparties, which the company minimizes by limiting its counterparties to major financial institutions. The fair value of the foreign exchange contracts are estimated using market quotes. The notional amount of the foreign exchange contracts at December 31, 2017 and 2016 was \$504,084 and \$460,233, respectively.

Gains and losses related to non-designated foreign currency exchange contracts are recorded in "Cost of sales" in the company's consolidated statements of operations. Gains and losses related to designated foreign currency exchange contracts are recorded in "Cost of sales", "Selling, general, and administrative expenses", and "Interest and other financing expense, net" based upon the nature of the underlying transaction, in the company's consolidated statements of operations and were not material for 2017, 2016, and 2015.



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The effects of derivative instruments on the company's consolidated statements of operations and other comprehensive income are as follows for the years ended December 31:

	2017	2016	2015
Gain (Loss) Recognized in Income			
Foreign exchange contracts	\$(20,877)	\$1,535	\$4,755
Interest rate swaps	(831 )	(608 )	(523 )
Total	\$(21,708)	\$927	\$4,232
Gain (Loss) Recognized in Other Comprehensive Income before reclassifications			
Foreign exchange contracts	\$(2,022 )	\$(153 )	\$(1,001)
Interest rate swaps	\$(4,672 )	\$—	\$827

Other

The carrying amount of cash and cash equivalents, accounts receivable, net, and accounts payable approximate their fair value due to the short maturities of these financial instruments.

## 8. Income Taxes

The provision for income taxes for the years ended December 31 consists of the following:

	2017	2016	2015
Current:			
Federal	\$119,883	\$45,314	\$82,532
State	(6,156 )	7,022	18,022
International	134,987	110,208	85,310
	248,714	162,544	185,864
Deferred:			
Federal	31,168	29,973	12,127
State	13,534	7,161	(1,828 )
International	(6,290 )	(9,004 )	(4,466 )
	38,412	28,130	5,833
	\$287,126	\$190,674	\$191,697

## ARROW ELECTRONICS, INC.

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The principal causes of the difference between the U.S. federal statutory tax rate of 35% and effective income tax rates for the years ended December 31 are as follows:

	2017	2016	2015
United States	\$115,850	\$235,256	\$281,579
International	578,438	480,141	410,604
Income before income taxes	\$694,288	\$715,397	\$692,183
Provision at statutory tax rate	\$243,001	\$250,389	\$242,264
State taxes, net of federal benefit	5,184	9,219	10,526
International effective tax rate differential	(88,444 )	(64,002 )	(56,132 )
Change in valuation allowance	1,408	7,174	(205 )
Other non-deductible expenses	12,700	3,516	3,530
Changes in tax accruals	(7,973 )	(3,679 )	(7,423 )
Tax credits	(8,170 )	(14,510 )	—
Tax Act's transition tax (a)	196,010	—	—
Tax Act's impact on deferred taxes (b)	(71,261 )	—	—
Other	4,671	2,567	(863 )
Provision for income taxes	\$287,126	\$190,674	\$191,697

On December 22, 2017, the U.S. government enacted comprehensive tax legislation (the "Tax Act"), which significantly revises the ongoing U.S. corporate income tax law by lowering the U.S. federal corporate income tax rate from 35% to 21%, implementing a territorial tax system, imposing one-time tax on foreign unremitted earnings and setting limitations on deductibility of certain costs (e.g., interest expense), among other things.

Due to the complexities involved in accounting for the recently enacted Tax Act, the U.S. Securities and Exchange Commission's Staff Accounting Bulletin ("SAB") 118 requires that the company include in its financial statements the reasonable estimate of the impact of the Tax Act on earnings to the extent such reasonable estimate has been determined. Accordingly, the company recorded the following reasonable estimates of the tax impact in its earnings for the year ended December 31, 2017.

For the year ended December 31, 2017, the company accrued a reasonable estimate of \$196,010 of tax expense for (a) the Tax Act's one-time transition tax on the foreign subsidiaries' accumulated, unremitted earnings going back to 1986.

For the year ended December 31, 2017, the company accrued \$71,261 in provisional tax benefit related to the net change in deferred tax liabilities stemming from the Tax Act's reduction of the U.S. federal tax rate from 35% to 21%, and disallowance of certain incentive based compensation tax deductibility under Internal Revenue Code Section 162(m).

The Tax Act also includes a provision to tax global intangible low-taxed income ("GILTI") of foreign subsidiaries and a base erosion anti-abuse tax ("BEAT") measure that taxes certain payments between a U.S. corporation and its subsidiaries. The company will be subject to the GILTI and BEAT provisions effective beginning January 1, 2018 and is in the process of analyzing their effects, including how to account for the GILTI provision from an accounting policy standpoint.

The final impact on the company from the Tax Act's transition tax legislation may differ from the aforementioned reasonable estimate of \$196,010 due to the complexity of calculating and supporting with primary evidence such U.S. tax attributes as accumulated foreign earnings and profits, foreign tax paid, and other tax components involved in

foreign tax credit calculations for prior years back to 1986. Such differences could be material, due to, among other things, changes in interpretations of the Tax Act, future legislative action to address questions that arise because of the Tax Act, changes in accounting standards for income taxes or related interpretations in response to the Tax Act, or any updates or changes to estimates the company has utilized to calculate the transition tax's reasonable estimate.

Pursuant to the SAB118, the company is allowed a measurement period of up to one year after the enactment date of the Tax Act to finalize the recording of the related tax impacts. Accordingly, the company accrued the transition tax of \$196,010 and a tax

## ARROW ELECTRONICS, INC.

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benefit related to the net change in deferred tax liabilities of \$71,261 for 2017 based on the reasonable estimate guidance. The company will continue to calculate the impact of the U.S. Tax Act and will record any resulting tax adjustments during 2018. Additionally, the company will elect to pay the transition tax in installments over the period of 8 years, pursuant to the guidance of the new Internal Revenue Code Section 965.

The company evaluates and establishes liabilities for uncertain tax positions that may be challenged by local tax authorities and that may not be fully sustained, despite the belief that the underlying tax positions are fully supportable. Uncertain tax positions are reviewed on an ongoing basis and are adjusted in light of changing facts and circumstances, including progress of tax audits, developments in case law and closing of statutes of limitations. Such adjustments are reflected in the tax provision as appropriate.

At December 31, 2017, the company had a liability for unrecognized tax position of \$24,361. The timing of the resolution of these uncertain tax positions is dependent on the tax authorities' income tax examination processes. Material changes are not expected, however, it is possible that the amount of unrecognized tax benefits with respect to uncertain tax positions could increase or decrease during 2018. Currently, the company is unable to make a reasonable estimate of when tax cash settlement would occur and how it would impact the effective tax rate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31 is as follows:

	2017	2016	2015
Balance at beginning of year	\$31,534	\$36,935	\$44,701
Additions based on tax positions taken during a prior period	2,342	2,356	2,568
Reductions based on tax positions taken during a prior period	(1,242 )	(6,305 )	(9,482 )
Additions based on tax positions taken during the current period	6,543	3,935	8,440
Reductions related to settlement of tax matters	(2,921 )	(2,795 )	(4,143 )
Reductions related to a lapse of applicable statute of limitations	(11,895 )	(2,592 )	(5,149 )
Balance at end of year	\$24,361	\$31,534	\$36,935

Interest costs related to unrecognized tax benefits are classified as a component of "Interest and other financing expense, net" in the company's consolidated statements of operations. In 2017, 2016, and 2015, the company recognized \$(2,792), \$(1,946), and \$(3,247), respectively, of interest expense related to unrecognized tax benefits. At December 31, 2017 and 2016, the company had a liability for the payment of interest of \$3,301 and \$6,881, respectively, related to unrecognized tax benefits.

In many cases the company's uncertain tax positions are related to tax years that remain subject to examination by tax authorities. The following describes the open tax years, by major tax jurisdiction, as of December 31, 2017:

United States - Federal	2014 - present
United States - States	2007 - present
Germany (c)	2010 - present
Hong Kong	2010 - present
Italy (c)	2012 - present
Sweden	2012 - present
United Kingdom	2015 - present

(c) Includes federal as well as local jurisdictions.

Deferred income taxes are provided for the effects of temporary differences between the tax basis of an asset or liability and its reported amount in the consolidated balance sheets. These temporary differences result in taxable or deductible amounts in future years.

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The deferred tax assets and liabilities consist of the following at December 31:

	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	\$ 113,327	\$ 102,710
Inventory adjustments	42,376	56,890
Allowance for doubtful accounts	12,368	14,526
Accrued expenses	28,229	40,179
Interest carryforward	15,964	19,073
Stock-based compensation awards	12,982	24,505
Other comprehensive income items	—	10,859
Integration and restructuring	6,726	2,970
Other	17,015	17,830
	248,987	289,542
Valuation allowance	(13,915 )	(15,323 )
Total deferred tax assets	\$ 235,072	\$ 274,219
Deferred tax liabilities:		
Goodwill	\$(109,994)	\$(142,541)
Depreciation	(116,725 )	(94,838 )
Intangible assets	(18,760 )	(21,118 )
Other comprehensive income items	(5,542 )	—
Total deferred tax liabilities	\$(251,021)	\$(258,497)
Total net deferred tax assets (liabilities)	\$(15,949 )	\$ 15,722

At December 31, 2017, the company had international tax loss carryforwards of approximately \$327,568, of which \$9,787 have expiration dates ranging from 2018 to 2035, and the remaining \$317,781 have no expiration date. Deferred tax assets related to these international tax loss carryforwards were \$105,534 with a corresponding valuation allowance of \$6,624.

At December 31, 2017, the company also had the U.S. Federal net operating loss carryforwards of approximately \$11,940, which relate to acquired subsidiaries. These U.S. Federal net operating losses expire in various years beginning after 2027. The company has an agreement with the sellers of an acquired business to reimburse them for the company's utilization of certain U.S. Federal net operating loss carryforwards. Deferred tax assets include federal net operating loss carryforwards. The company also has certain state net operating loss carryforwards with corresponding valuation allowances.

Valuation allowances reflect the deferred tax benefits that management is uncertain of the ability to utilize in the future.

At December 31, 2017, cumulative undistributed earnings of foreign subsidiaries were approximately \$3,200,000, for which no U.S. deferred income taxes were provided for, with the exception of the Tax Act's transition tax, due to the company's assertion to permanently reinvest such earnings in international operations.

Income taxes paid, net of income taxes refunded, amounted to \$231,183, \$190,109, and \$182,668 in 2017, 2016, and 2015, respectively.





## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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## 9. Restructuring, Integration, and Other Charges

In 2017, 2016, and 2015, the company recorded restructuring, integration, and other charges of \$91,294, \$73,602, and \$68,765, respectively.

The following table presents the components of the restructuring, integration, and other charges for the years ended December 31:

	2017	2016	2015
Restructuring and integration charge - current period actions	\$46,816	\$32,894	\$39,119
Restructuring and integration charges - actions taken in prior periods	6,191	3,611	4,084
Other charges	38,287	37,097	25,562
	\$91,294	\$73,602	\$68,765

## 2017 Restructuring and Integration Charge

The following table presents the components of the 2017 restructuring and integration charge of \$46,816 and activity in the related restructuring and integration accrual for 2017:

	Personnel Costs	Facilities Costs	Other	Total
Restructuring and integration charge	\$37,615	\$8,192	\$1,009	\$46,816
Payments	(23,384 )	(3,494 )	(926 )	(27,804 )
Foreign currency translation	1,045	176	17	1,238
Balance as of December 31, 2017	\$15,276	\$4,874	\$100	\$20,250

These restructuring initiatives are due to the company's continued efforts to lower cost and drive operational efficiency. Integration costs are primarily related to the integration of acquired businesses within the company's pre-existing business and the consolidation of certain operations.

## 2016 Restructuring and Integration Charge

The following table presents the components of the 2016 restructuring and integration charge of \$32,894 and activity in the related restructuring and integration accrual for 2016 and 2017:

	Personnel Costs	Facilities Costs	Other	Total
Restructuring and integration charge	\$25,763	\$5,786	\$1,345	\$32,894
Payments	(13,730 )	(1,974 )	(1,132 )	(16,836 )
Foreign currency translation	(339 )	(19 )	103	(255 )
Balance as of December 31, 2016	11,694	3,793	316	15,803
Restructuring and integration charge (credit)	6,498	(525 )	(196 )	5,777
Payments	(12,229 )	(2,767 )	(119 )	(15,115 )
Foreign currency translation	459	213	18	690
Balance as of December 31, 2017	\$6,422	\$714	\$19	\$7,155

These restructuring initiatives are due to the company's continued efforts to lower cost and drive operational efficiency. Integration costs are primarily related to the integration of acquired businesses within the company's pre-existing business and the consolidation of certain operations.

ARROW ELECTRONICS, INC.

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Restructuring and Integration Accruals Related to Actions Taken Prior to 2016

Included in restructuring, integration, and other charges for 2017 are restructuring and integration charges of \$414 related to restructuring and integration actions taken prior to 2016. The restructuring and integration charge (credits) includes adjustments to personnel costs of \$750, facilities costs of \$(316), and other costs of \$(20). The restructuring and integration accruals related to actions taken prior to 2016 of \$3,175, include accruals for personnel costs of \$2,523, accruals for facilities costs of \$524, and accrual for other costs of \$128.

Restructuring and Integration Accrual Summary

In summary, the restructuring and integration accruals aggregate \$30,580 at December 31, 2017, all of which are expected to be spent in cash, and are expected to be utilized as follows:

The accruals for personnel costs totaling \$24,221 relate to the termination of personnel that have scheduled payouts of \$20,599 in 2018, \$2,576 in 2019, \$1,005 in 2020, and \$41 in 2021.

The accruals for facilities totaling \$6,112 relate to vacated leased properties that have scheduled payments of \$1,730 in 2018, \$669 in 2019, \$698 in 2020, \$451 in 2021, \$327 in 2022, and \$2,237 thereafter.

Other accruals of \$247 are expected to be spent within one year.

Other Charges

Included in restructuring, integration, and other charges for 2017 are other expenses of \$38,287. The following items represent other charges and credits recorded to restructuring, integration, and other charges for the year ended December 31, 2017:

acquisition related charges for 2017 of \$7,658 related to contingent consideration for acquisitions completed in prior years which were conditional upon the financial performance of the acquired companies and the continued employment of the selling shareholders, as well as professional and other fees directly related to recent acquisition activity;

an additional expense of \$2,071 to increase its accrual for the Wyle Laboratories ("Wyle") environmental obligation (see Note 15);

a net loss on real estate transactions of \$3,144; and

a settlement expense of \$16,706 relating to settling a portion of the company's Wyle defined benefit plan (see Note 13).

Included in restructuring, integration, and other charges for 2016 are other expenses of \$37,097. The following items represent other charges and credits recorded to restructuring, integration, and other charges for the year ended December 31, 2016:

a settlement expense of \$12,211 relating to the company's adoption of an amendment to its Wyle defined benefit plan (see Note 13);

an additional expense of \$11,771 to increase its accrual for the Wyle environmental obligation (see Note 15);

acquisition related charges for 2016 of \$8,705 related to contingent consideration for acquisitions completed in prior years, which were conditional upon the financial performance of the acquired companies and the continued employment of the selling shareholders, as well as professional and other fees directly related to recent acquisition activity;

- fraud loss, net of insurance recoveries and incremental expenses, of \$4,329; and
- credit related to the release of a \$2,376 legal reserve.

In January 2016, the company determined that it was the target of criminal fraud by persons impersonating a company executive, which resulted in unauthorized transfers of cash from a company account in Europe to outside bank accounts in Asia. Legal actions by the company and law enforcement are ongoing. The information gathered by the company indicates that this was an isolated event not associated with a security breach or loss of data. Additionally, no officers or employees of the company were involved in the fraud.

Included in restructuring, integration, and other charges for 2015 are acquisition related expenses of \$19,565, primarily consisting of charges related to contingent consideration for acquisitions completed in prior years which were conditional upon the financial performance of the acquired companies and the continued employment of the selling shareholders, as well as professional and other fees directly related to recent acquisition activity.

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## 10. Shareholders' Equity

## Accumulated Other Comprehensive Income (Loss)

The following table presents the changes in Accumulated other comprehensive income (loss), excluding noncontrolling interests:

	Foreign Currency Translation Adjustment and Other	Unrealized Gain (loss) on Investment Securities, Net	Unrealized Gain (Loss) on Interest Rate Swaps Designated as Cash Flow Hedges, Net	Employee Benefit Plan Items, Net	Total
Balance as of December 31, 2015	\$ (241,326 )	\$ 8,533	\$ (3,320 )	\$ (48,593 )	\$ (284,706 )
Other comprehensive income (loss) before reclassifications (a)	(103,254 )	(2,439 )	—	(737 )	(106,430 )
Amounts reclassified into income (loss)	(3,976 )	—	373	10,885	7,282
Net change in accumulated other comprehensive income (loss) for the year ended December 31, 2016	(107,230 )	(2,439 )	373	10,148	(99,148 )
Balance as of December 31, 2016	(348,556 )	6,094	(2,947 )	(38,445 )	(383,854 )
Other comprehensive income (loss) before reclassifications (a)	253,259	8,852	(2,870 )	(3,812 )	255,429
Amounts reclassified into income (loss)	(9,756 )	—	511	12,665	3,420
Net change in accumulated other comprehensive income (loss) for the year ended December 31, 2017	243,503	8,852	(2,359 )	8,853	258,849
Balance as of December 31, 2017	\$ (105,053 )	\$ 14,946	\$ (5,306 )	\$ (29,592 )	\$ (125,005 )

(a) Foreign currency translation adjustment includes intra-entity foreign currency transactions that are of a long-term investment nature of \$(64,610) and \$(12,852) for 2017 and 2016, respectively.

## Common Stock Outstanding Activity

The following table sets forth the activity in the number of shares outstanding (in thousands):

	Common Stock Issued	Treasury Stock	Common Stock Outstanding
Common stock outstanding at December 31, 2014	125,424	29,529	95,895
Shares issued for stock-based compensation awards	—	(1,155 )	1,155
Repurchases of common stock	—	6,127	(6,127 )
Common stock outstanding at December 31, 2015	125,424	34,501	90,923
Shares issued for stock-based compensation awards	—	(1,372 )	1,372
Repurchases of common stock	—	3,382	(3,382 )
Common stock outstanding at December 31, 2016	125,424	36,511	88,913
Shares issued for stock-based compensation awards	—	(1,097 )	1,097

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Repurchases of common stock	—	2,319	(2,319	)
Common stock outstanding at December 31, 2017	125,424	37,733	87,691	

The company has 2,000,000 authorized shares of serial preferred stock with a par value of one dollar. There were no shares of serial preferred stock outstanding at December 31, 2017 and 2016.

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## Share-Repurchase Programs

The following table shows the company's share-repurchase programs with activity in the years ended December 31, 2017, 2016, and 2015:

Month of Board Approval	Dollar Value Approved for Repurchase	Dollar Value of Shares Repurchased	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program
May 2014	\$ 200,000	\$ 200,000	\$ —
December 2014	200,000	200,000	—
September 2015	400,000	400,000	—
December 2016	400,000	41,079	358,921
Total	\$ 1,200,000	\$ 841,079	\$ 358,921

## 11. Net Income Per Share

The following table presents the computation of net income per share on a basic and diluted basis for the years ended December 31 (shares in thousands):

	2017	2016	2015
Net income attributable to shareholders	\$401,962	\$522,750	\$497,726
Weighted-average shares outstanding - basic	88,681	90,960	94,608
Net effect of various dilutive stock-based compensation awards	1,085	1,073	1,078
Weighted-average shares outstanding - diluted	89,766	92,033	95,686
Net income per share:			
Basic	\$4.53	\$5.75	\$5.26
Diluted (a)	\$4.48	\$5.68	\$5.20

Stock-based compensation awards for the issuance of 380 shares, 766 shares, and 658 shares for the years ended (a) December 31, 2017, 2016, and 2015, respectively, were excluded from the computation of net income per share on a diluted basis as their effect was anti-dilutive.

## 12. Employee Stock Plans

## Omnibus Plan

The company maintains the Arrow Electronics, Inc. 2004 Omnibus Incentive Plan (the "Omnibus Plan"), which provides an array of equity alternatives available to the company when designing compensation incentives. The Omnibus Plan permits the grant of cash-based awards, non-qualified stock options, incentive stock options ("ISOs"), stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, covered employee annual incentive awards, and other stock-based awards. The Compensation Committee of the company's Board of Directors (the "Compensation Committee") determines the vesting requirements, termination provision, and the terms of the award for any awards under the Omnibus Plan when such awards are issued.



Under the terms of the Omnibus Plan, a maximum of 19,100,000 shares of common stock may be awarded, inclusive of 5,600,000 shares registered in October 2015. There were 4,896,220 and 5,862,454 shares available for grant under the Omnibus Plan as of December 31, 2017 and 2016, respectively. Generally, shares are counted against the authorization only to the extent that they are issued. Restricted stock, restricted stock units, performance shares, and performance units count against the authorization at a rate of 1.69 to 1.

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The company recorded, as a component of "Selling, general, and administrative expenses", amortization of stock-based compensation of \$39,122, \$39,825, and \$47,274 in 2017, 2016, and 2015, respectively. The actual tax benefit realized from share-based payment awards during 2017, 2016, and 2015 was \$18,846, \$19,745, and \$16,593, respectively.

## Stock Options

Under the Omnibus Plan, the company may grant both ISOs and non-qualified stock options. ISOs may only be granted to employees of the company, its subsidiaries, and its affiliates. The exercise price for options cannot be less than the fair market value of Arrow's common stock on the date of grant. Options generally vest in equal installments over a four-year period. Options currently outstanding have contractual terms of ten years.

The following information relates to the stock option activity for the year ended December 31, 2017:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding at December 31, 2016	1,744,345	\$ 50.72		
Granted	378,753	73.89		
Exercised	(508,533 )	43.65		
Forfeited	(74,196 )	59.24		
Outstanding at December 31, 2017	1,540,369	58.34	85 months	\$ 33,990
Exercisable at December 31, 2017	619,083	\$ 48.95	65 months	\$ 19,477

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (the difference between the company's closing stock price on the last trading day of 2017 and the exercise price, multiplied by the number of in-the-money options) received by the option holders had all option holders exercised their options on December 31, 2017. This amount changes based on the market value of the company's stock.

The total intrinsic value of options exercised during 2017, 2016, and 2015 was \$15,320, \$10,511, and \$10,400, respectively.

Cash received from option exercises during 2017, 2016, and 2015 was \$22,195, \$18,967, and \$14,900, respectively, and is included within the financing activities section in the company's consolidated statements of cash flows.

The fair value of stock options was estimated using the Black-Scholes valuation model with the following weighted-average assumptions for the years ended December 31:

	2017	2016	2015
Volatility (percent) (a)	26	31	28
Expected term (in years) (b)	5.1	5.2	4.8
Risk-free interest rate (percent) (c)	1.9	1.3	1.5

(a)

Volatility is measured using historical daily price changes of the company's common stock over the expected term of the option.

- (b) The expected term represents the weighted-average period the option is expected to be outstanding and is based primarily on the historical exercise behavior of employees.
- (c) The risk-free interest rate is based on the U.S. Treasury zero-coupon yield with a maturity that approximates the expected term of the option.

There is no expected dividend yield.

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The weighted-average fair value per option granted was \$20.01, \$16.93, and \$19.10 during 2017, 2016, and 2015, respectively.

#### Performance Awards

The Compensation Committee, subject to the terms and conditions of the Omnibus Plan, may grant performance share and/or performance unit awards (collectively "performance awards"). The fair value of a performance award is the fair market value of the company's common stock on the date of grant. Such awards will be earned only if performance goals over performance periods established by or under the direction of the Compensation Committee are met. The performance goals and periods may vary from participant-to-participant, group-to-group, and time-to-time. The performance awards will be delivered in common stock at the end of the service period based on the company's actual performance compared to the target metric and may be from 0% to 185% of the initial award. Compensation expense is recognized using the graded vesting method over the three-year service period and is adjusted each period based on the current estimate of performance compared to the target metric.

#### Restricted Stock

Subject to the terms and conditions of the Omnibus Plan, the Compensation Committee may grant shares of restricted stock and/or restricted stock units. Restricted stock units are similar to restricted stock except that no shares are actually awarded to the participant on the date of grant. Shares of restricted stock and/or restricted stock units awarded under the Omnibus Plan may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable period of restriction established by the Compensation Committee and specified in the award agreement (and in the case of restricted stock units until the date of delivery or other payment). Compensation expense is recognized on a straight-line basis as shares become free of forfeiture restrictions (i.e., vest) generally over a four-year period.

#### Non-Employee Director Awards

The company's Board shall set the amounts and types of equity awards that shall be granted to all non-employee directors on a periodic, nondiscriminatory basis pursuant to the Omnibus Plan, as well as any additional amounts, if any, to be awarded, also on a periodic, nondiscriminatory basis, based on each of the following: the number of committees of the Board on which a non-employee director serves, service of a non-employee director as the chair of a Committee of the Board, service of a non-employee director as Chairman of the Board or Lead Director, or the first selection or appointment of an individual to the Board as a non-employee director. Non-employee directors currently receive annual awards of fully-vested restricted stock units valued at \$130. All restricted stock units are settled in common stock following the director's separation from the Board.

Unless a non-employee director gives notice setting forth a different percentage, 50% of each director's annual retainer fee is deferred and converted into units based on the fair market value of the company's stock as of the date it was payable. A non-employee director can choose between one-year cliff vesting or keep the deferral until separation from the Board. After separation from the board, the deferral will be converted into a share of company stock and distributed to the non-employee director as soon as practicable following such date.

#### Summary of Non-Vested Shares

The following information summarizes the changes in non-vested performance shares, performance units, restricted stock, and restricted stock units for 2017:

	Shares	Weighted- Average Grant Date Fair Value
Non-vested shares at December 31, 2016	1,372,046	\$ 57.04
Granted	493,232	70.57
Vested	(573,617 )	56.57
Forfeited	(114,696 )	60.52
Non-vested shares at December 31, 2017	1,176,965	62.60

ARROW ELECTRONICS, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

The total fair value of shares vested during 2017, 2016, and 2015 was \$42,470, \$52,026, and \$48,118, respectively.

As of December 31, 2017, there was \$38,018 of total unrecognized compensation cost related to non-vested shares and stock options which is expected to be recognized over a weighted-average period of 2.04 years.

### 13. Employee Benefit Plans

The company maintains an unfunded Arrow supplemental executive retirement plan ("SERP") under which the company will pay supplemental pension benefits to certain employees upon retirement. As of December 31, 2017, there were 10 current and 22 former corporate officers participating in this plan. The Board determines those employees who are eligible to participate in the Arrow SERP.

The Arrow SERP, as amended, provides for the pension benefits to be based on a percentage of average final compensation, based on years of participation in the Arrow SERP. The Arrow SERP permits early retirement, with payments at a reduced rate, based on age and years of service subject to a minimum retirement age of 55. Participants whose accrued rights under the Arrow SERP, prior to the 2002 amendment, which were adversely affected by the amendment, will continue to be entitled to such greater rights.

Additionally, as part of the company's acquisition of Wyle in 2000, Wyle provided retirement benefits for certain employees under a defined benefit plan. Benefits under this plan were frozen as of December 31, 2000.

In 2016, the company adopted an amendment to its Wyle defined benefit plan that provided eligible plan participants with the option to receive an early distribution of their pension benefits. Lump sum payments of \$26,063 were made during June 2016 and the company incurred a settlement expense of \$12,211.

In 2017, the company entered into a settlement for a portion of its Wyle defined benefit plan. Participants will receive benefits through an insurance annuity contract. The settlement of \$42,985 was completed during October 2017 and the company incurred a settlement expense of \$16,706.

## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

The company uses a December 31 measurement date for the Arrow SERP and the Wyle defined benefit plan. Pension information for the years ended December 31 is as follows:

	Arrow SERP		Wyle Defined Benefit Plan		
	2017	2016	2017	2016	
Accumulated benefit obligation	\$90,368	\$84,561	\$60,374	\$97,984	
Changes in projected benefit obligation:					
Projected benefit obligation at beginning of year	\$91,038	\$88,729	\$97,984	\$129,029	
Service cost	2,310	1,689	—	—	
Interest cost	3,552	3,475	3,860	4,485	
Actuarial loss (gain)	4,929	1,021	7,595	(3,244)	)
Benefits paid	(4,222)	(3,876)	(6,080)	(6,223)	)
Settlement	—	—	(42,985)	(26,063)	)
Projected benefit obligation at end of year	\$97,607	\$91,038	\$60,374	\$97,984	
Changes in plan assets:					
Fair value of plan assets at beginning of year	\$—	\$—	\$71,470	\$101,859	
Actual return on plan assets	—	—	10,258	1,897	
Company contributions	—	—	14,000	—	
Benefits paid	—	—	(6,080)	(6,223)	)
Settlement	—	—	(42,985)	(26,063)	)
Fair value of plan assets at end of year	\$—	\$—	\$46,663	\$71,470	
Funded status	\$(97,607)	\$(91,038)	\$(13,711)	\$(26,514)	)
Amounts recognized in the company's consolidated balance sheets:					
Current liabilities	\$(4,535)	\$(4,556)	\$—	\$—	
Noncurrent liabilities	(93,072)	(86,482)	(13,711)	(26,514)	)
Net liabilities at end of year	\$(97,607)	\$(91,038)	\$(13,711)	\$(26,514)	)
Components of net periodic pension cost:					
Service cost	\$2,310	\$1,689	\$—	\$—	
Interest cost	3,552	3,475	3,860	4,485	
Expected return on plan assets	—	—	(3,449)	(5,273)	)
Amortization of net loss	1,216	3,208	1,666	1,827	
Settlement charge	—	—	16,706	12,211	
Net periodic pension cost	\$7,078	\$8,372	\$18,783	\$13,250	
Weighted-average assumptions used to determine benefit obligation:					
Discount rate	3.50	% 4.00	% 3.60	% 4.00	%
Rate of compensation increase	5.00	% 5.00	% N/A	N/A	
Expected return on plan assets	N/A	N/A	5.25	% 4.75	%
Weighted-average assumptions used to determine net periodic pension cost:					
Discount rate	4.00	% 4.00	% 4.00	% 4.25	%
Rate of compensation increase	5.00	% 5.00	% N/A	N/A	
Expected return on plan assets	N/A	N/A	4.75	% 6.25	%

## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

The amounts reported for net periodic pension cost and the respective benefit obligation amounts are dependent upon the actuarial assumptions used. The company reviews historical trends, future expectations, current market conditions, and external data to determine the assumptions. The discount rate represents the market rate for a high-quality corporate bond. The rate of compensation increase is determined by the company, based upon its long-term plans for such increases. The expected return on plan assets is based on current and expected asset allocations, historical trends, and projected returns on those assets. The actuarial assumptions used to determine the net periodic pension cost are based upon the prior year's assumptions used to determine the benefit obligation.

Benefit payments are expected to be paid as follows:

	Arrow SERP	Wyle Defined Benefit Plan
2018	\$4,535	\$ 3,133
2019	5,902	3,216
2020	5,852	3,232
2021	5,797	3,273
2022	5,998	3,361
2023-2026	32,652	17,207

The company makes contributions to the Wyle defined benefit plan so that minimum contribution requirements, as determined by government regulations, are met. The company made contributions of \$14,000 in 2017. The company did not make any contributions in 2016. The company is planning on contributing \$15,000 to the plan in 2018, however, there is no requirement to make any contributions in 2018. The company has funded \$86,587 of the Arrow SERP obligation for the former corporate officers in a rabbi trust comprised primarily of life insurance policies and mutual fund assets.

The fair values of the company's pension plan assets for the Wyle defined benefit plan at December 31, 2017, utilizing the fair value hierarchy discussed in Note 7, are as follows:

	Level 1	Level 2	Level 3	Total
Equities:				
U.S. common stocks	\$17,039	\$ —	—	—\$17,039
International mutual funds	6,975	—	—	6,975
Index mutual funds	2,942	—	—	2,942
Fixed Income:				
Mutual funds	19,707	—	—	19,707
Total	\$46,663	\$ —	—	—\$46,663

The fair values of the company's pension plan assets for the Wyle defined benefit plan at December 31, 2016, utilizing the fair value hierarchy discussed in Note 7, are as follows:

	Level 1	Level 2	Level 3	Total
Equities:				



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U.S. common stocks	\$29,020	\$—	\$	—\$29,020
International mutual funds	10,791	—	—	10,791
Index mutual funds	8,501	—	—	8,501
Fixed Income:				
Mutual funds	21,047	—	—	21,047
Insurance contracts	—	2,111	—	2,111
Total	\$69,359	\$2,111	\$	—\$71,470

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## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

The investment portfolio contains a diversified blend of common stocks, bonds, cash equivalents, and other investments, which may reflect varying rates of return. The company accounts for common stock and mutual fund investments at fair value, using quoted market prices. The investments are further diversified within each asset classification. The portfolio diversification provides protection against a single security or class of securities having a disproportionate impact on aggregate performance. The long-term target allocations for plan assets are 58% in equities and 42% in fixed income, although the actual plan asset allocations may be within a range around these targets. The actual asset allocations are reviewed and rebalanced on a periodic basis to maintain the target allocations.

## Comprehensive Income Items

In 2017, 2016, and 2015, actuarial losses of \$3,795, \$740, and \$185, respectively, were recognized in comprehensive income, net of related taxes, related to the company's defined benefit plans. In 2017, 2016, and 2015, a reclassification adjustment of comprehensive income was recognized, net of related taxes, as a result of being recognized in net periodic pension cost for an actuarial loss of \$12,070, \$10,625, and \$3,282, respectively.

Accumulated other comprehensive income (loss) at December 31, 2017 and 2016 includes unrecognized actuarial losses, net of related taxes, of \$28,569 and \$36,841, respectively, that have not yet been recognized in net periodic pension cost.

The actuarial loss included in accumulated other comprehensive income (loss), net of related taxes, which is expected to be recognized in net periodic pension cost is \$1,439 as of December 31, 2018.

## Defined Contribution Plan

The company has defined contribution plans for eligible employees, which qualify under Section 401(k) of the Internal Revenue Code. The company's contribution to the plans, which are based on a specified percentage of employee contributions, amounted to \$13,627, \$13,432, and \$13,604 in 2017, 2016, and 2015, respectively. The company made discretionary contributions to the company's defined benefit 401(k) plan, which amounted to \$7,574, \$7,572, and \$7,151 in 2017, 2016, and 2015, respectively. Certain international subsidiaries maintain separate defined contribution plans for their employees and made contributions thereunder, which amounted to \$18,815, \$12,882, and \$11,465 in 2017, 2016, and 2015, respectively.

## 14. Lease Commitments

The company leases certain office, distribution, and other property under non-cancelable operating leases expiring at various dates through 2033. Rental expense under non-cancelable operating leases, net of sublease income, amounted to \$83,636, \$78,521, and \$77,405 in 2017, 2016, and 2015, respectively.

Aggregate minimum rental commitments under all non-cancelable operating leases, exclusive of real estate taxes, insurance, and leases related to facilities closed as a result of the integration of acquired businesses and the restructuring of the company, are as follows:

2018	\$75,058
2019	64,397
2020	49,616
2021	37,157
2022	27,964

Thereafter 135,079

## 15. Contingencies

### Environmental Matters

In connection with the purchase of Wyle in August 2000, the company acquired certain of the then outstanding obligations of Wyle, including Wyle's indemnification obligations to the purchasers of its Wyle Laboratories division for environmental clean-up costs associated with any then existing contamination or violation of environmental regulations. Under the terms of the

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ARROW ELECTRONICS, INC.

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(Dollars in thousands except per share data)

company's purchase of Wyle from the sellers, the sellers agreed to indemnify the company for certain costs associated with the Wyle environmental obligations, among other things. In 2012, the company entered into a settlement agreement with the sellers pursuant to which the sellers paid \$110,000 and the company released the sellers from their indemnification obligation. As part of the settlement agreement the company accepted responsibility for any potential subsequent costs incurred related to the Wyle matters. The company is aware of two Wyle Laboratories facilities (in Huntsville, Alabama and Norco, California) at which contaminated groundwater was identified and will require environmental remediation. In addition, the company was named as a defendant in several lawsuits related to the Norco facility and a third site in El Segundo, California which have now been settled to the satisfaction of the parties.

The company expects these environmental liabilities to be resolved over an extended period of time. Costs are recorded for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated. Accruals for environmental liabilities are adjusted periodically as facts and circumstances change, assessment and remediation efforts progress, or as additional technical or legal information becomes available. Environmental liabilities are difficult to assess and estimate due to various unknown factors such as the timing and extent of remediation, improvements in remediation technologies, and the extent to which environmental laws and regulations may change in the future. Accordingly, the company cannot presently fully estimate the ultimate potential costs related to these sites until such time as a substantial portion of the investigation at the sites is completed and remedial action plans are developed and, in some instances, implemented. To the extent that future environmental costs exceed amounts currently accrued by the company, net income would be adversely impacted and such impact could be material.

Accruals for environmental liabilities are included in "Accrued expenses" and "Other liabilities" in the company's consolidated balance sheets. The company has determined that there is no amount within the environmental liability range that is a better estimate than any other amount, and therefore has recorded the accruals at the minimum amount of the ranges.

As successor-in-interest to Wyle, the company is the beneficiary of various Wyle insurance policies that covered liabilities arising out of operations at Norco and Huntsville. To date, the company has recovered approximately \$37,000 from certain insurance carriers relating to environmental clean-up matters at the Norco site. The company is considering the best way to pursue its potential claims against insurers regarding liabilities arising out of operations at Huntsville. The resolution of these matters will likely take several years. The company has not recorded a receivable for any potential future insurance recoveries related to the Norco and Huntsville environmental matters, as the realization of the claims for recovery are not deemed probable at this time.

The company believes the settlement amount together with potential recoveries from various insurance policies covering environmental remediation and related litigation will be sufficient to cover any potential future costs related to the Wyle acquisition; however, it is possible unexpected costs beyond those anticipated could occur.

#### Environmental Matters - Huntsville

In February 2015, the company and the Alabama Department of Environmental Management ("ADEM") finalized and executed a consent decree in connection with the Huntsville, Alabama site. Characterization of the extent of contaminated soil and groundwater continues at the site. Under the direction of the ADEM, approximately \$6,000 was spent to date. The pace of the ongoing remedial investigations, project management, and regulatory oversight is likely to increase somewhat and though the complete scope of the activities is not yet known, the company currently estimates additional investigative and related expenditures at the site of approximately \$200 to \$400. The nature and scope of both feasibility studies and subsequent remediation at the site has not yet been determined, but assuming the

outcome includes source control and certain other measures, the cost is estimated to be between \$4,500 and \$10,000.

Despite the amount of work undertaken and planned to date, the company is unable to estimate any potential costs in addition to those discussed above because the complete scope of the work is not yet known, and, accordingly, the associated costs have yet to be determined.

#### Environmental Matters - Norco

In October 2003, the company entered into a consent decree with Wyle Laboratories and the California Department of Toxic Substance Control ("DTSC") in connection with the Norco site. In April 2005, a Remedial Investigation Work Plan was approved by DTSC that provided for site-wide characterization of known and potential environmental issues. Investigations performed in connection with this work plan and a series of subsequent technical memoranda continued until the filing of a final Remedial

## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

Investigation Report early in 2008. Work is under way pertaining to the remediation of contaminated groundwater at certain areas on the Norco site and of soil gas in a limited area immediately adjacent to the site. In 2008, a hydraulic containment system was installed to capture and treat groundwater before it moves into the adjacent offsite area. In September 2013, the DTSC approved the final Remedial Action Plan ("RAP") and work is currently progressing under the RAP. The approval of the RAP includes the potential for additional remediation action after the five year review of the hydraulic containment system if the review finds that contaminants have not been sufficiently reduced in the offsite area.

Approximately \$56,000 was spent to date on remediation, project management, regulatory oversight, and investigative and feasibility study activities. The company currently estimates that these activities will give rise to an additional \$18,500 to \$29,000. Project management and regulatory oversight include costs incurred by project consultants for project management and costs billed by DTSC to provide regulatory oversight.

Despite the amount of work undertaken and planned to date, the company is unable to estimate any potential costs in addition to those discussed above because the complete scope of the work under the RAP is not yet known, and, accordingly, the associated costs have yet to be determined.

## Other

From time to time, in the normal course of business, the company may become liable with respect to other pending and threatened litigation, environmental, regulatory, labor, product, and tax matters. While such matters are subject to inherent uncertainties, it is not currently anticipated that any such matters will materially impact the company's consolidated financial position, liquidity, or results of operations.

## 16. Segment and Geographic Information

The company is a global provider of products, services, and solutions to industrial and commercial users of electronic components and enterprise computing solutions. The company distributes electronic components to original equipment manufacturers and contract manufacturers through its global components business segment and provides enterprise computing solutions to value-added resellers through its global ECS business segment. As a result of the company's philosophy of maximizing operating efficiencies through the centralization of certain functions, selected fixed assets and related depreciation, as well as borrowings, are not directly attributable to the individual operating segments and are included in the corporate business segment.

Sales and operating income (loss), by segment, for the years ended December 31 are as follows:

	2017	2016	2015
Sales:			
Global components	\$18,330,456	\$15,408,839	\$14,405,793
Global ECS	8,482,052	8,416,422	8,876,227
Consolidated	\$26,812,508	\$23,825,261	\$23,282,020
Operating income (loss):			
Global components	\$801,027	\$686,466	\$649,396
Global ECS	445,081	441,803	424,063
Corporate (a)	(317,658)	(269,730)	(248,977)
Consolidated	\$928,450	\$858,539	\$824,482

(a) Includes restructuring, integration, and other charges of \$91,294, \$73,602, and \$68,765 in 2017, 2016, and 2015, respectively, as well as an impairment on assets held for sale of \$21,000 in 2017.

ARROW ELECTRONICS, INC.

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(Dollars in thousands except per share data)

Total assets, by segment, at December 31 are as follows:

	2017	2016
Global components	\$10,229,168	\$8,360,926
Global ECS	5,430,217	5,053,172
Corporate	803,424	792,268
Consolidated	\$16,462,809	\$14,206,366

Sales, by geographic area, for the years ended December 31 are as follows:

	2017	2016	2015
Americas (b)	\$12,408,383	\$11,442,690	\$11,721,528
EMEA	7,673,348	6,772,685	6,788,738
Asia/Pacific	6,730,777	5,609,886	4,771,754
Consolidated	\$26,812,508	\$23,825,261	\$23,282,020

(b) Includes sales related to the United States of \$11,321,917, \$10,501,131, and \$10,761,932 in 2017, 2016, and 2015, respectively.

Net property, plant, and equipment, by geographic area, is as follows:

	2017	2016
Americas (c)	\$688,637	\$631,386
EMEA	108,232	90,834
Asia/Pacific	41,606	34,079
Consolidated	\$838,475	\$756,299

(c) Includes net property, plant, and equipment related to the United States of \$683,988 and \$626,964 at December 31, 2017 and 2016, respectively.



## ARROW ELECTRONICS, INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands except per share data)

## 17. Quarterly Financial Data (Unaudited)

The company operates on a quarterly calendar that closes on the Saturday closest to the end of the calendar quarter.

A summary of the company's consolidated quarterly results of operations is as follows:

	First Quarter	Second Quarter (b)	Third Quarter	Fourth Quarter (c)
2017				
Sales	\$5,759,552	\$6,465,346	\$6,953,740	\$7,633,870
Gross profit	759,887	823,966	843,358	930,128
Operating income	191,722	229,822	235,992	270,914
Net income attributable to shareholders	113,768	99,679	134,630	53,885
Net income per share (a):				
Basic	\$1.27	\$1.12	\$1.52	\$0.61
Diluted	\$1.26	\$1.11	\$1.50	\$0.60
2016				
Sales	\$5,474,177	\$5,972,101	\$5,936,092	\$6,442,891
Gross profit	748,898	798,791	773,162	823,348
Operating income	181,364	223,592	198,684	254,899
Net income attributable to shareholders	106,235	134,270	117,727	164,518
Net income per share (a):				
Basic	\$1.16	\$1.46	\$1.29	\$1.84
Diluted	\$1.14	\$1.45	\$1.28	\$1.81

Quarterly net income per share is calculated using the weighted-average shares outstanding during each quarterly period, while net income per share for the full year is calculated using the weighted-average shares outstanding during the year. Therefore, the sum of the net income per share for each of the four quarters may not equal the net income per share for the full year.

(a) Net income attributable to shareholders includes a loss on extinguishment of debt of \$58.8 million during the second quarter of 2017

(b) Net income attributable to shareholders includes a U.S. Tax Act expense of \$124.7 million during the fourth quarter of 2017.

## 18. Assets Held for Sale

During fiscal year 2017, the company took actions to actively market a non-strategic business. The sale is expected to close within one year. Total assets of \$109,000 and total liabilities of \$76,000 have not been reclassified as held for sale on the consolidated balance sheet given the immaterial nature of the business. The company recorded a pre-tax impairment charge of \$21,000 to write-down the assets held for sale to the fair value less cost to sell, inclusive of a \$7,922, \$9,660, and \$3,418 impairment of goodwill, intangibles, and property, plant, and equipment respectively. Pre-tax profit of the business held for sale was not material for the years ended December 31, 2017, 2016, and 2015, respectively.



ARROW ELECTRONICS, INC.

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#### 19. Subsequent Events

In January 2018, the company acquired eInfochips for a purchase price of approximately \$318,000. eInfochips services customers at every phase of technology deployment, including custom hardware and software, and new Internet of Things based business models. eInfochips will be recorded in the company's global components business segment.

In January 2018, the company acquired Commtech for a purchase price of approximately \$22,000. Commtech is a value-added distributor of enterprise computing solutions.

#### Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

#### Item 9A. Controls and Procedures.

##### Evaluation of Disclosure Controls and Procedures

The company's management, under the supervision and with the participation of the company's Chief Executive Officer and Chief Financial Officer, carried out an evaluation of the effectiveness of the design and operation of the company's disclosure controls and procedures as of December 31, 2017 (the "Evaluation"). Based upon the Evaluation, the company's Chief Executive Officer and Chief Financial Officer concluded that the company's disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934) are effective.

##### Management's Report on Internal Control Over Financial Reporting

The company's management is responsible for establishing and maintaining adequate "internal control over financial reporting" (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)). Management evaluates the effectiveness of the company's internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Management, under the supervision and with the participation of the company's Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2017, and concluded that it is effective.

The company acquired three separate entities during the year ended December 31, 2017, which are included in the company's 2017 consolidated financial statements and constituted less than 1.0% of total and net assets as of December 31, 2017 and less than 1.0% of sales and net income attributable to shareholders for the year ended December 31, 2017. The company has excluded these three entities from its annual assessment of and conclusion on the effectiveness of the company's internal control over financial reporting.

The company's independent registered public accounting firm, Ernst & Young LLP, has audited the effectiveness of the company's internal control over financial reporting as of December 31, 2017, as stated in their report, which is included herein.



## Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Arrow Electronics, Inc.

### Opinion on Internal Control Over Financial Reporting

We have audited Arrow Electronics, Inc.'s internal control over financial reporting as of December 31, 2017, 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). In our opinion, Arrow Electronics, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of three separate entities acquired during the year ended December 31, 2017, which are included in the 2017 consolidated financial statements of the Company and constituted less than 1.0% of total and net assets as of December 31, 2017 and less than 1.0% of sales and net income attributable to shareholders for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of these three entities.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income, equity and cash flows for each of the three years in the period ended December 31, 2017 and our report dated February 6, 2018 expressed an unqualified opinion thereon.

### Basis for Opinion

The Company'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 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 are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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.

### Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that

transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP  
Denver, Colorado  
February 6, 2018

Item 9B. Other Information.

None.

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### PART III

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

See "Executive Officers" in Part I of this Annual Report on Form 10-K. In addition, the information set forth under the headings "Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" in the company's Proxy Statement, filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, are incorporated herein by reference.

Information about the company's audit committee financial experts set forth under the heading "The Board and its Committees" in the company's Proxy Statement, filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, is incorporated herein by reference.

Information about the company's code of ethics governing the Chief Executive Officer, Chief Financial Officer, and Corporate Controller, known as the "Finance Code of Ethics," as well as a code of ethics governing all employees, known as the "Worldwide Code of Business Conduct and Ethics," is available free of charge on the company's website at <http://www.arrow.com> and is available in print to any shareholder upon request.

Information about the company's "Corporate Governance Guidelines" and written committee charters for the company's Audit Committee, Compensation Committee, and Corporate Governance Committee is available free of charge on the company's website at <http://www.arrow.com> and is available in print to any shareholder upon request.

#### Item 11. Executive Compensation.

The information required by Item 11 is included in the company's Proxy Statement filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, and is incorporated herein by reference.

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

The information required by Item 12 is included in the company's Proxy Statement filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, and is incorporated herein by reference.

#### Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by Item 13 is included in the company's Proxy Statement filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, and is incorporated herein by reference.

#### Item 14. Principal Accounting Fees and Services.

The information required by Item 14 is included in the company's Proxy Statement filed in connection with the Annual Meeting of Shareholders scheduled to be held on May 10, 2018, and is incorporated herein by reference.



PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) The following documents are filed as part of this report: Page

1. Financial Statements.

Report of Independent Registered Public Accounting Firm 38

Consolidated Statements of Operations for the years ended December 31, 2017, 2016, and 2015 39

Consolidated Statements of Comprehensive Income for the years ended December 31, 2017, 2016, and 2015 40

Consolidated Balance Sheets as of December 31, 2017 and 2016 41

Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016, and 2015 42

Consolidated Statements of Equity for the years ended December 31, 2017, 2016, and 2015 43

Notes to the Consolidated Financial Statements 44

2. Financial Statement Schedule.

Schedule II - Valuation and Qualifying Accounts 87

All other schedules are omitted since the required information is not present, or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements, including the notes thereto.

3. Exhibits.

See Index of Exhibits included on pages 81 - 86

INDEX OF EXHIBITS

Exhibit  
Number Exhibit

3(a)(i) Certificate of Amendment of the Restated Certificate of Incorporation of the company, dated as of October 12, 2000 (incorporated by reference to Exhibit 3(a)(iii) to the company's Annual Report on Form 10-K for the year ended December 31, 2000, Commission File No. 1-4482).

3(b) Amended Corporate By-Laws, dated July 29, 2004 (incorporated by reference to Exhibit 3(ii) to the company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004, Commission File No. 1-4482).

4(a)(i) Indenture, dated as of January 15, 1997, between the company and The Bank of New York Mellon (formerly, the Bank of Montreal Trust Company), as Trustee (incorporated by reference to Exhibit 4(b)(i) to the company's Annual Report on Form 10-K for the year ended December 31, 1996, Commission File No. 1-4482).

4(a)(ii) Officers' Certificate, as defined by the Indenture in 4(a)(i) above, dated as of January 22, 1997, with respect to the company's \$200,000,000 7% Senior Notes due 2007 and \$200,000,000 7 1/2% Senior Debentures due 2027 (incorporated by reference to Exhibit 4(b)(ii) to the company's Annual Report on Form 10-K for the year ended December 31, 1996, Commission File No. 1-4482).

4(a)(iii) Supplemental Indenture, dated as of September 30, 2009, between the company and The Bank of New York Mellon (as successor to the Bank of Montreal Trust Company), as trustee (incorporated by reference to Exhibit 4.1 to the company's Current Report on Form 8-K dated September 29, 2009, Commission File No. 1-4482).

4(a)(iv) Supplemental Indenture, dated as of November 3, 2010, between the company and The Bank of New York Mellon (as successor to the Bank of Montreal Trust Company), as trustee (incorporated by reference to Exhibit 4.1 to the company's Current Report on Form 8-K dated November 2, 2010, Commission File No. 1-4482).

4(a)(v) Supplemental Indenture, dated as of February 20, 2013, between the company and The Bank of New York Mellon (as successor to the Bank of Montreal Trust Company), as trustee (incorporated by reference to Exhibit 4.1 to the company's Current Report on Form 8-K dated February 14, 2013, Commission File No. 1-4482).

4(a)(vi) Supplemental Indenture, dated as of March 2, 2015, between the company and The Bank of New York Mellon (as successor to the Bank of Montreal Trust Company), as trustee (incorporated by reference to Exhibit 4(a)(x) to the company's Annual Report on Form 10-K for the year ended December 31, 2015, Commission File No. 1-4882).

4(a)(vii) Supplemental Indenture, dated as of June 12, 2017, between the company and US Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the company's Current Report on Form 8-K dated June 12, 2017, Commission File No. 1-4482).

4(a)(viii) Supplemental Indenture, dated as of September 8, 2017, between the company and US Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the company's Current Report on Form 8-K dated September 8, 2017, Commission File No. 1-4482).

10(a) Arrow Electronics Savings Plan, as amended and restated effective January 1, 2012 (incorporated by reference to Exhibit 10(a) to the company's Annual Report on Form 10-K for the year ended December 31, 2012, Commission File No. 1-4482).

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- 10(a)(i) Amendment 3 to the Arrow Electronics Savings Plan effective December 23, 2015 (incorporated by reference to Exhibit 10(a)(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2015, Commission File No. 1-4482).
- 10(b) Wyle Electronics Retirement Plan, as amended and restated on September 9, 2009 (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended October 3, 2009, Commission File No. 1-4482).
- 10(c) Arrow Electronics Stock Ownership Plan, as amended and restated on September 9, 2009 (incorporated by reference to Exhibit 10(c) to the company's Quarterly Report on Form 10-Q for the quarter ended October 3, 2009, Commission File No. 1-4482).
- 10(c)(i) Amendment 4 to the Arrow Electronics Stock Ownership Plan effective December 31, 2012 (incorporated by reference to Exhibit 10(c)(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2012, Commission File No. 1-4482).
- 10(c)(ii) Amendment 6 to the Arrow Electronics Stock Ownership Plan effective December 23, 2015 (incorporated by reference to Exhibit 10(c)(ii) to the company's Annual Report on Form 10-K for the year ended December 31, 2015, Commission File No. 1-4482).
- 10(d)(i) Arrow Electronics, Inc. 2004 Omnibus Incentive Plan (as amended through February 17, 2015) (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended June 27, 2015, Commission File No. 1-4482).
- 10(d)(ii) Form of Non-Qualified Stock Option Award Agreement under 10(d)(i) above (as amended through February 17, 2015) (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended April 1, 2017, Commission File No. 1-4482).
- 10(d)(iii) Form of Performance Stock Unit Award Agreement under 10(d)(i) above (as amended through February 17, 2015) (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended April 1, 2017, Commission File No. 1-4482).
- 10(d)(iv) Form of Restricted Stock Unit Award Agreement under 10(d)(i) above (as amended through February 17, 2015) (incorporated by reference to Exhibit 10(c) to the company's Quarterly Report on Form 10-Q for the quarter ended April 1, 2017, Commission File No. 1-4482).
- 10(e) Non-Employee Directors Deferred Compensation Plan, as amended and restated effective January 1, 2018.
- 10(f) Arrow Electronics, Inc. Supplemental Executive Retirement Plan, as amended effective January 1, 2009 (incorporated by reference to Exhibit 10(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2009, Commission File No. 1-4482).
- 10(g) Arrow Electronics, Inc. Executive Deferred Compensation Plan amended and restated effective January 1, 2009 (incorporated by reference to Exhibit 10(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2011, Commission File No. 1-4482).
- 10(h)(i)

Arrow Electronics, Inc. Executive Severance Policy (incorporated by reference to Exhibit 10.1 to the company's Current Report on Form 8-K dated February 19, 2013, Commission File No. 1-4482).

10(h)(ii) Form of the Arrow Electronics, Inc. Executive Severance Policy Participation Agreement (incorporated by reference to Exhibit 10.2 to the company's Current Report on Form 8-K dated February 19, 2013, Commission File No. 1-4482).

10(h)(iii) Form of Executive Change in Control Retention Agreement (incorporated by reference to Exhibit 10.3 to the company's Current Report on Form 8-K dated February 19, 2013, Commission File No. 1-4482).

- 10(h)(iv) Grantor Trust Agreement, as amended and restated on November 11, 2003, by and between Arrow Electronics, Inc. and Wachovia Bank, N.A. (incorporated by reference to Exhibit 10(i)(xvii) to the company's Annual Report on Form 10-K for the year ended December 31, 2003, Commission File No. 1-4482).
- 10(h)(v) First Amendment, dated September 17, 2004, to the amended and restated Grantor Trust Agreement in 10(h)(iv) above by and between Arrow Electronics, Inc. and Wachovia Bank, N.A. (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004, Commission File No. 1-4482).
- 10(h)(vi) Paying Agency Agreement, dated November 11, 2003, by and between Arrow Electronics, Inc. and Wachovia Bank, N.A. (incorporated by reference to Exhibit 10(d)(iii) to the company's Annual Report on Form 10-K for the year ended December 31, 2003, Commission File No. 1-4482).
- 10(i) Second Amended and Restated Credit Agreement, dated as of December 23, 2016, among Arrow Electronics, Inc. and certain of its subsidiaries, as borrowers, the lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as administrative agent and BNP Paribas, Bank of America, N.A., The Bank of Nova Scotia, The Bank of Tokyo-Mitsubishi UFJ, Ltd., ING Bank N.V., Dublin Branch, Mizuho Bank, LTD., and Sumitomo Mitsui Banking Corporation as syndication agents (incorporated by reference to Exhibit 10(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2016, Commission File No. 1-4482).
- 10(j)(i) Transfer and Administration Agreement, dated as of March 21, 2001, by and among Arrow Electronics Funding Corporation, Arrow Electronics, Inc., individually and as Master Servicer, the several Conduit Investors, Alternate Investors and Funding Agents and Bank of America, National Association, as administrative agent (incorporated by reference to Exhibit 10(m)(i) to the company's Annual Report on Form 10-K for the year ended December 31, 2001, Commission File No. 1-4482).
- 10(j)(ii) Amendment No. 1 to the Transfer and Administration Agreement, dated as of November 30, 2001, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(ii) to the company's Annual Report on Form 10-K for the year ended December 31, 2001, Commission File No. 1-4482).
- 10(j)(iii) Amendment No. 2 to the Transfer and Administration Agreement, dated as of December 14, 2001, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(iii) to the company's Annual Report on Form 10-K for the year ended December 31, 2001, Commission File No. 1-4482).
- 10(j)(iv) Amendment No. 3 to the Transfer and Administration Agreement, dated as of March 20, 2002, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(iv) to the company's Annual Report on Form 10-K for the year ended December 31, 2001, Commission File No. 1-4482).
- 10(j)(v) Amendment No. 4 to the Transfer and Administration Agreement, dated as of March 29, 2002, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(v) to the company's Annual Report on Form 10-K for the year ended December 31, 2002, Commission File No.

1-4482).

10(j)(vi) Amendment No. 5 to the Transfer and Administration Agreement, dated as of May 22, 2002, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(vi) to the company's Annual Report on Form 10-K for the year ended December 31, 2002, Commission File No. 1-4482).

10(j)(vii) Amendment No. 6 to the Transfer and Administration Agreement, dated as of September 27, 2002, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(vii) to the company's Annual Report on Form 10-K for the year ended December 31, 2002, Commission File No. 1-4482).

10(j)(viii) Amendment No. 7 to the Transfer and Administration Agreement, dated as of February 19, 2003, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 99.1 to the company's Current Report on Form 8-K dated February 6, 2003, Commission File No. 1-4482).

10(j)(ix) Amendment No. 8 to the Transfer and Administration Agreement, dated as of April 14, 2003, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(ix) to the company's Annual Report on Form 10-K for the year ended December 31, 2003, Commission File No. 1-4482).

10(j)(x) Amendment No. 9 to the Transfer and Administration Agreement, dated as of August 13, 2003, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(x) to the company's Annual Report on Form 10-K for the year ended December 31, 2003, Commission File No. 1-4482).

10(j)(xi) Amendment No. 10 to the Transfer and Administration Agreement, dated as of February 18, 2004, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n)(xi) to the company's Annual Report on Form 10-K for the year ended December 31, 2003, Commission File No. 1-4482).

10(j)(xii) Amendment No. 11 to the Transfer and Administration Agreement, dated as of August 13, 2004, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004, Commission File No. 1-4482).

10(j)(xiii) Amendment No. 12 to the Transfer and Administration Agreement, dated as of February 14, 2005, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(o)(xiii) to the company's Annual Report on Form 10-K for the year ended December 31, 2004, Commission File No. 1-4482).

10(j)(xiv) Amendment No. 13 to the Transfer and Administration Agreement, dated as of February 13, 2006, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(o)(xiv) to the company's Annual Report on Form 10-K for the year ended December 31, 2005, Commission File No. 1-4482).

10(j)(xv) Amendment No. 14 to the Transfer and Administration Agreement, dated as of October 31, 2006, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(o)(xv) to the company's Annual Report on Form 10-K for the year ended December 31, 2006, Commission File No. 1-4482).

10(j)(xvi) Amendment No. 15 to the Transfer and Administration Agreement, dated as of February 12, 2007, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(o)(xvi) to the company's Annual Report on Form 10-K for the year ended December 31, 2006, Commission File No. 1-4482).

10(j)(xvii) Amendment No. 16 to the Transfer and Administration Agreement, dated as of March 27, 2007, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2007, Commission File



No. 1-4482).

10(j)(xviii) Amendment No. 17 to the Transfer and Administration Agreement, dated as of March 26, 2010, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n) to the company's Current Report on Forms 8-K and 8-K/A dated March 31, 2010, Commission File No. 1-4482).

10(j)(xix) Amendment No. 18 to the Transfer and Administration Agreement, dated as of December 15, 2010, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(n) to the company's Current Report on Form 8-K/A dated January 13, 2011, Commission File No.1-4482).

- 10(j)(xx) Amendment No. 19 to the Transfer and Administration Agreement, dated as of February 14, 2011, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(xx) to the company's Annual Report on Form 10-K for the year ended December 31, 2011, Commission File No. 1-4482).
- 10(j)(xxi) Amendment No. 20 to the Transfer and Administration Agreement, dated as of December 7, 2011, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10.1 to the company's Current Report on Form 8-K dated December 12, 2011, Commission File No.1-4482).
- 10(j)(xxii) Amendment No. 21 to the Transfer and Administration Agreement, dated as of March 30, 2012, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(xxii) to the company's Annual Report on Form 10-K for the year ended December 31, 2012, Commission File No. 1-4482).
- 10(j)(xxiii) Amendment No. 22 to the Transfer and Administration Agreement, dated as of August 29, 2012, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(m)(xxiii) to the company's Annual Report on Form 10-K for the year ended December 31, 2012, Commission File No. 1-4482).
- 10(j)(xxiv) Amendment No. 23 to the Transfer and Administration Agreement, dated as of July 29, 2013, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(k)(xxiv) to the company's Annual Report on Form 10-K for the year ended December 31, 2013, Commission File No. 1-4482).
- 10(j)(xxv) Amendment No. 24 to the Transfer and Administration Agreement, dated as of March 24, 2014, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10.1 to the company's Current Report on Form 8-K dated March 27, 2014, Commission File No. 1-4482).
- 10(j)(xxvi) Amendment No. 25 to the Transfer and Administration Agreement, dated as of March 9, 2015, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended March 28, 2015, Commission File No. 1-4482).
- 10(j)(xxvii) Partial Release of Receivables related to the Transfer and Administration Agreement, dated as of March 11, 2016, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended April 2, 2016, Commission File No. 1-4482).
- 10(j)(xxviii) Amendment No. 26 to the Transfer and Administration Agreement, dated as of September 19, 2016, to the Transfer and Administration Agreement in 10(j)(i) above (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended October 1, 2016, Commission File No. 1-4482).
- 10(k)(i) Commercial Paper Private Placement Agreement, dated as of November 9, 1999, among Arrow Electronics, Inc., as issuer, and Chase Securities Inc., Bank of America Securities LLC, Goldman, Sachs & Co., and Morgan Stanley & Co. Incorporated as placement agents (incorporated by reference to Exhibit 10(g) to the company's Annual Report on Form 10-K for the year ended December 31, 1999.

Commission File No. 1-4482).

10(k)(ii)

Amendment No. 1, dated as of October 11, 2011, to Dealer Agreement dated as of November 9, 1999, between Arrow Electronics, Inc. and J.P. Morgan Securities LLC (f.k.a. Chase Securities Inc.), Merrill Lynch, Pierce, Fenner & Smith Incorporated (f.k.a. Bank of America Securities LLC), Goldman, Sachs & Co. and Morgan Stanley & Co. LLC (f.k.a. Morgan Stanley & Co. Incorporated) (incorporated by reference to Exhibit 10(n)(ii) to the company's Annual Report on Form 10-K for the year ended December 31, 2011, Commission File No. 1-4482).

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- Amendment No. 2, dated as of October 20, 2014, to Dealer Agreement dated as of November 9, 1999, between Goldman, Sachs & Co., J.P. Morgan Securities LLC (f.k.a. Chase Securities Inc.), Morgan Stanley & Co. LLC (f.k.a. Morgan Stanley & Co. Incorporated), Merrill Lynch, Pierce, Fenner & Smith Incorporated (f.k.a. Bank of America Securities LLC) and Arrow Electronics, Inc., as amended by Amendment No. 1 (incorporated by reference to Exhibit 10(a) to the company's Quarterly Report on Form 10-Q for the quarter ended September 27, 2014, Commission File No. 1-4482).
- Issuing and Paying Agency Agreement, dated as of October 20, 2014, by and between Arrow Electronics, Inc. and BNP Paribas (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended September 27, 2014, Commission File No. 1-4482).
- Amendment No. 3, dated as of January 6, 2016, to Dealer Agreement dated as of November 9, 1999, between Goldman, Sachs & Co., J.P. Morgan Securities LLC (f.k.a. Chase Securities Inc.), Morgan Stanley & Co. LLC (f.k.a. Morgan Stanley & Co. Incorporated), Merrill Lynch, Pierce, Fenner & Smith Incorporated (f.k.a. Bank of America Securities LLC) and Arrow Electronics, Inc., as amended by Amendment No. 1 and Amendment No. 2. (incorporated by reference to Exhibit 10(b) to the company's Quarterly Report on Form 10-Q for the quarter ended April 2, 2016, Commission File No. 1-4482).
- Form of Indemnification Agreement between the company and each director (incorporated by reference to Exhibit 10(g) to the company's Annual Report on Form 10-K for the year ended December 31, 1986, Commission File No. 1-4482).
- Management Insurance Program Agreement, dated as of September 16, 2015 (incorporated by reference to Exhibit 10(m) to the company's Annual Report on Form 10-K for the year ended December 31, 2015, Commission File No. 1-4482).
- Subsidiary Listing.
- Consent of Independent Registered Public Accounting Firm.
- Certification of Chief Executive Officer pursuant to Rule 13A-14(a)/15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- Certification of Chief Financial Officer pursuant to Rule 13A-14(a)/15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- Certification of Chief 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.LAB XBRL Taxonomy Extension Label Linkbase Document.

101.PRE XBRL Taxonomy Extension Presentation Linkbase Documents.

101.DEF XBRL Taxonomy Definition Linkbase Document.

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ARROW ELECTRONICS, INC.  
 SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS  
 (In thousands)

	Balance at beginning of year	Charged to income	Other (a)	Write-down	Balance at end of year
Allowance for doubtful accounts:					
Year ended December 31, 2017	\$ 52,256	\$12,887	\$2,831	\$ 11,683	\$56,291
Year ended December 31, 2016	\$ 49,659	\$8,336	\$(392 )	\$ 5,347	\$52,256
Year ended December 31, 2015	\$ 59,188	\$(8 )	\$(383 )	\$ 9,138	\$49,659

(a) "Other" primarily includes the effect of fluctuations in foreign currencies and the allowance for doubtful accounts of the businesses acquired by the company.

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.

ARROW ELECTRONICS, INC.

By: /s/ Gregory P. Tarpinian  
Gregory P. Tarpinian  
Senior Vice President, General Counsel, and Secretary  
February 6, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 6, 2018:

By: /s/ Michael  
J. Long  
Michael  
J. Long,  
Chairman,  
President,  
and Chief  
Executive  
Officer  
(principal  
executive  
officer)

By: /s/ Chris D.  
Stansbury  
Chris D.  
Stansbury,  
Senior Vice  
President  
and Chief  
Financial  
Officer  
(principal  
financial and  
accounting  
officer)

By: /s/ Barry W.  
Perry  
Barry W.  
Perry, Lead

Independent  
Director

By: /s/ Philip K.  
Asherman  
Philip K.  
Asherman,  
Director

By: /s/ Steven H.  
Gunby  
Steven H.  
Gunby,  
Director

By: /s/ Gail E.  
Hamilton  
Gail E.  
Hamilton,  
Director

By: /s/ Richard  
S. Hill  
Richard  
S. Hill,  
Director

By: /s/ Fran  
Keeth  
Fran  
Keeth,  
Director

By: /s/ Andrew  
C. Kerin  
Andrew  
C. Kerin,  
Director

By: /s/ Stephen  
C. Patrick  
Stephen  
C. Patrick,  
Director