



2017 Irish Statutory Accounts

PENTAIR PUBLIC LIMITED COMPANY

Directors' Report and Consolidated Financial Statements

For the Year Ended December 31, 2017

Company Registration Number: 536025

Table of Contents

	<u>Page</u>
Directors' Report	1
Statement of Directors' Responsibilities	21
Independent Auditor's Report to the Members of Pentair plc (the "GROUP")	22
Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss)	28
Consolidated Balance Sheets	29
Consolidated Statements of Cash Flows	30
Consolidated Reconciliation of Movements in Shareholders' Funds	31
Notes to Consolidated Financial Statements	32
Independent Auditor's Report to the Members of Pentair plc (the "COMPANY")	87
Company Balance Sheets	90
Company Statements of Cash Flows	91
Company Statements of Changes in Equity	92
Notes to Company Financial Statements	93

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DIRECTORS' REPORT

For the Year Ended December 31, 2017

The directors present their report, audited consolidated financial statements for the year ended December 31, 2017, which are set out on pages 1 to 85, and audited parent company financial statements for the year ended December 31, 2017, which are set out on pages 86 to 97.

Pentair plc, is a public limited company, incorporated in the Republic of Ireland under the Companies Act 2014.

The directors have elected to prepare the consolidated financial statements of Pentair plc in accordance with Section 279 of the Companies Act 2014, which provides that a true and fair view of the assets and liabilities, financial position and profit or loss may be given by preparing the financial statements in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") to the extent that the use of those principles in the preparation of the financial statements does not contravene any provision of Part 6 of the Companies Act 2014.

The directors have elected to prepare the Pentair plc parent company financial statements in accordance with generally accepted accounting practice in Ireland ("Irish GAAP"), comprising the Financial Reporting Standards 102 ("FRS 102"), the Financial Reporting Framework applicable in the UK and Republic of Ireland ("relevant financial reporting framework"), together with the Companies Act 2014.

Basis of presentation

The accompanying financial statements reflect the consolidated operations of the parent company (Pentair plc, or the "Company") and its subsidiaries (Pentair plc and all its subsidiaries, hereinafter referred to as "Pentair," "we," "us," "our," or the "Group"). We report our results on a calendar year basis.

History and development

In December 2013, Pentair Ltd.'s Board of Directors approved changing our jurisdiction of organization from Switzerland to Ireland. At an extraordinary meeting of shareholders on May 20, 2014, Pentair Ltd. shareholders voted in favor of a reorganization proposal pursuant to which Pentair Ltd. would merge into Pentair plc and all Pentair Ltd. common shares would be canceled and all holders of such shares would receive ordinary shares of Pentair plc on a one-to-one basis. The reorganization transaction was completed on June 3, 2014, at which time Pentair plc replaced Pentair Ltd. as the ultimate parent company (the "Redomicile"). Shares of Pentair plc began trading on the New York Stock Exchange ("NYSE") on June 3, 2014 under the symbol "PNR," the same symbol under which Pentair Ltd. shares were previously traded.

Although our jurisdiction of organization is Ireland, we manage our affairs so that we are centrally managed and controlled in the United Kingdom (the "U.K.") and therefore have our tax residency in the U.K.

Our former parent company, Pentair Ltd., took its form on September 28, 2012 as a result of a reverse acquisition (the "Merger") involving Pentair, Inc. and an indirect, wholly-owned subsidiary of Flow Control (defined below), with Pentair, Inc. surviving as an indirect, wholly-owned subsidiary of ours. "Flow Control" refers to Pentair Ltd. prior the Merger. Prior to the Merger, Tyco International Ltd. ("Tyco") engaged in an internal restructuring whereby it transferred to Flow Control certain assets related to the flow control business of Tyco, and Flow Control assumed from Tyco certain liabilities related to the flow control business of Tyco. On September 28, 2012 prior to the Merger, Tyco effected a spin-off of Flow Control through the pro-rata distribution of 100% of the outstanding ordinary shares of Flow Control to Tyco's shareholders (the "Distribution"), resulting in the distribution of approximately 110.9 million of our ordinary shares to Tyco's shareholders. The Merger was accounted for as a reverse acquisition under the purchase method of accounting with Pentair, Inc. treated as the acquirer.

On September 18, 2015, we acquired, as part of Electrical, all of the outstanding shares of capital stock of ERICO Global Company ("ERICO") for approximately \$1.8 billion in cash (the "ERICO Acquisition"). ERICO is a leading global manufacturer and marketer of engineered electrical and fastening products for electrical, mechanical and civil applications. ERICO has employees in 30 countries across the world with recognized brands including CADDY fixing, fastening and support products; ERICO electrical grounding, bonding and connectivity products and LENTON engineered systems.

On April 28, 2017 we completed the sale of the Valves & Controls business to Emerson Electric Co. for \$3.15 billion in cash, subject to certain customary adjustments. The sale resulted in a gain, net of tax, of \$181.1 million, net of tax. The results of the Valves & Controls business have been presented as discontinued operations and the related assets and liabilities have been reclassified as held for sale for all periods presented. The Valves & Controls business was previously disclosed as a stand-alone reporting segment.

On May 9, 2017, we announced that our Board of Directors approved a plan to separate our Water business and Electrical business into two independent, publicly-traded companies (the “Proposed Separation”). The Proposed Separation is expected to occur through a tax-free spin-off of the Electrical business to Pentair shareholders.

Completion of the Proposed Separation is subject to certain customary conditions, including, among other things, final approval of the transaction by Pentair’s Board of Directors, receipt of tax opinions and rulings and effectiveness of appropriate filings with the U.S. Securities and Exchange Commission (“SEC”). Upon completion of the Proposed Separation, it is anticipated that Electrical’s jurisdiction of organization will be Ireland, but that it will manage its affairs so that it will be centrally managed and controlled in the U.K. and therefore will have its tax residency in the U.K.

We are targeting April 30, 2018 for the completion of the Proposed Separation; however, there can be no assurance regarding the ultimate timing of the Proposed Separation or that the Proposed Separation will be completed.

See Note 2 for acquisitions completed during 2017.

Our registered address is 10 Earlsfort Terrace, Dublin 2, Ireland. Our executive office is located at 43 London Wall, London, EC2M 5TF, United Kingdom. Our management office in the United States (“U.S.”) is located at 5500 Wayzata Boulevard, Suite 600, Minneapolis, Minnesota.

Principal activities

Pentair plc is the parent company of subsidiaries that are a focused diversified industrial manufacturing company comprising two reporting segments: Water and Electrical. The Water segment designs, manufactures, markets and services innovative water solutions for the filtration, separation, flow and water management challenges in agriculture, foodservice, food and beverage processing, swimming pools, water supply and disposal and a variety of industrial applications. The Electrical segment designs, manufactures, markets, installs and services high performance products and solutions that connect and protect some of the world’s most sensitive equipment, buildings and critical processes.

Pentair strategy

Our strategy is to drive sustainable, profitable growth and return on invested capital improvements through:

- building operational excellence through the Pentair Integrated Management System (“PIMS”) consisting of lean enterprise, growth and talent management;
- driving long-term growth in sales, operating profit and cash flows, through growth and productivity initiatives along with acquisitions;
- developing new products and enhancing existing products;
- penetrating attractive growth markets, particularly outside of the United States;
- expanding multi-channel distribution; and
- proactively managing our business portfolio for optimal value creation, including consideration of new business platforms.

Key performance indicators

Management evaluates performance based on turnover growth and segment income and utilizes free cash flow to assess the Group’s cash flow performance. The segment income and free cash flow measures discussed below are considered “non-U.S. GAAP” financial measures and should be considered supplemental to and not a substitute for financial information prepared in accordance with U.S. GAAP.

Turnover from continuing operations increased by \$46.5 million, or 1.0%, from \$4,890.0 million in 2016 to \$4,936.5 million in 2017. Segment income increased by \$57.7 million, or 6.9%, from \$839.5 million in 2016 to \$897.2 million in 2017. Segment income represents equity income of unconsolidated subsidiaries and operating profit from continuing operations exclusive of intangible asset amortization, certain acquisition related expenses, costs of restructuring activities, “mark-to-market” gain/loss for pension and other post-retirement plans, impairments and other unusual non-operating items. Management utilizes this adjusted financial measure to assess the run-rate of its continuing operations against those of prior periods without the distortion of certain unusual, non-recurring or non-operational items.

The below table presents a reconciliation of profit from continuing operations before taxation to segment income:

<i>In millions, except per-share data</i>	Years ended December 31	
	2017	2016
Profit from continuing operations before taxation	\$ 489.2	\$ 561.0
Adjustments:		
Restructuring and other	30.7	20.6
Separation Costs	53.1	—
Intangible amortization	97.7	96.4
Pension and other post-retirement mark-to-market loss	1.6	4.2
Trade name and other impairment	32.0	13.3
Loss on sale of businesses	4.2	3.9
Loss on early extinguishment of debt	101.4	—
Interest expense, net	87.3	140.1
Segment income	\$ 897.2	\$ 839.5

Free cash flow from continuing operations increased by \$1.7 million, or 0.3%, from \$609.3 million in 2016 to \$611.0 million in 2017. The Group believes free cash flow is an important measure of liquidity because it provides the Group and its investors a measurement of cash generated that is available to pay dividends and repay debt. In addition, free cash flow is used as criterion to measure and pay compensation-based incentives. Free cash flow represents cash flows from operating activities less capital expenditures and proceeds from the sale of tangible assets. The Group’s measure of free cash flow may not be comparable to similarly titled measures reported by other companies.

The following table is a reconciliation of free cash flow:

<i>In millions</i>	Years ended December 31	
	2017	2016
Free cash flow		
Net cash provided by (used for) operating activities of continuing operations	\$ 674.0	\$ 702.4
Capital expenditures	(70.9)	(117.8)
Proceeds from sale of tangible assets	7.9	24.7
Free cash flow from continuing operations	\$ 611.0	\$ 609.3
Net cash provided by (used for) operating activities of discontinued operations	\$ (53.8)	\$ 159.0
Capital expenditures of discontinued operations	(6.8)	(20.4)
Proceeds from sale of property and equipment of discontinued operations	0.3	21.9
Free cash flow	\$ 550.7	\$ 769.8

The Group believes that these non-GAAP financial measures will be useful to investors in order to assess the continuing strength of the Group’s underlying operations.

CONSOLIDATED RESULTS OF OPERATIONS

The consolidated results of continuing operations were as follows:

<i>In millions</i>	<u>Years ended December 31</u>		<u>% / point change</u>
	<u>2017</u>	<u>2016</u>	<u>2017 vs 2016</u>
Turnover	\$ 4,936.5	\$ 4,890.0	1.0%
Cost of sales	3,107.4	3,095.9	0.4%
Gross profit	1,829.1	1,794.1	2.0%
<i>% of turnover</i>	37.1%	36.7%	0.4pts
Selling, general and administrative	1,032.5	979.3	5.4%
<i>% of turnover</i>	20.9%	20.0%	0.9pts
Research and development	115.8	114.1	1.5%
<i>% of turnover</i>	2.3%	2.3%	—pts
Operating profit	680.8	700.7	(2.8)%
<i>% of turnover</i>	13.8%	14.3%	(0.5)pts
Other (income) expense			
Loss on sale of businesses	4.2	3.9	7.7%
Loss on early extinguishment of debt	101.4	—	N.M.
Net interest expense	87.3	140.1	(37.7)%
Profit from continuing operations before taxation	489.2	561.0	(12.8)%
Taxation	9.2	109.4	(91.6)%
<i>Effective tax rate</i>	1.9%	19.5%	(17.6)pts

N.M. Not Meaningful

Turnover

The components of the turnover from continuing operations change were as follows:

	<u>% Change</u>
Volume	(1.0)%
Price	0.5
Core growth	(0.5)
Acquisition	0.9
Currency	0.6
Total	1.0%

The 1.0 percent increase in consolidated net sales in 2017 from 2016 was primarily the result of:

- increased sales volume in our industrial business primarily in the U.S.;
- increased sales related to business acquisitions that occurred in the fourth quarter of 2016 and the first quarter of 2017; and
- favorable foreign currency effects during the year ended December 31, 2017.

These increases were partially offset by:

- continued lower project sales volume particularly in the energy and industrial businesses; and
- large job adjustments to net sales of \$9.7 million in 2017.

Gross profit

The 0.4 percentage point increase in gross profit as a percentage of sales in 2017 from 2016 was primarily the result of:

- selective increases in selling prices to mitigate inflationary cost increases;
- favorable mix as a result of the decline in lower margin project sales and growth in higher margin product sales; and
- higher contribution margin as a result of savings generated from our Pentair Integrated Management System (“PIMS”) initiatives including lean and supply management practices.

These increases were partially offset by:

- inflationary increases related to raw materials and labor costs; and
- large job adjustments negatively impacting gross profit by \$16.4 million in 2017.

Selling, general and administrative (“SG&A”)

The 0.9 percentage point increase in SG&A expense as a percentage of sales in 2017 from 2016 and was driven by:

- restructuring costs of \$30.7 million in 2017, compared to \$20.6 million in 2016;
- costs incurred in anticipation of the Proposed Separation of \$53.1 million in 2017;
- non-cash charges of \$32.0 million related to trade name and other impairments; and
- increased investment in sales and marketing to drive growth.

These increases were partially offset by:

- savings generated from back-office consolidation, reduction in personnel and other lean initiatives;
- a benefit from the reversal of a \$13.3 million indemnification liability in 2017 related to our 2012 transaction with Tyco (now known as Johnson Controls International plc); and
- “mark-to-market” actuarial losses related to pension and other post-retirement benefit plans of \$1.6 million in 2017, compared to \$4.2 million in 2016.

Net interest expense

The 37.7 percent decrease in net interest expense in 2017 from 2016 was primarily the result of:

- the impact of lower debt levels during 2017 compared to 2016. In May 2017, a portion of the proceeds from the sale of the Valves & Controls business was utilized to repay all commercial paper and revolving long term debt and for the early extinguishment of \$1,659.3 million aggregate principal amount of certain series of fixed rate outstanding notes.

Taxation

The 17.6 percentage point decrease in the effective tax rate in 2017 from 2016 was primarily due to:

- net provisional tax benefit of \$84.8 million recognized in 2017 as a result of the enactment of U.S. Tax Reform legislation. We expect our effective tax rate to approximate 18% in future periods, which is an improvement from our historical rate of 20%; and
- the unfavorable tax impact of restructuring costs in 2016 in jurisdictions with low tax benefits.

Principal risks and uncertainties

Investors should carefully consider all of the information in this document and the following risk factors before making an investment decision regarding our securities. Any of the following risks could materially and adversely affect our business, financial condition, results of operations, cash flows and the actual outcome of matters as to which forward-looking statements are made in this document.

Key trends and uncertainties regarding our existing business

The following trends and uncertainties affected our financial performance in 2017 and 2016, and will likely impact our results in the future:

- During 2017 and 2016, we continued execution of certain business restructuring initiatives aimed at reducing our fixed cost structure and, during 2017, began realigning our business in contemplation of the Proposed Separation. We expect that these actions will contribute to margin growth in 2018.
- We have identified specific product and geographic market opportunities that we find attractive and continue to pursue, both within and outside the United States. We are reinforcing our businesses to more effectively address these opportunities through research and development and additional sales and marketing resources. Unless we successfully penetrate these markets, our core sales growth will likely be limited or may decline.
- We have experienced material and other cost inflation. We strive for productivity improvements, and we implement increases in selling prices to help mitigate this inflation. We expect the current economic environment will result in continuing price volatility for many of our raw materials, and we are uncertain as to the timing and impact of these market changes.

Risks Relating to Our Proposed Separation of Our Water Business and Electrical Business by Spin-off

The proposed separation of our Water business and Electrical business is contingent upon the satisfaction of a number of conditions, may require significant time and attention of our management and may have an adverse effect on us whether or not it is completed.

On May 9, 2017, we announced that our Board of Directors approved a plan to separate our Water business and Electrical business into two independent, publicly-traded companies through a spin-off. Completion of the spin-off will be contingent upon customary conditions, including obtaining final approval from our Board of Directors, receipt of tax opinions and rulings and effectiveness of appropriate filings with the SEC. In addition, the proposed spin-off is complex in nature and may be affected by unanticipated developments or changes in market conditions. For these and other reasons, the spin-off may not be completed on April 30, 2018, as we are targeting, if at all.

Whether or not we complete the spin-off, our ongoing businesses may be adversely affected and we may be subject to certain risks and consequences as a result of pursuing the spin-off, including the following:

- execution of the proposed spin-off will require significant time and attention from management, which may distract management from the operation of our businesses and the execution of other initiatives that may have been beneficial to us;
- our employees may also be distracted due to uncertainty about their future roles with each of the separate companies pending the completion of the spin-off;
- some of our suppliers or customers may delay or defer decisions or may end their relationships with us;
- we will be required to pay certain costs and expenses relating to the spin-off, such as legal, accounting and other professional fees, whether or not it is completed; and
- we may experience negative reactions from the financial markets if we fail to complete the spin-off or fail to complete it on a timely basis.

Any of these factors could have a material adverse effect on our business, financial condition, results of operations, cash flows and trading prices.

We may be unable to achieve some or all of the benefits that we expect to achieve from the spin-off.

Although we believe that separating our Electrical business from our Water business by means of the spin-off will provide financial, operational, managerial and other benefits to us and our shareholders, the spin-off may not provide the results on the scope or on the scale we anticipate, and we may not realize any or all of the intended benefits. In addition, we will incur one-time costs and ongoing costs in connection with, or as a result of, the spin-off, including costs of operating as independent, publicly-traded companies that the two businesses will no longer be able to share. Those costs may exceed our estimates or could negate some of the benefits we expect to realize. If we do not realize the intended benefits or if our costs exceed our estimates, we could suffer a material adverse effect on the business, financial condition, results of operations, cash flows and trading prices.

If the proposed spin-off of our Electrical business is completed, the trading price of our ordinary shares will likely decline and may experience greater volatility.

We expect the trading price of our ordinary shares immediately following the spin-off to be significantly lower than immediately prior to the spin-off because the trading price for our shares will no longer reflect the value of our Electrical business. In addition, until the market has fully analyzed our value without our Electrical business, the price of our shares may experience greater volatility.

If the proposed spin-off is completed, our shares may not match some holders' investment strategies or meet minimum criteria for inclusion in stock market indices or portfolios, which could cause investors to sell their shares. Excessive selling pressure could cause the market price of our shares to decrease further following the completion of the proposed spin-off.

Following the spin-off, the value of our ordinary shares and the ordinary shares of the Electrical business that is spun off may collectively trade at an aggregate price less than that at which the Company's ordinary shares might trade had the spin-off not occurred.

For a number of reasons, our ordinary shares and the ordinary shares of the Electrical business that is spun off that you may hold following the spin-off may collectively trade at a value less than the price at which our ordinary shares might have traded had the spin-off not occurred and we continued to own the Electrical business. These reasons include the future performance of either us or the Electrical business as separate, independent companies and the future shareholder base and market for our ordinary shares and the ordinary shares of the Electrical business and the prices at which these shares individually trade.

The proposed spin-off transaction could result in substantial tax liability to us and our shareholders.

The spin-off is conditioned on our receipt of opinions of tax counsel and tax rulings from taxing authorities. However, these tax opinions will not be binding on taxing authorities. Accordingly, taxing authorities or the courts may reach conclusions with respect to the spin-off that are different from the conclusions reached in the opinions of counsel. Moreover, the opinions of counsel will be based on certain statements and representations made by us, which, if incomplete or inaccurate in any material respect, could invalidate the opinion of counsel. Additionally, certain internal restructuring transactions necessary to accomplish the spin-off may result in adverse tax consequences to us.

If the spin-off and certain related transactions were determined to be taxable, we could be subject to a substantial tax liability that could have a material adverse effect on our financial condition, results of operations and cash flows. In addition, if the spin-off were taxable, each holder of our ordinary shares who receives shares of the Electrical business in the spin-off would generally be treated as receiving a taxable distribution of property in an amount equal to the fair market value of the shares received.

Risks Relating to Our Business

General global economic and business conditions affect demand for our products.

We compete in various geographic regions and product markets around the world. Among these, the most significant are global industrial markets and residential markets. We have experienced, and expect to continue to experience, fluctuations in revenues and operating results due to economic and business cycles. Important factors for our businesses and the businesses of our customers include the overall strength of the economy and our customers' confidence in the economy, industrial and governmental capital spending, the strength of the residential and commercial real estate markets, unemployment rates, availability of consumer and commercial financing, interest rates, and energy and commodity prices. The businesses of many of our industrial customers are to varying degrees cyclical and have experienced periodic downturns. While we attempt to minimize our exposure to economic or market fluctuations by serving a balanced mix of end markets and geographic regions, any of the above factors, individually or in the aggregate, or a significant or sustained downturn in a specific end market or geographic region could reduce demand for our products and services, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We compete in attractive markets with a high level of competition, which may result in pressure on our profit margins and limit our ability to maintain or increase the market share of our products.

The markets for our products and services are geographically diverse and highly competitive. We compete against large and well-established national and global companies, as well as regional and local companies and lower cost manufacturers. We compete based on technical expertise, reputation for quality and reliability, timeliness of delivery, previous installation history, contractual terms and price. Some of our competitors, in particular smaller companies,

attempt to compete based primarily on price, localized expertise and local relationships, especially with respect to products and applications that do not require a great deal of engineering or technical expertise. In addition, during economic downturns average selling prices tend to decrease as market participants compete more aggressively on price. If we are unable to continue to differentiate our products, services and solutions, or if we are forced to cut prices or to incur additional costs to remain competitive, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Volatility in currency exchange rates could have a material adverse effect on our financial condition, results of operations and cash flows.

Sales outside of the United States (“U.S.”) for the year ended December 31, 2017 accounted for 40 percent of our net sales. Our financial statements reflect translation of items denominated in non-U.S. currencies to U.S. dollars. Therefore, if the U.S. dollar strengthens in relation to the principal non-U.S. currencies from which we derive revenue as compared to a prior period, our U.S. dollar reported revenue and income will effectively be decreased to the extent of the change in currency valuations, and vice-versa. Fluctuations in foreign currency exchange rates, most notably the strengthening of the U.S. dollar against the euro, could have a material adverse effect our reported revenue in future periods. In addition, currency variations could have a material adverse effect on margins on sales of our products in countries outside of the U.S. and margins on sales of products that include components obtained from suppliers located outside of the U.S.

Our future growth is dependent upon our ability to continue to adapt our products, services and organization to meet the demands of local markets in both developed and emerging economies and by developing or acquiring new technologies that achieve market acceptance with acceptable margins.

We operate in global markets that are characterized by customer demand that is often global in scope but localized in delivery. We compete with thousands of smaller regional and local companies that may be positioned to offer products produced at lower cost than ours, or to capitalize on highly localized relationships and knowledge that are difficult for us to replicate. Also, in several emerging markets potential customers prefer local suppliers, in some cases because of existing relationships and in other cases because of local legal restrictions or incentives that favor local businesses. Accordingly, our future success depends upon a number of factors, including our ability to adapt our products, services, organization, workforce and sales strategies to fit localities throughout the world, particularly in high growth emerging markets; identify emerging technological and other trends in our target end-markets; and develop or acquire competitive products and services and bring them to market quickly and cost-effectively. The failure to effectively adapt our products or services could materially and adversely affect our business, financial condition, results of operations and cash flows.

We may not be able to identify, finance and complete suitable acquisitions and investments, and any completed acquisitions and investments could be unsuccessful or consume significant resources.

Our business strategy includes acquiring businesses and making investments that complement our existing businesses. We continue to analyze and evaluate the acquisition of strategic businesses or product lines with the potential to strengthen our industry position or enhance our existing set of product and service offerings. We may not be able to identify suitable acquisition candidates, obtain financing or have sufficient cash necessary for acquisitions or successfully complete acquisitions in the future or that completed acquisitions will be successful. Acquisitions and investments may involve significant cash expenditures, debt incurrences, equity issuances, operating losses and expenses. Acquisitions involve numerous other risks, including:

- diversion of management time and attention from daily operations;
- difficulties integrating acquired businesses, technologies and personnel into our business;
- difficulties in obtaining and verifying the financial statements and other business information of acquired businesses;
- inability to obtain required regulatory approvals;
- potential loss of key employees, key contractual relationships or key customers of acquired companies or of ours;
- assumption of the liabilities and exposure to unforeseen liabilities of acquired companies, including risks related to the U.S. Foreign Corrupt Practices Act (the “FCPA”); and
- dilution of interests of holders of our shares through the issuance of equity securities or equity-linked securities.

It may be difficult for us to complete transactions quickly and to integrate acquired operations efficiently into our business operations. Any acquisitions or investments may ultimately harm our business, financial condition, results of operations and cash flows, as such acquisitions may not be successful and may ultimately result in impairment charges.

We may not achieve some or all of the expected benefits of our business initiatives.

During 2017 and 2016, we initiated and continued execution of certain business initiatives aimed at reducing our fixed cost structure and realigning our business. As a result, we have incurred substantial expense, including restructuring charges. We may not be able to achieve the operating efficiencies to reduce costs or realize benefits that were initially anticipated in connection with these initiatives. If we are unable to execute these initiatives as planned, we may not realize all or any of the anticipated benefits, which could adversely affect our business and results of operations.

We are exposed to political, regulatory, economic and other risks that arise from operating a multinational business.

Sales outside of the U.S. for the year ended December 31, 2017 accounted for 40 percent of our turnover. Further, most of our businesses obtain some products, components and raw materials from non-U.S. suppliers. Accordingly, our business is subject to the political, regulatory, economic and other risks that are inherent in operating in numerous countries. These risks include:

- changes in general economic and political conditions in countries where we operate, particularly in emerging markets;
- relatively more severe economic conditions in some international markets than in the U.S.;
- the difficulty of enforcing agreements and collecting receivables through foreign legal systems;
- the difficulty of communicating and monitoring standards and directives across our global network of after-market service centers and manufacturing facilities;
- trade protection measures and import or export licensing requirements and restrictions;
- the possibility of terrorist action affecting us or our operations;
- the threat of nationalization and expropriation;
- the imposition of tariffs, exchange controls or other trade restrictions;
- difficulty in staffing and managing widespread operations in non-U.S. labor markets;
- changes in tax treaties, laws or rulings that could have an adverse impact on our effective tax rate;
- limitations on repatriation of earnings;
- the difficulty of protecting intellectual property in non-U.S. countries; and
- changes in and required compliance with a variety of non-U.S. laws and regulations.

Our success depends in part on our ability to anticipate and effectively manage these and other risks. We cannot assure you that these and other factors will not have a material adverse effect on our international operations or on our business as a whole.

We may experience material cost and other inflation.

In the past, we have experienced material cost and other inflation in a number of our businesses. We strive for productivity improvements and implement increases in selling prices to help mitigate cost increases in raw materials (especially metals and resins), energy and other costs such as pension, health care and insurance. We continue to implement operational initiatives in order to mitigate the impacts of this inflation and continuously reduce our costs. However, these actions may not be successful in managing our costs or increasing our productivity. Continued cost inflation or failure of our initiatives to generate cost savings or improve productivity could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Intellectual property challenges may hinder our ability to develop, engineer and market our products.

Patents, non-compete agreements, proprietary technologies, customer relationships, trademarks, trade names and brand names are important to our business. Intellectual property protection, however, may not preclude competitors from developing products similar to ours or from challenging our names or products. Our pending patent applications, and our pending copyright and trademark registration applications, may not be allowed or competitors may challenge the validity or scope of our patents, copyrights or trademarks. In addition, our patents, copyrights, trademarks and other intellectual property rights may not provide us a significant competitive advantage. Over the past few years, we have noticed an increasing tendency for participants in our markets to use challenges to intellectual property as a means to compete. Patent and trademark challenges increase our costs to develop, engineer and market our products. We may need to spend significant resources monitoring our intellectual property rights and we may or may not be able to detect infringement by third parties. If we fail to successfully enforce our intellectual property rights or register new patents, our competitive position could suffer, which could harm our business, financial condition, results of operations and cash flows.

We have significant goodwill and intangible assets and future impairment of our goodwill and intangible assets could have a material adverse effect on our results of operations.

We test goodwill and indefinite-lived intangible assets for impairment on at least an annual basis, and more frequently if circumstances warrant, by comparing the estimated fair value of each of our reporting units to their respective carrying values on their balance sheets. As of December 31, 2017 our goodwill and intangible assets were \$5,909.5 million and represented 68% of our total assets. Long-term declines in projected future cash flows could result in future goodwill and intangible asset impairments.

A material disruption at any of our manufacturing facilities could cause us to be unable to meet customer demands or increase our costs.

If operations at any of our manufacturing facilities were to be disrupted as a result of significant equipment failures, natural disasters, earthquakes, power outages, fires, explosions, terrorism, adverse weather conditions, labor disputes or other reasons, we may be unable to fill customer orders and otherwise meet customer demand for our products, which could have a material adverse effect our business, financial condition, results of operations and cash flows. Interruptions in production, in particular at our manufacturing facilities, could increase our costs and reduce our sales. Any interruption in production capability could require us to make substantial capital expenditures to fill customer orders. We maintain property damage insurance that we believe to be adequate to provide for reconstruction of facilities and equipment, as well as business interruption insurance to mitigate losses resulting from any production interruption or shutdown caused by an insured loss. However, any recovery under our insurance policies may not offset the lost sales or increased costs that may be experienced during the disruption of operations, which could have a material adverse effect our business, financial condition, results of operations and cash flows.

Seasonality of sales and weather conditions could have a material adverse effect on our financial results.

We experience seasonal demand in a number of markets within both our business segments. In Water, demand for residential water supply products, infrastructure, agricultural products and end-user demand for pool equipment in our primary markets follow warm weather trends and is at seasonal highs from April to August. The magnitude of the sales increase in Water is partially mitigated by employing some advance sale or “early buy” programs (generally including extended payment terms and/or additional discounts). Seasonal effects may vary from year to year and are impacted by weather patterns, particularly by temperatures, heavy flooding and droughts. Electrical generally experiences increased demand for thermal protection products and services during the fall and winter months in the Northern Hemisphere and increased demand for electrical fastening products during the spring and summer months in the Northern Hemisphere. Seasonality and weather conditions could have a material adverse effect on our results of operations.

Our share price may fluctuate significantly.

We cannot predict the prices at which our shares may trade. The market price of our shares may fluctuate widely, depending on many factors, some of which may be beyond our control, including:

- actual or anticipated fluctuations in our operating results due to factors related to our business;
- success or failure of our business strategy;
- our quarterly or annual earnings, or those of other companies in our industry;
- our ability to obtain third-party financing as needed;

- announcements by us or our competitors of significant acquisitions or dispositions;
- changes in accounting standards, policies, guidance, interpretations or principles;
- changes in earnings estimates by us or securities analysts or our ability to meet those estimates;
- the operating and share price performance of other comparable companies;
- investor perception of us;
- natural or other environmental disasters that investors believe may affect us;
- overall market fluctuations;
- results from any material litigation, including asbestos claims, government investigations or environmental liabilities;
- changes in laws and regulations affecting our business; and
- general economic conditions and other external factors.

Stock markets in general have experienced volatility that has often been unrelated to the operating performance of a particular company. These broad market fluctuations could have a material adverse effect on our share price.

Risks Relating to Legal, Regulatory and Compliance Matters

Violations of the U.S. Foreign Corrupt Practices Act and similar anti-corruption laws outside the U.S. could have a material adverse effect on us.

The FCPA and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials or other persons for the purpose of obtaining or retaining business. Recent years have seen a substantial increase in anti-bribery law enforcement activity, with more frequent and aggressive investigations and enforcement proceedings by both the U.S. Department of Justice and the SEC, increased enforcement activity by non-U.S. regulators and increases in criminal and civil proceedings brought against companies and individuals. Our policies mandate compliance with these anti-bribery laws. We operate in many parts of the world that are recognized as having governmental and commercial corruption and in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. Because many of our customers and end users are involved in infrastructure construction and energy production, they are often subject to increased scrutiny by regulators. We cannot assure you that our internal control policies and procedures will always protect us from reckless or criminal acts committed by our employees or third-party intermediaries. In the event that we believe or have reason to believe that our employees or agents have or may have violated applicable anti-corruption laws, including the FCPA we may be required to investigate or have outside counsel investigate the relevant facts and circumstances, which can be expensive and require significant time and attention from senior management. Violations of these laws may require self-disclosure to government agencies and result in criminal or civil sanctions, which could disrupt our business and result in a material adverse effect on our reputation, business, financial condition, results of operations and cash flows.

Our failure to satisfy international trade compliance regulations, and changes in U.S. government sanctions, could have a material adverse effect on us.

Our global operations require importing and exporting goods and technology across international borders on a regular basis. Certain of the products we manufacture are “dual use” products, which are products that may have both civil and military applications, or may otherwise be involved in weapons proliferation, and are often subject to more stringent export controls. From time to time, we obtain or receive information alleging improper activity in connection with imports or exports. Our policy mandates strict compliance with U.S. and non-U.S. trade laws applicable to our products. However, even when we are in strict compliance with law and our policies, we may suffer reputational damage if certain of our products are sold through various intermediaries to entities operating in sanctioned countries. When we receive information alleging improper activity, our policy is to investigate that information and respond appropriately, including, if warranted, reporting our findings to relevant government authorities. Nonetheless, our policies and procedures may not protect us from actions that would violate U.S. and/or non-U.S. laws. Any improper actions could subject us to civil or criminal penalties, including material monetary fines, or other adverse actions including denial of import or export privileges, and could damage our reputation and business prospects.

Changes in U.S. administrative policy, including changes to existing trade agreements, could have a material adverse effect on us.

As a result of changes to U.S. administrative policy, there may be changes to existing trade agreements, like the North American Free Trade Agreement, greater restrictions on free trade generally, significant increases in tariffs on goods imported into the U.S. particularly tariffs on products manufactured in Mexico, among other possible changes. Changes in U.S. social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment in the territories and countries where we currently manufacture and sell products, and any resulting negative sentiments towards the U.S. as a result of such changes, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are exposed to potential environmental laws, liabilities and litigation.

We are subject to U.S. federal, state, local and non-U.S. laws and regulations governing our environmental practices, public and worker health and safety, and the indoor and outdoor environment. Compliance with these environmental, health and safety regulations could require us to satisfy environmental liabilities, increase the cost of manufacturing our products or otherwise have a material adverse effect on our business, financial condition, results of operations and cash flow. Any violations of these laws by us could cause us to incur unanticipated liabilities. We are also required to comply with various environmental laws and maintain permits, some of which are subject to renewal from time to time, for many of our businesses and we could suffer if we are unable to renew existing permits or to obtain any additional permits that we may require. Compliance with environmental requirements also could require significant operating or capital expenditures or result in significant operational restrictions. We cannot assure you that we have been or will be at all times in compliance with environmental and health and safety laws. If we violate these laws, we could be fined, criminally charged or otherwise sanctioned by regulators.

We have been named as defendant, target or a potentially responsible party (“PRP”) in a number of environmental clean-ups relating to our current or former business units. We have disposed of a number of businesses in recent years and in certain cases, we have retained responsibility and potential liability for certain environmental obligations. We have received claims for indemnification from certain purchasers. We may be named as a PRP at other sites in the future for existing business units, as well as both divested and acquired businesses. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances.

Certain environmental laws impose liability on current or previous owners or operators of real property for the cost of removal or remediation of hazardous substances at their properties or at properties at which they have disposed of hazardous substances. We have projects underway at several current and former manufacturing facilities to investigate and remediate environmental contamination resulting from our past operations or by other businesses that previously owned or used the properties. The cost of cleanup and other environmental liabilities can be difficult to accurately predict. In addition, environmental requirements change and tend to become more stringent over time. Our eventual environmental clean-up costs and liabilities could exceed the amount of our current reserves.

Our subsidiaries are party to asbestos-related product litigation that could adversely affect our financial condition, results of operations and cash flows.

Our subsidiaries, along with numerous other companies, are named as defendants in a substantial number of lawsuits based on alleged exposure to asbestos-containing materials. These cases typically involve product liability claims based primarily on allegations of manufacture, sale or distribution of industrial products that either contained asbestos or were attached to or used with asbestos-containing components manufactured by third parties. Each case typically names between dozens to hundreds of corporate defendants. Historically, our subsidiaries have been identified as defendants in asbestos-related claims. We have experienced an increase in the number of asbestos-related lawsuits over the past several years, including lawsuits by plaintiffs with mesothelioma-related claims. A large percentage of these suits have not presented viable legal claims and, as a result, have been dismissed or withdrawn. Our strategy has been, and continues to be, to mount a vigorous defense aimed at having unsubstantiated suits dismissed, and, only where appropriate, settling claims before trial. As of December 31, 2017, there were approximately 600 claims pending against our subsidiaries. We cannot predict with certainty the extent to which we will be successful in litigating or otherwise resolving lawsuits in the future and we continue to evaluate different strategies related to asbestos claims filed against us including entity restructuring and judicial relief. Unfavorable rulings, judgments or settlement terms could have a material adverse impact on our business and financial condition, results of operations and cash flows.

We are exposed to certain regulatory and financial risks related to climate change.

Climate change is receiving ever increasing attention worldwide. Many scientists, legislators and others attribute global warming to increased levels of greenhouse gases, which has led to significant legislative and regulatory efforts to limit greenhouse gas emissions. The U.S. Environmental Protection Agency (“EPA”) has published findings that emissions of carbon dioxide, methane, and other greenhouse gases (“GHGs”) present an endangerment to public health and the environment because emissions of such gases are, according to the EPA, contributing to the warming of the earth’s atmosphere and other climate changes. Based on these findings, the EPA has implemented regulations that require reporting of GHG emissions, or that limit emissions of GHGs from certain mobile or stationary sources. In addition, the U.S. Congress and federal and state regulatory agencies have considered other legislation and regulatory proposals to reduce emissions of GHGs, and many states have already taken legal measures to reduce emissions of GHGs, primarily through the development of GHG inventories, GHG permitting and/or regional GHG cap-and-trade programs. It is uncertain whether, when and in what form a federal mandatory carbon dioxide emissions reduction program, or other state programs, may be adopted. Similarly, certain countries have adopted the Kyoto Protocol and/or Paris Accord, and these and other existing international initiatives or those under consideration could affect our international operations. To the extent our customers, particularly our energy and industrial customers, are subject to any of these or other similar proposed or newly enacted laws and regulations, we are exposed to risks that the additional costs by customers to comply with such laws and regulations could impact their ability or desire to continue to operate at similar levels in certain jurisdictions as historically seen or as currently anticipated, which could negatively impact their demand for our products and services. These actions could also increase costs associated with our operations, including costs for raw materials and transportation. Because it is uncertain what laws will be enacted, we cannot predict the potential impact of such laws on our future financial condition, results of operations and cash flows.

Increased information technology security threats and computer crime pose a risk to our systems, networks, products and services, and we are exposed to potential regulatory, financial and reputational risks relating to the protection of our data.

We rely upon information technology systems and networks in connection with a variety of business activities, some of which are managed by third parties. Additionally, we collect and store data that is sensitive to Pentair and its employees, customers, dealers and suppliers. As our business increasingly interfaces with employees, customers, dealers and suppliers using information technology systems and networks, we are subject to an increased risk to the secure operation of these systems and networks and to additional laws and regulatory requirements regarding data privacy, including the European Union General Data Protection Regulation. The secure operation of these information technology systems and networks, and the processing and maintenance of this data is critical to our business operations and strategy. Information technology security threats -- from user error to attacks designed to gain unauthorized access to our systems, networks and data -- are increasing in frequency and sophistication. Attacks may range from random attempts to coordinated and targeted attacks, including sophisticated computer crime and advanced persistent threats. These threats pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of the data we process and maintain. Establishing systems and processes to address these threats and changes in legal requirements relating to data collection and storage may increase our costs. We have experienced data breaches, and, although we have determined such data breaches to be immaterial and such data breaches have not had a material adverse effect on our financial condition, results of operations or cash flows, there can be no assurance of similar results in the future. Should future attacks succeed in the theft of assets, exporting sensitive data or financial information or controlling sensitive systems or networks, it could expose us and our employees, customers, dealers and suppliers to the theft of assets, misuse of information or systems, the compromising of confidential information, manipulation and destruction of data, defective products, production downtimes and operations disruptions, and breach of privacy, which may require notification under data privacy and other applicable laws. The occurrence of any of these events could have a material adverse effect on our reputation, business, financial condition, results of operations and cash flow. In addition, such breaches in security could result in litigation, regulatory action and potential liability and the costs and operational consequences of implementing further data protection measures.

We may be negatively impacted by litigation, including product liability claims.

Our businesses expose us to potential litigation, such as product liability claims relating to the design, manufacture and sale of our products. While we currently maintain what we believe to be suitable product liability insurance, we may not be able to maintain this insurance on acceptable terms or that this insurance will provide adequate protection

against potential or previously existing liabilities. In addition, we self-insure a portion of product liability claims. Successful claims against us for significant amounts could materially and adversely affect our product reputation, business, financial condition, results of operations and cash flows.

We share responsibility for certain income tax liabilities for tax periods prior to and including the date of the Distribution.

In connection with the Distribution, we entered into a tax sharing agreement (the “2012 Tax Sharing Agreement”) with Tyco (now known as Johnson Controls International plc, “Johnson Controls”) and The ADT Corporation (“ADT”), which governs the rights and obligations of ADT, Johnson Controls and us for certain pre-Distribution tax liabilities, including Johnson Controls’ obligations under a separate tax sharing agreement (the “2007 Tax Sharing Agreement”) entered into by Johnson Controls, Covidien Ltd. (now known as Medtronic plc, “Medtronic”) and TE Connectivity Ltd. (“TE Connectivity”) in connection with the 2007 distributions of Medtronic and TE Connectivity by Johnson Controls.

The 2012 Tax Sharing Agreement provides that we, Johnson Controls and ADT will share (i) certain pre-Distribution income tax liabilities that arise from adjustments made by tax authorities to our, Johnson Controls’ and ADT’s U.S. income tax returns, including withholding tax, income tax, or other tax liabilities that could arise if the Merger, Distribution or certain internal transactions undertaken in anticipation of the Distribution are determined to be taxable for U.S. federal or Swiss tax purposes, and (ii) payments required to be made by Johnson Controls with respect to the 2007 Tax Sharing Agreement (the liabilities in clauses (i) and (ii) collectively, “Shared Tax Liabilities”). Johnson Controls is responsible for the first \$500 million of Shared Tax Liabilities. As of December 31, 2017, Johnson Controls has paid \$210.0 million of Shared Tax Liabilities. We and ADT will share 42% and 58%, respectively, of the next \$225 million of Shared Tax Liabilities. We, ADT and Johnson Controls will share 20%, 27.5% and 52.5%, respectively, of Shared Tax Liabilities above \$725 million. Costs and expenses associated with the management of Shared Tax Liabilities will generally be shared 20% by us, 27.5% by ADT and 52.5% by Johnson Controls. However, the ultimate resolution of these matters, and the impact of that resolution, are uncertain. To the extent we are responsible for any liability under the 2012 Tax Sharing Agreement, and indirectly the 2007 Tax Sharing Agreement, in excess of the recorded liability, there could be a material adverse impact on our financial condition, results of operations, cash flows or our effective tax rate in future reporting periods.

In addition, under the terms of the 2012 Tax Sharing Agreement, in the event the Distribution, the ADT distribution, the internal transactions or the Merger were determined to be taxable as a result of actions taken after the Distribution by us, ADT or Johnson Controls, the party responsible for such failure would be responsible for all taxes imposed as a result thereof. If such failure is not the result of actions taken after the Distribution by us, ADT or Johnson Controls, then we, ADT and Johnson Controls would be responsible for any taxes imposed as a result of such determination in the same manner and in the same proportions as we, ADT and Johnson Controls are responsible for Shared Tax Liabilities. Such tax amounts could be significant.

Risks Relating to Our Liquidity

Disruptions in the financial markets could adversely affect us, our customers and our suppliers by increasing funding costs or reducing availability of credit.

In the normal course of our business, we may access credit markets for general corporate purposes, which may include repayment of indebtedness, acquisitions, additions to working capital, repurchase of shares, capital expenditures and investments in our subsidiaries. Although we expect to have sufficient liquidity to meet our foreseeable needs, our access to and the cost of capital could be negatively impacted by disruptions in the credit markets, which have occurred in the past and made financing terms for borrowers unattractive or unavailable. These factors may make it more difficult or expensive for us to access credit markets if the need arises. In addition, these factors may make it more difficult for our suppliers to meet demand for their products or for prospective customers to commence new projects, as customers and suppliers may experience increased costs of debt financing or difficulties in obtaining debt financing. Disruptions in the financial markets have had adverse effects on other areas of the economy and have led to a slowdown in general economic activity that may continue to adversely affect our businesses. These disruptions may have other unknown adverse effects. One or more of these factors could adversely affect our business, financial condition, results of operations or cash flows.

Covenants in our debt instruments may adversely affect us.

Our credit agreements and indentures contain customary financial covenants, including those that limit the amount of our debt, which may restrict the operations of our business and our ability to incur additional debt to finance acquisitions. Our ability to meet the financial covenants can be affected by events beyond our control, and we cannot provide assurance that we will meet those tests. A breach of any of these covenants could result in a default under our credit agreements or indentures. Upon the occurrence of an event of default under any of our credit facilities or indentures, the lenders or trustees could elect to declare all amounts outstanding thereunder to be immediately due and payable and, in the case of credit facility lenders, terminate all commitments to extend further credit. If the lenders or trustees accelerate the repayment of borrowings, we cannot provide assurance that we will have sufficient assets to repay our credit facilities and our other indebtedness. Furthermore, acceleration of any obligation under any of our material debt instruments will permit the holders of our other material debt to accelerate their obligations, which could have a material adverse effect on our financial condition.

We may increase our debt or raise additional capital in the future, which could affect our financial condition, and may decrease our profitability.

As of December 31, 2017, we had \$1.4 billion of total debt outstanding. We may increase our debt or raise additional capital in the future, subject to restrictions in our debt agreements. If our cash flow from operations is less than we anticipate, if our cash requirements are more than we expect, or if we intend to finance acquisitions, we may require more financing. However, debt or equity financing may not be available to us on acceptable terms, if at all. If we incur additional debt or raise equity through the issuance of additional capital shares, the terms of the debt or capital shares issued may give the holders rights, preferences and privileges senior to those of holders of our ordinary shares, particularly in the event of liquidation. The terms of the debt may also impose additional and more stringent restrictions on our operations than we currently have. If we raise funds through the issuance of additional equity, the percentage ownership of existing shareholders in our company would decline. If we are unable to raise additional capital when needed, our financial condition could be adversely affected.

Our leverage could have a material adverse effect on our business, financial condition or results of operations.

Our ability to make payments on and to refinance our indebtedness, including our existing debt as well as any future debt that we may incur, will depend on our ability to generate cash in the future from operations, financings or asset sales. Our ability to generate cash is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. If we are not able to repay or refinance our debt as it becomes due, we may be forced to sell assets or take other disadvantageous actions, including (i) reducing financing in the future for working capital, capital expenditures and general corporate purposes or (ii) dedicating an unsustainable level of our cash flow from operations to the payment of principal and interest on our indebtedness. The lenders who hold such debt could also accelerate amounts due, which could potentially trigger a default or acceleration of any of our other debt.

Risks Relating to Our Jurisdiction of Incorporation in Ireland and Tax Residency in the United Kingdom

We are subject to changes in law and other factors that may not allow us to maintain a worldwide effective corporate tax rate that is competitive in our industry.

While we believe that we should be able to maintain a worldwide effective corporate tax rate that is competitive in our industry, we cannot give any assurance as to what our effective tax rate will be in the future because of, among other things, uncertainty regarding tax policies of the jurisdictions where we operate. Also, the tax laws of the U.S., the U.K., Ireland and other jurisdictions could change in the future, and such changes could cause a material change in our worldwide effective corporate tax rate. In particular, legislative action could be taken by the U.S., the U.K., Ireland or the European Union which could override tax treaties or modify tax statutes or regulations upon which we expect to rely and adversely affect our effective tax rate. We cannot predict the outcome of any specific legislative proposals. If proposals were enacted that had the effect of disregarding our incorporation in Ireland or limiting our ability as an Irish company to maintain tax residency in the U.K. and take advantage of the tax treaties among the U.S., the U.K. and Ireland, we could be subject to increased taxation, which could materially adversely affect our financial condition, results of operations, cash flows or our effective tax rate in future reporting periods.

A change in our tax residency could have a negative effect on our future profitability and may trigger taxes on dividends or exit changes.

Under current Irish legislation, a company is regarded as resident for tax purposes in Ireland if it is centrally managed and controlled in Ireland, or, in certain circumstances, if it is incorporated in Ireland. Under current U.K. legislation, a company that is centrally managed and controlled in the U.K. is regarded as resident in the U.K. for taxation purposes unless it is treated as resident in another jurisdiction pursuant to any appropriate double tax treaty with the U.K. Other jurisdictions may also seek to assert taxing jurisdiction over Pentair.

Where a company is treated as tax resident under the domestic laws of both the U.K. and Ireland, article 4(3) of the Double Tax Convention between Ireland and the U.K. (the “residence tie-breaker”) currently provides that the company shall be treated as resident only in one of those two jurisdictions if its place of effective management is situation in that jurisdiction.

The Organisation for Economic Co-operation and Development has proposed a number of measures relating to the tax treatment of multinationals, some of which are to be implemented by amending double tax treaties through a multilateral instrument (the “MLI”). The MLI has been signed by a number of countries, including Ireland and the U.K. The MLI allows signatories to opt into or out of certain changes: the effect for a given double tax convention depends on the options chosen by the two contracting states. Ireland and the U.K. have indicated they intend to change the residence tie-breaker so that it will depend on a ruling by the tax authorities of the two contracting states, instead of an objective application of the place of effective management test. Accordingly, if Ireland and the U.K. maintain their position and enough other countries ratify the MLI, the residence tie-breaker would be amended to depend on a determination by Irish Revenue Commissioners and the U.K. HM Revenue and Customs. It is not certain when this will take place nor what factors will be taken into account in making the determination, but we do not expect such a determination to alter our tax residency.

It is possible that in the future, whether as a result of a change in law (including the entry into force of the MLI or a change to the intention of Ireland or the U.K. in relation to the MLI) or the practice of any relevant tax authority or as a result of any change in the conduct of our affairs, we could become, or be regarded as having become, resident in a jurisdiction other than the U.K. If Pentair ceases to be resident in the U.K. and becomes resident in another jurisdiction, it may be subject to U.K. exit charges, and could become liable for additional tax charges in the other jurisdiction (including dividend withholding taxes or corporate income tax charges). If Pentair were to be treated as resident in more than one jurisdiction, it could be subject to taxation in multiple jurisdictions. If, for example, Pentair were considered to be a tax resident of Ireland, we could become liable for Irish corporation tax and any dividends paid by it could be subject to Irish dividend withholding tax.

Irish law differs from the laws in effect in the United States and may afford less protection to holders of our securities.

It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the United States currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in a jurisdiction of the U.S.

Transfers of our ordinary shares may be subject to Irish stamp duty.

Transfers of our ordinary shares effected by means of the transfer of book entry interests in the Depository Trust Company (“DTC”) will not be subject to Irish stamp duty. However, if you hold your ordinary shares directly rather than beneficially through DTC, any transfer of your ordinary shares could be subject to Irish stamp duty (currently at the rate of 1 percent of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee.

We currently intend to pay, or cause one of our affiliates to pay, stamp duty in connection with share transfers made in the ordinary course of trading by a seller who holds shares directly to a buyer who holds the acquired shares beneficially. In other cases we may, in our absolute discretion, pay or cause one of our affiliates to pay any stamp duty. Our articles of association provide that, in the event of any such payment, we (i) may seek reimbursement from the buyer, (ii) will have a lien against the shares acquired by such buyer and any dividends paid on such shares and (iii) may set-off the amount of the stamp duty against future dividends on such shares. Parties to a share transfer may assume that any stamp duty arising in respect of a transaction in our shares has been paid unless one or both of such parties is otherwise notified by us.

Our ordinary shares, received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (“CAT”) could apply to a gift or inheritance of our ordinary shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children have a tax-free threshold of €310,000 per lifetime in respect of taxable gifts or inheritances received from their parents for periods on or after October 12, 2016.

Financial risk management

Interest rate risk

Our debt portfolio as of December 31, 2017, was comprised of debt predominantly denominated in U.S. dollars. This debt portfolio is comprised of 96% fixed-rate debt and 4% variable-rate debt. Changes in interest rates have different impacts on the fixed and variable-rate portions of our debt portfolio. A change in interest rates on the fixed portion of the debt portfolio impacts the fair value but has no impact on interest incurred or cash flows. A change in interest rates on the variable portion of the debt portfolio impacts the interest incurred and cash flows but does not impact the net financial instrument position.

Based on the fixed-rate debt included in our debt portfolio, as of December 31, 2017, a 100 basis point increase or decrease in interest rates would result in a \$28.6 million decrease or a \$29.3 million increase in fair value, respectively.

Based on the variable-rate debt included in our debt portfolio as of December 31, 2017, a 100 basis point increase or decrease in interest rates would result in a \$0.6 million increase or decrease in interest incurred.

Foreign currency risk

We conduct business in various locations throughout the world and are subject to market risk due to changes in the value of foreign currencies in relation to our reporting currency, the U.S. dollar. Periodically, we use derivative financial instruments to manage these risks. The functional currencies of our foreign operating locations are generally the local currency in the country of domicile. We manage these operating activities at the local level and turnovers, costs, assets and liabilities are generally denominated in local currencies, thereby mitigating the risk associated with changes in foreign exchange. However, our results of operations and assets and liabilities are reported in U.S. dollars and thus will fluctuate with changes in exchange rates between such local currencies and the U.S. dollar.

From time to time, we may enter into short duration foreign currency contracts to hedge foreign currency risks. As the majority of our foreign currency contracts have an original maturity date of less than one year, there is no material foreign currency risk. At December 31, 2017 and 2016, we had outstanding foreign currency derivative contracts with gross notional U.S. dollar equivalent amounts of \$481.4 million and \$475.6 million, respectively. Changes in the fair value of all derivatives are recognized immediately in income unless the derivative qualifies as a hedge of future cash flows. Gains and losses related to a hedge are deferred and recorded in the Consolidated Balance Sheets as a component of AOCI and subsequently recognized in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) when the hedged item affects earnings.

In September 2015, we designated the €500.0 million 2.45% Senior Notes due 2019 (the “2019 Euro Notes”) as a net investment hedge of our investments in certain international subsidiaries that use the Euro as their functional currency. The hedge is intended to reduce, but will not eliminate, the impact on our financial results of changes in the exchange rate between the Euro and the U.S. dollar. The currency risk related to the net investment hedge is measured by estimating the potential impact of a 10% change in the value of the U.S. dollar relative to the Euro. The rates used to perform this analysis were based on the market exchange rates in effect on December 31, 2017. A 10% appreciation of the U.S. dollar relative to the Euro would result in a \$54.0 million net increase in Other comprehensive income. Conversely, a 10% depreciation of the U.S. dollar relative to the Euro would result in a \$66.0 million net decrease in Other comprehensive income. However, these increases and decreases in Other comprehensive income would be offset by decreases or increases in the hedged net investments on our balance sheet due to currency translation.

Research and development

We conduct research and development (“R&D”) activities in our own facilities, which consist primarily of the development of new products, product applications and manufacturing processes. We expense R&D costs as incurred. R&D expenditures during 2017 and 2016 were \$115.8 million and \$114.1 million, respectively.

Acquisition of own shares

In December 2014, the Board of directors authorized the repurchase of our ordinary shares up to a maximum dollar limit of \$1.0 billion. The authorization expires on December 31, 2019.

In December 2015, we repurchased 3.1 million of our ordinary shares for \$200 million under the 2014 authorization.

During the year ended December 31, 2017, we repurchased 3.0 million of our ordinary shares for \$200.0 million under the 2014 authorization. We have \$600.0 million remaining availability for repurchases under the 2014 authorization.

Dividends on our ordinary shares or reductions of share capital for distribution to shareholders, if any, must be approved by our board of directors for payment out of distributable reserves on our parent company statutory balance sheet. We are not permitted to pay dividends out of share capital, which includes share premiums. Our distributable reserve balance was \$9.0 billion and \$9.4 billion as of December 31, 2017 and 2016, respectively.

Dividends

On December 5, 2017, the Board of Directors declared a quarterly cash dividend of \$0.35 that was paid on February 9, 2018 to shareholders of record at the close of business on January 26, 2018. Additionally, the Board of Director’s approved a plan to increase the 2018 annual cash dividend to \$1.40, which is intended to be paid in four quarterly installments. The 2018 increase will mark the 42nd consecutive year we have increased dividends. We paid dividends in 2017 of \$251.7 million, or \$1.38 per ordinary share, compared with \$243.6 million, or \$1.34 per ordinary share, in 2016.

Company accounting records

We are responsible for ensuring that the Company keeps adequate accounting records and appropriate accounting systems. The measures taken by the directors to ensure compliance with the Company’s obligation to keep adequate accounting records are the use of appropriate systems and procedures and the employment of competent persons. We have appointed a Chief Financial Officer who makes regular reports to us and ensures compliance with the requirements of Section 281-285 of the Companies Act, 2014. The Company also has a Chief Accounting Officer, who works closely with the Chief Financial Officer and who makes regular reports to our Audit Committee. In addition, the Company’s Vice President of Internal Audit and the Company’s Vice President of Corporate Law and Compliance each make regular reports to our Audit Committee regarding fraud and other financial-related irregularities. Our Audit Committee, in turn, briefs us on significant financial matters arising from reports of the Chief Financial Officer, the Chief Accounting Officer, the Vice President of Internal Audit, the external auditor and the Vice President of Corporate Law and Compliance.

The books and accounting records of Pentair plc are maintained at the Company’s executive office at 43 London Wall, London, EC2M 5TF, United Kingdom and are readily accessible at Pentair plc’s registered address of Arthur Cox, 10 Earlsfort Terrace, Dublin 2, Ireland.

Directors

Glynis A. Bryan, Jerry W. Burris, Carol Anthony (John) Davidson, Jacques Esculier, Edward P. Garden, T. Michael Glenn, David H.Y. Ho, Randall J. Hogan, David A. Jones, Ronald L. Merriman, William T. Monahan and Billie I. Williamson served as directors of Pentair plc during 2017 and each of their terms expire at the 2018 annual general meeting of shareholders.

There were no changes to the composition of the Board during the financial year or since the financial year end.

Directors and Secretary's interests in shares

No director, the general counsel and secretary, or any member of their immediate family had any interest in shares or debentures of any subsidiary. Directors' remuneration is set forth in Note 26 to the consolidated financial statements. The interests of the directors and company secretary holding office at the year end in the ordinary share capital of Pentair plc at the beginning of the financial year, or date of appointment if later, and at the end of the financial year were as follows:

	Ordinary shares of \$0.01 each			
	December 31, 2017		December 31, 2016	
	Shares ⁽¹⁾	Options	Shares ⁽¹⁾	Options
Directors				
Glynis A. Bryan	23,498	56,019	22,817	60,754
Jerry W. Burris	24,892	38,819	14,906	53,554
Carol Anthony (John) Davidson	15,714	22,105	15,140	16,840
Jacques Esculier	7,176	—	6,387	—
Edward P. Garden ⁽²⁾	15,411,807	11,163	14,337,040	5,898
T. Michael Glenn	20,352	56,019	16,917	60,754
David H.Y. Ho	11,868	22,105	12,001	16,840
Randall J. Hogan	623,788	2,093,556	629,585	2,237,881
David A. Jones	41,251	38,819	40,058	43,554
Ronald L. Merriman	21,369	38,819	20,786	58,754
William T. Monahan	54,827	56,019	53,977	60,754
Billie I. Williamson	7,498	—	6,351	—
General Counsel and Secretary				
Angela D. Jilek	38,641	158,078	42,292	145,332

(1) The amounts in this column include ordinary shares owned by the director, both directly and indirectly, and unvested restricted stock units.

(2) Includes 15,410,685 and 14,335,888 shares owned in 2017 and 2016, respectively, by certain funds and investment vehicles managed by Triam, which Mr. Garden may be deemed to indirectly beneficially own.

Audit Committee

In accordance with Section 167 of the Companies Act 2014, the Company has established an audit committee for the full financial year.

Disclosure of Information to Auditor

Each of the persons who is a director at the date of approval of this report confirms that:

- so far as that director is aware, there is no relevant audit information of which the company's auditor is unaware, and
- that director has taken all the steps that ought to have been taken as a director in order to be aware of any relevant audit information and to establish that the company's auditor is aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of Section 330 of the Companies Act 2014.

Directors' Compliance Statement

As required by Section 225 of the Companies Act 2014, the directors acknowledge that they are responsible for securing Pentair plc's compliance with its "relevant obligations" (as defined in that legislation). The directors further confirm that a compliance policy statement has been drawn up, and that appropriate arrangements and structures have been put in place that are, in the directors' opinion, designed to secure material compliance with the relevant obligations. In discharging their responsibilities under Section 225, the directors relied on the advice of persons who the directors believe have the requisite knowledge and experience to advise Pentair plc on compliance with its relevant obligations.

Political donations

No political contributions that require disclosure under Irish law were made during the year.

Subsidiary companies and branches

Information regarding subsidiary undertakings, including information regarding branches, is provided in Note 29 to the consolidated financial statements.

Going concern

The directors have a reasonable expectation that the Pentair plc Group and Company have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the financial statements.

Auditors

The auditors, Deloitte, Chartered Accountants and Statutory Audit Firm, continue in office in accordance with Section 383(2) of the Companies Act 2014.

On behalf of the Directors

/s/Randall J. Hogan
Director

/s/ Glynis A. Bryan
Director

February 27, 2018

PENTAIR PLC
STATEMENT OF DIRECTORS' RESPONSIBILITIES

The directors are responsible for preparing the directors' report and the financial statements in accordance with the Companies Act 2014.

Irish company law requires the directors to prepare financial statements for each financial year. Under the law, the directors have elected to prepare the group financial statements in accordance with accounting principles generally accepted in the United States of America ("US GAAP"), as defined in Section 279 of the Companies Act 2014 to the extent that the use of those principles in preparation of the group financial statements does not contravene any provision of Part 6 of the Companies Act 2014, and the parent company financial statements in accordance with FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland ("relevant financial reporting framework"). Under company law, the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the assets, liabilities and financial position of the group and the company as at the financial year end date and of the profit or loss of the group for the financial year and otherwise comply with the Companies Act 2014.

In preparing the group and company financial statements, the directors are required to:

- select suitable accounting policies for the group and the parent company financial statements and then apply them consistently;
- make judgments and estimates that are reasonable and prudent;
- state whether the financial statements have been prepared in accordance with applicable accounting standards, identify those standards, and note the effect and the reasons for any material departure from those standards; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for ensuring that the company keeps or causes to be kept adequate accounting record which correctly explain and record the transactions of the company, enable at any time the assets, liabilities, financial position and profit or loss of the group and company to be determined with reasonable accuracy, enable them to ensure that the group and company financial statements and directors' report comply with the Companies Act 2014 and enable financial statements to be audited. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website.

Legislation in Ireland governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions. The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF PENTAIR PLC (the "GROUP")

Report on the audit of the financial statements

Opinion on the financial statements of Pentair plc (the 'group')

In our opinion the group financial statements:

- give a true and fair view of the assets, liabilities and financial position of the group as at 31 December 2017 and of the profit of the Group for the financial year then ended; and
- have been properly prepared in accordance with the relevant financial reporting framework and, in particular, with the requirements of the Companies Act 2014.

The financial statements we have audited comprise:

- the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss);
- the Consolidated Balance Sheet;
- the Consolidated Statement of Changes in Equity;
- the Consolidated Statement of Cash Flows; and
- the related notes 1 to 29, including a summary of significant accounting policies as set out in note 1.

The relevant financial reporting framework that has been applied in the preparation of the group financial statements is the Companies Act 2014 and US Generally Accepted Accounting Principles (US GAAP), as defined in Section 279 of the Companies Act 2014, to the extent that the use of those principles in the preparation of the financial statements does not contravene Part VI of the Companies Act 2014 (the relevant financial reporting framework).

Other Matter

We have reported separately on the parent company financial statements of Pentair plc for the financial year ended 31 December 2017.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (Ireland) (ISAs (Ireland)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in Ireland, including the Ethical Standard issued by the Irish Accounting and Auditing Supervisory Authority, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (Ireland) require us to report to you where:

- the directors' use of the going concern basis of accounting in preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the Group's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Other information

The directors are responsible for the other information. The other information comprises the information included in the Directors' Report and Consolidated Financial Statements for the financial year ended 31 December 2017, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current financial period and include the most significant assessed risks of material misstatement (whether or not due to fraud) we identified, including those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Risk Description

Valuation of goodwill and indefinite-lived intangibles

\$4.4bn (2016: \$4.2bn)

The assessment of the potential impairment of goodwill and indefinite-lived intangible assets requires significant judgement in determining the appropriate assumptions when projecting future cash flows for these assets.

Refer to note 1 (accounting policy for goodwill and identifiable intangible assets) and note 6 in the financial statements.

How the scope of our audit responded to the risk

In order to evaluate management's assumptions and data inputs used in the valuation of goodwill and indefinite-lived intangible assets we performed the following specific procedures:

- We obtained an understanding of management's controls over the development and approval of the projections, and performed testing of relevant controls, which involved reviews by senior members of management to ensure the assumptions used are appropriate.
- We performed risk assessment procedures that included gaining an understanding of the key changes to the business to determine the nature, timing and extent of procedures to be performed over management's assumptions and assessing whether there had been any triggering events or conditions during 2017 and whether these have been factored into management's assessment.
- Assisted by Deloitte fair value specialists, we challenged the key assumptions made by management for a sample of goodwill and indefinite-lived intangibles. Our audit procedures for goodwill included: (1) Assessment of the market multiples and EBITDA metrics, (2) recalculation of the discount rate, and (3) validation of the terminal growth rate. Our audit procedures for indefinite lived intangible assets included: (1) Assessment of the revenue growth assumptions used within the forecasts, (2) recalculation of the discount rate, and (3) validation of the royalty rate.

Key Observation

Based on the procedures performed, no material errors were noted.

Completeness of unrecognized tax positions

\$36.6m (2016: \$71.1m)

The calculation of unrecognized tax positions involves assessing uncertainties in the application of complex tax regulations in a multitude of jurisdictions. There are complexities in identifying and evaluating these tax positions due to the disaggregated nature of the Company.

Refer also to note 1 (accounting policy for income taxes) and note 12 in the financial statements.

In order to assess the completeness of unrecognized tax positions, we performed the following specific procedures;

- We obtained an understanding of management's controls over the identification and review of unrecognized tax positions, and performed testing of relevant controls being periodic reviews by members of management over tax positions and cross border interest charges.
- We performed risk assessment procedures in order to determine the nature, timing and extent of procedures to be performed over unrecognized tax positions and to identify material unrecognized tax positions. For these we have performed audit procedures to assess if the criteria to determine that the positions were supportable.
- Assisted by Deloitte tax specialists, we performed periodic inquiries of the Tax and Corporate Controlling departments to assess the measurement of unrecognized tax positions, the determination of the basis of the estimates and any changes in the business environment in order to assess the completeness of the balance. The testing performed with assistance from our tax specialists include: (1) verifying the mathematical accuracy of the provision calculation and rate reconciliation; (2) testing a selection of permanent adjustments and deferred tax balances; (3) evaluating the possible sources of taxable income; (4) assessing material uncertain tax positions and evaluating against the more likely than not criteria; and (5) ensuring that the valuation allowances are appropriate and complete.

Key Observation

Based on the procedures performed, no material errors were noted.

Valuation of pension and other post retirement benefit obligations

\$213.2m (2016: \$253m)

Significant estimates are made in valuing the Company's retirement benefit obligation and the related mark-to-market adjustment.

Small changes in assumptions and estimates used to value the Company's pension obligation may have a significant impact on the Company's financial position.

Refer to note 1 (accounting policy for pension and other post-retirement plans) and note 13 in the financial statements.

In order to assess the Company's valuation of pension and other post retirement benefit obligations, we performed the following specific procedures;

- We obtained an understanding of management's controls over the development and approval of the assumptions used, and performed testing of relevant controls over approval of the assumptions by management.
- We performed risk assessment procedures that included gaining an understanding of the key assumptions used in the pension and other post retirement plans to determine the nature, timing and extent of procedures to be performed over the assumptions used.
- We evaluated the Company's accounting for pension and other post retirement plans through a combination of analytical and substantive testing procedures over a sample of plan assets and the benefits paid. Assist by Deloitte actuarial specialists, we challenged the discount rate, rate of return and mark-to-market adjustment recorded by the Company in order to assess the pension valuations.

Key Observation

Based on the procedures performed, no material errors were noted.

Our audit procedures relating to these matters were designed in the context of our audit of the financial statements as a whole, and not to express an opinion on individual accounts or disclosures. Our opinion on the financial statements is not modified with respect to any of the risks described above, and we do not express an opinion on these individual matters.

Our application of materiality

We define materiality as the magnitude of misstatement that makes it probable that the economic decisions of a reasonably knowledgeable person, relying on the financial statements, would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

We determined materiality for the Group to be \$45m (2016: \$50m) which is 7% of profit before tax. We have considered profit before tax to be the benchmark for determining materiality as we determined profit before tax to be of most importance to the principal external users of the financial statements.

We agreed with the Audit Committee that we would report to the Audit Committee any audit differences in excess of \$2.3m (2016: \$2.5m) or 5% of materiality, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the Group financial statements.

An overview of the scope of our audit

Our Group audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group level. Based on that assessment, we focused our Group audit scope primarily on the audit work of ten components. Eight of these were subject to a full audit, whilst the remaining two were subject to specified audit procedures where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the Group's operations. These ten components represent the principal business units and account for at least 65.6% of the Group's net assets, revenue and profit before tax. They were also selected to provide an appropriate basis for undertaking audit work to address the risks of material misstatement identified above. Our audit work at the ten components was executed at levels of materiality applicable to each individual component which were lower than Group materiality and ranged from \$13.5m to \$36m.

We leveraged Deloitte component auditors in United States, Germany and China. A site visit was performed by the Group team to the US location. Our US team visited the components in Germany and China.

Opinion on other matters prescribed by the Companies Act 2014

Based solely on the work undertaken in the course of the audit, we report that:

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- The financial statements are in agreement with the accounting records.
- In our opinion the information given in the directors' report is consistent with the financial statements and the directors' report has been prepared in accordance with the Companies Act 2014.

Matters on which we are required to report by exception

Based on the knowledge and understanding of the group and its environment obtained in the course of the audit, we have not identified material misstatements in the directors' report. We have nothing to report in respect of the provisions in the Companies Act 2014 which require us to report to you if, in our opinion, the disclosures of directors' remuneration and transactions specified by law are not made.

Responsibilities of directors

As explained more fully in the Directors' Responsibilities Statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view and otherwise comply with the Companies Act 2014, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (Ireland) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (Ireland), we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of the auditor's report. However, future events or conditions may cause the entity (or where relevant, the group) to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that the auditor identifies during the audit.

This report is made solely to the company's members, as a body, in accordance with Section 391 of the Companies Act 2014. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

/s/ Richard Howard
For and on behalf of Deloitte
Chartered Accountants and Statutory Audit Firm
Deloitte & Touche House,
Earlsfort Terrace,
Dublin 2
Date: February 27, 2018

Pentair plc and Subsidiaries
Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss)

		Financial years ended December 31					
		2017			2016		
<i>In millions, except per-share data</i>	Note	Continuing Operations	Discontinued Operations (Note 3)	Total	Continuing Operations	Discontinued Operations (Note 3)	Total
Turnover	16	\$ 4,936.5	\$ 450.3	\$ 5,386.8	\$ 4,890.0	\$ 1,639.4	\$ 6,529.4
Cost of goods sold		3,107.4	339.7	3,447.1	3,095.9	1,177.1	4,273.0
Gross profit		1,829.1	110.6	1,939.7	1,794.1	462.3	2,256.4
Selling, general and administrative		1,032.5	103.3	1,135.8	979.3	367.6	1,346.9
Research and development		115.8	5.7	121.5	114.1	18.2	132.3
Operating profit		680.8	1.6	682.4	700.7	76.5	777.2
Loss (gain) on sale of businesses		4.2	(181.1)	(176.9)	3.9	(0.6)	3.3
Loss on early extinguishment of debt		101.4	—	101.4	—	—	—
Equity income of unconsolidated subsidiaries		(1.3)	(0.4)	(1.7)	(4.3)	(1.5)	(5.8)
Interest receivable and similar income		(9.9)	(0.2)	(10.1)	(8.3)	(0.9)	(9.2)
Interest payable and similar charges	18	97.2	(0.2)	97.0	148.4	1.7	150.1
Profit before taxation		489.2	183.5	672.7	561.0	77.8	638.8
Taxation	12	9.2	(3.0)	6.2	109.4	7.2	116.6
Profit of the group for the year		\$ 480.0	\$ 186.5	\$ 666.5	\$ 451.6	\$ 70.6	\$ 522.2
Comprehensive profit (loss), net of tax							
Profit of the group for the year		\$ 480.0	\$ 186.5	\$ 666.5	\$ 451.6	\$ 70.6	\$ 522.2
Changes in cumulative translation adjustment		123.3	374.2	497.5	(31.0)	(52.0)	(83.0)
Changes in market value of derivative financial instruments, net of tax		(4.6)	—	(4.6)	(8.3)	—	(8.3)
Comprehensive profit		\$ 598.7	\$ 560.7	\$ 1,159.4	\$ 412.3	\$ 18.6	\$ 430.9
Earnings per ordinary share							
Basic	4	\$ 2.64	\$ 1.03	\$ 3.67	\$ 2.49	\$ 0.39	\$ 2.88
Diluted	4	\$ 2.61	\$ 1.02	\$ 3.63	\$ 2.47	\$ 0.38	\$ 2.85

See accompanying notes to consolidated financial statements.

Pentair plc and Subsidiaries
Consolidated Balance Sheets as at 31 December 2017

<i>In millions</i>	Note	December 31	
		2017	2016
Fixed assets			
Intangible assets	6	\$ 5,909.5	\$ 5,849.2
Tangible assets	20	545.5	538.6
Financial assets	23	107.6	105.8
Fixed assets held for sale	3	—	2,292.9
Total fixed assets		6,562.6	8,786.5
Current assets			
Stocks	9	581.0	524.2
Debtors	24	1,376.8	1,093.7
Cash at bank and in hand		113.3	238.5
Current assets held for sale	3	—	891.9
Total current assets		2,071.1	2,748.3
Creditors (amounts falling due within one year)	21	1,360.7	1,387.5
Creditors held for sale (amounts falling due within one year)	3	—	306.5
Net current assets		710.4	1,054.3
Total assets less current liabilities			
		7,273.0	9,840.8
Creditors (amounts falling due after more than one year)	22	1,412.5	4,040.6
Provisions for liabilities	25	822.7	990.2
Creditors held for sale (amounts falling due after more than one year)	3	—	69.2
Provisions for liabilities held for sale	3	—	486.4
Net assets		\$ 5,037.8	\$ 4,254.4
Capital and Reserves			
Called-up share capital	14	\$ 1.8	\$ 1.8
Share premium reserve		77.2	31.6
Other reserves		2,720.5	2,889.2
Profit and loss account		2,481.7	2,068.1
Accumulated other comprehensive loss		(243.4)	(736.3)
Total shareholders' funds		\$ 5,037.8	\$ 4,254.4

See accompanying notes to consolidated financial statements.

Approved by the Board of Directors on February 27, 2018 and signed on its behalf by:

/s/Randall J. Hogan
 Director

/s/ Glynis A. Bryan
 Director

Pentair plc and Subsidiaries
Consolidated Statements of Cash Flows

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Operating activities		
Profit of the group for the year	\$ 666.5	\$ 522.2
Profit from discontinued operations, net of tax	(5.4)	(70.0)
Gain from sale of discontinued operations, net of tax	(181.1)	(0.6)
Adjustments to reconcile profit of the group to net cash provided by (used for) operating activities		
Equity income of unconsolidated subsidiaries	(1.3)	(4.3)
Depreciation	85.2	84.6
Amortization	97.7	96.4
Loss on sale of businesses	4.2	3.9
Deferred taxation	(159.7)	(16.1)
Share-based compensation	39.6	34.2
Trade name and other impairment	32.0	13.3
Loss on early extinguishment of debt	101.4	—
Excess tax benefits from share-based compensation	—	(8.0)
Pension and other post-retirement expense	29.2	31.8
Pension and other post-retirement contributions	(15.7)	(13.5)
Changes in assets and liabilities, net of effects of business acquisitions		
Trade debtors	(30.9)	21.3
Stocks	(29.4)	34.3
Trade creditors	32.6	38.0
Other	9.1	(65.1)
Net cash provided by (used for) operating activities of continuing operations	674.0	702.4
Net cash provided by (used for) operating activities of discontinued operations	(53.8)	159.0
Net cash provided by (used for) operating activities	620.2	861.4
Investing activities		
Capital expenditures	(70.9)	(117.8)
Proceeds from sale of tangible assets	7.9	24.7
Proceeds from sale of businesses and other	2,759.4	(5.2)
Acquisitions, net of cash acquired	(59.5)	(25.0)
Net cash provided by (used for) investing activities of continuing operations	2,636.9	(123.3)
Net cash provided by (used for) investing activities of discontinued operations	(6.5)	1.5
Net cash provided by (used for) investing activities	2,630.4	(121.8)
Financing activities		
Net receipts (repayments) of short-term borrowings	(0.8)	0.8
Net receipts (repayments) of commercial paper and revolving long-term debt	(913.1)	(385.3)
Repayment of long-term debt	(2,009.3)	(0.7)
Premium paid on early extinguishment of debt	(94.9)	—
Excess tax benefits from share-based compensation	—	8.0
Shares issued to employees, net of shares withheld	37.2	20.7
Repurchases of ordinary shares	(200.0)	—
Dividends paid	(251.7)	(243.6)
Net cash provided by (used for) financing activities	(3,432.6)	(600.1)
Effect of exchange rate changes on cash at bank and in hand	56.8	(27.3)
Change in cash at bank and in hand	(125.2)	112.2
Cash at bank and in hand, beginning of year	238.5	126.3
Cash at bank and in hand, end of year	\$ 113.3	\$ 238.5

See accompanying notes to consolidated financial statements.

Pentair plc and Subsidiaries
Consolidated Reconciliation of Movements in Shareholders' Funds

<i>In millions</i>	Called-up & fully paid share capital		Other reserves				Profit and loss account	Accumulated other comprehensive loss (note 8)	Total
	Number	Amount	Share premium reserve	Capital redemption reserve	Other				
Balance - December 31, 2015	180.5	\$ 1.8	\$ —	\$ 0.1	\$ 2,860.2	\$ 1,791.7	\$ (645.0)	\$ 4,008.8	
Profit after taxation	—	—	—	—	—	522.2	—	522.2	
Other comprehensive loss, net of tax	—	—	—	—	—	—	(91.3)	(91.3)	
Tax benefit of share-based compensation	—	—	—	—	5.5	—	—	5.5	
Dividends declared	—	—	—	—	—	(245.8)	—	(245.8)	
Exercise of options, net of shares tendered for payment	1.0	—	31.6	—	—	—	—	31.6	
Issuance of restricted shares, net of cancellations	0.5	—	—	—	—	—	—	—	
Shares surrendered by employees to pay taxes	(0.2)	—	—	—	(10.8)	—	—	(10.8)	
Share-based compensation	—	—	—	—	34.2	—	—	34.2	
Balance - December 31, 2016	181.8	\$ 1.8	\$ 31.6	\$ 0.1	\$ 2,889.1	\$ 2,068.1	\$ (736.3)	\$ 4,254.4	
Profit after taxation	—	—	—	—	—	666.5	—	666.5	
Other comprehensive income, net of tax	—	—	—	—	—	—	492.9	492.9	
Dividends declared	—	—	—	—	—	(252.9)	—	(252.9)	
Share repurchase	(3.0)	—	—	—	(200.0)	—	—	(200.0)	
Exercise of options, net of shares tendered for payment	1.2	—	45.6	—	—	—	—	45.6	
Issuance of restricted shares, net of cancellations	0.4	—	—	—	—	—	—	—	
Shares surrendered by employees to pay taxes	(0.1)	—	—	—	(8.3)	—	—	(8.3)	
Share-based compensation	—	—	—	—	39.6	—	—	39.6	
Balance - December 31, 2017	180.3	\$ 1.8	\$ 77.2	\$ 0.1	\$ 2,720.4	\$ 2,481.7	\$ (243.4)	\$ 5,037.8	

See accompanying notes to consolidated financial statements.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

1. Basis of Presentation and Summary of Significant Accounting Policies

Basis of presentation

The directors have elected to prepare the consolidated financial statements in accordance with the Companies Act 2014 which provides that a true and fair view of the state of affairs and profit or loss may be given by preparing the financial statements in accordance with accounting principles generally accepted in the United States of America (“GAAP”), as defined in Section 279 of the Companies Act 2014 to the extent that the use of those principles in the preparation of the financial statements does not contravene Part VI of the Companies Act 2014 (“the relevant financial reporting framework”).

These consolidated financial statements were prepared in accordance with Irish company law, to present to shareholders and file with the Companies Registration Office in Ireland. Accordingly, these consolidated financial statements include disclosures and other presentational and measurement amendments required by the Republic of Ireland’s Companies Act 2014 in addition to those required under GAAP.

The accompanying consolidated financial statements have been prepared in United States dollars (“USD”) and reflect the consolidated operations of Pentair plc and its subsidiaries, both the United States (“U.S.”) and non-U.S., which we control (Pentair plc and all its subsidiaries, hereinafter referred to as “Pentair,” “we,” “us,” “our,” or the “Group”). Intercompany accounts and transactions have been eliminated. Investments in companies of which we own 20% to 50% of the voting stock or have the ability to exercise significant influence over operating and financial policies of the investee are accounted for using the equity method of accounting and as a result, our share of the earnings or losses of such equity affiliates is included in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss).

Proposed separation

On May 9, 2017, we announced that our Board of Directors approved a plan to separate our Water business and Electrical business into two independent, publicly-traded companies (the “Proposed Separation”). The Proposed Separation is expected to occur through a tax-free spin-off of the Electrical business to Pentair shareholders.

Completion of the Proposed Separation is subject to certain customary conditions, including, among other things, final approval of the transaction by Pentair’s Board of Directors, receipt of tax opinions and rulings and effectiveness of appropriate filings with the U.S. Securities and Exchange Commission (“SEC”). Upon completion of the Proposed Separation, it is anticipated that Electrical’s jurisdiction of organization will be Ireland, but that it will manage its affairs so that it will be centrally managed and controlled in the United Kingdom (the “U.K.”) and therefore will have its tax residency in the U.K.

We are targeting April 30, 2018 for the completion of the Proposed Separation; however, there can be no assurance regarding the ultimate timing of the Proposed Separation or that the Proposed Separation will be completed.

Fiscal year

Our fiscal year ends on December 31.

Use of estimates

The preparation of our consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported in these consolidated financial statements and accompanying notes, disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of turnovers and expenses during the reporting period. These estimates include our accounting for valuation of goodwill and indefinite lived intangible assets, estimated allowance for doubtful accounts, estimated realizable value on excess and obsolete stocks, percentage of completion turnover recognition, assets acquired and liabilities assumed in acquisitions, estimated selling proceeds from assets held for sale, contingent liabilities, income taxes and pension and other post-retirement benefits. Actual results could differ from our estimates.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Turnover recognition

We recognize turnover when it is realized or realizable and has been earned. Turnover is recognized when persuasive evidence of an arrangement exists, shipment or delivery has occurred (depending on the terms of the sale), our price to the buyer is fixed or determinable, and collectability is reasonably assured.

Generally, there is no post-shipment obligation on product sold other than warranty obligations in the normal and ordinary course of business. In the event significant post-shipment obligations were to exist, turnover recognition would be deferred until substantially all obligations were satisfied.

Percentage of completion

Turnover from certain long-term contracts is recognized over the contractual period under the percentage of completion method of accounting. Under this method, turnover and gross profit are recognized as work is performed either based on the relationship between the actual costs incurred and the total estimated costs at completion (“the cost-to-cost method”) or based on efforts for measuring progress towards completion in situations in which this approach is more representative of the progress on the contract than the cost-to-cost method. Changes to the original estimates may be required during the life of the contract and such estimates are reviewed on a regular basis. Turnover and gross profit are adjusted using the cumulative catch-up method for revisions in estimated total contract costs. These reviews have not resulted in adjustments that were significant to our results of operations. Estimated losses are recorded when identified. Claims against customers are recognized as turnover upon settlement.

We record costs and earnings in excess of billings on uncompleted contracts within *Debtors* and billings in excess of costs and earnings on uncompleted contracts within *Creditors (amounts falling due within one year)* in the Consolidated Balance Sheets.

Sales returns

The right of return may exist explicitly or implicitly with our customers. Our return policy allows for customer returns only upon our authorization. Goods returned must be product we continue to market and must be in salable condition. At the time of sale, we reduce turnover for the estimated effect of returns. Estimated sales returns include consideration of historical sales levels, the timing and magnitude of historical sales return levels as a percent of sales, type of product, type of customer and a projection of this experience into the future.

Pricing and sales incentives

We record estimated reductions to turnover for customer programs and incentive offerings including pricing arrangements, promotions and other volume-based incentives at the later of the date turnover is recognized or the incentive is offered. Sales incentives given to our customers are recorded as a reduction of turnover unless we (1) receive an identifiable benefit for the goods or services in exchange for the consideration and (2) we can reasonably estimate the fair value of the benefit received.

Pricing is established at or prior to the time of sale with our customers and we record sales at the agreed-upon net selling price. However, we allow customers to apply for a refund of a percentage of the original purchase price if they can demonstrate sales to a qualifying end customer. At the time of sale, we estimate the anticipated refund to be paid based on historical experience and reduce sales for the probable cost of the discount. The cost of these refunds is recorded as a reduction in gross sales.

Volume-based incentives involve rebates that are negotiated at or prior to the time of sale with the customer and are redeemable only if the customer achieves a specified cumulative level of sales or sales increase. Under these incentive programs, at the time of sale, we estimate the anticipated rebate to be paid based on forecasted sales levels. These forecasts are updated at least quarterly for each customer and sales are reduced for the anticipated cost of the rebate. If the forecasted sales for a customer changes, the accrual for rebates is adjusted to reflect the new amount of rebates expected to be earned by the customer.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Shipping and handling costs

Amounts billed to customers for shipping and handling are recorded in *Turnover* in the accompanying Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss). Shipping and handling costs incurred by Pentair for the delivery of goods to customers are included in *Cost of goods sold* in the accompanying Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss).

Research and development

We conduct research and development (“R&D”) activities primarily in our own facilities, which consist primarily of the development of new products, product applications and manufacturing processes. We expense R&D costs as incurred. R&D expenditures during 2017 and 2016 were \$115.8 million and \$114.1 million, respectively.

Cash equivalents

We consider highly liquid investments with original maturities of three months or less at the date of acquisition to be cash equivalents.

Trade debtors and concentration of credit risk

We record an allowance for doubtful accounts, reducing our debtors balance to an amount we estimate is collectible from our customers. Estimates used in determining the allowance for doubtful accounts are based on current trends, aging of trade debtors, periodic credit evaluations of our customers’ financial condition, and historical collection experience. We generally do not require collateral. No customer receivable balances exceeded 10 percent of total net receivable balances as of December 31, 2017 or December 31, 2016.

Stocks

Stocks are stated at the lower of cost or market with substantially all stocks recorded using the first-in, first-out (“FIFO”) cost method.

Tangible assets

Tangible assets are stated at historical cost. We compute depreciation by the straight-line method based on the following estimated useful lives:

	<u>Years</u>
Land improvements	5 to 20
Buildings and leasehold improvements	5 to 50
Machinery and equipment	3 to 15

Significant improvements that add to productive capacity or extend the lives of properties are capitalized. Costs for repairs and maintenance are charged to expense as incurred. When property is retired or otherwise disposed of, the recorded cost of the assets and their related accumulated depreciation are removed from the Consolidated Balance Sheets and any related gains or losses are included in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss).

We review the recoverability of long-lived assets to be held and used, such as tangible assets, when events or changes in circumstances occur that indicate the carrying value of the asset or asset group may not be recoverable. The assessment of possible impairment is based on our ability to recover the carrying value of the asset or asset group from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If these cash flows are less than the carrying value of such asset or asset group, an impairment loss is recognized for the difference between estimated fair value and carrying value. Impairment losses on long-lived assets held for sale are determined in a similar manner, except that fair values are reduced for the cost to dispose of the assets. The measurement of impairment requires us to estimate future cash flows and the fair value of long-lived assets. We recorded no impairment charges in 2017 or 2016 in conjunction with restructuring activities.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Goodwill and identifiable intangible assets

Goodwill

Goodwill represents the excess of the cost of acquired businesses over the net of the fair value of identifiable tangible net assets and identifiable intangible assets purchased and liabilities assumed. Irish company law requires goodwill and indefinite-lived intangible assets to be amortized. However, Pentair does not believe this gives a true and fair view because not all goodwill and intangible assets decline in value. In addition, since goodwill that does decline in value rarely does so on a straight-line basis, straight-line amortization of goodwill over an arbitrary period does not reflect the economic reality. Therefore, in order to present a true and fair view of the economic reality, under US GAAP, goodwill and certain other intangible assets are considered indefinite-lived and are not amortized.

Goodwill is tested at least annually for impairment and is tested for impairment more frequently if events or changes in circumstances indicate that the asset might be impaired. The impairment test is performed using a two-step process. In the first step, the fair value of each reporting unit is compared with the carrying amount of the reporting unit, including goodwill. If the estimated fair value is less than the carrying amount of the reporting unit there is an indication that goodwill impairment exists and a second step must be completed in order to determine the amount of the goodwill impairment, if any, that should be recorded. In the second step, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation.

The fair value of each reporting unit is determined using a discounted cash flow analysis and market approach. Projecting discounted future cash flows requires us to make significant estimates regarding future turnovers and expenses, projected capital expenditures, changes in working capital and the appropriate discount rate. Use of the market approach consists of comparisons to comparable publicly-traded companies that are similar in size and industry. Actual results may differ from those used in our valuations. This non-recurring fair value measurement is a "Level 3" measurement under the fair value hierarchy described below.

In developing our discounted cash flow analysis, assumptions about future revenues and expenses, capital expenditures and changes in working capital, are based on our annual operating plan and long-term business plan for each of our reporting units. These plans take into consideration numerous factors including historical experience, anticipated future economic conditions, changes in raw material prices and growth expectations for the industries and end markets we participate in. These assumptions are determined over a six year long-term planning period. The six year growth rates for revenues and operating profits vary for each reporting unit being evaluated. Revenues and operating profit beyond 2023 are projected to grow at a perpetual growth rate of 3.0%.

Discount rate assumptions for each reporting unit take into consideration our assessment of risks inherent in the future cash flows of the respective reporting unit and our weighted-average cost of capital. We utilized discount rates ranging from 9.0% to 9.5% in determining the discounted cash flows in our fair value analysis.

In estimating fair value using the market approach, we identify a group of comparable publicly-traded companies for each reporting unit that are similar in terms of size and product offering. These groups of comparable companies are used to develop multiples based on total market-based invested capital as a multiple of earnings before interest, taxes, depreciation and amortization ("EBITDA"). We determine our estimated values by applying these comparable EBITDA multiples to the operating results of our reporting units. The ultimate fair value of each reporting unit is determined considering the results of both valuation methods.

We completed step one of our annual goodwill impairment evaluation as of the first day of the fourth quarter of 2017 and 2016 with each reporting unit's fair value in excess of its carrying value.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Identifiable intangible assets

Our primary identifiable intangible assets include: customer relationships, trade names, proprietary technology and patents. Identifiable intangibles with finite lives are amortized and those identifiable intangibles with indefinite lives are not amortized. Identifiable intangible assets that are subject to amortization are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Identifiable intangible assets not subject to amortization are tested for impairment annually or more frequently if events warrant. We complete our annual impairment test during the fourth quarter each year for those identifiable assets not subject to amortization.

We compute amortization by the straight-line method based on the following estimated useful lives:

	Years
Customer relationships	5 to 20
Trade names	5 to 10
Proprietary technology	5 to 20
Patents	5 to 20
Backlog	1 to 5

The impairment test for trade names consists of a comparison of the fair value of the trade name with its carrying value. Fair value is measured using the relief-from-royalty method. This method assumes the trade name has value to the extent that the owner is relieved of the obligation to pay royalties for the benefits received from them. This method requires us to estimate the future turnover for the related brands, the appropriate royalty rate and the weighted average cost of capital. The non-recurring fair value measurement is a “Level 3” measurement under the fair value hierarchy described below.

An impairment charge of \$25.2 million was recorded in 2017 related to certain trade names in Water and Electrical as a result of lower forecasted sales volume or rebranding strategies implemented in the fourth quarter of 2017. An impairment charge of \$13.3 million was recorded in 2016 related to a trade name in Electrical as a result of a rebranding strategy implemented in the fourth quarter of 2016. The trade name impairment charges were recorded in *Selling, general and administrative* in our Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss).

Income taxes

We use the asset and liability approach to account for income taxes. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of differences between the carrying amounts of assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period when the change is enacted. We maintain valuation allowances unless it is more likely than not that all or a portion of the deferred tax assets will be realized. Changes in valuation allowances from period to period are included in our tax provision in the period of change. We recognize the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Pension and other post-retirement plans

We sponsor U.S. and non-U.S. defined-benefit pension and other post-retirement plans. The pension and other post-retirement benefit costs for group-sponsored benefit plans are determined from actuarial assumptions and methodologies, including discount rates, expected returns on plan assets. These assumptions are updated annually and are disclosed in Note 13.

We recognize changes in the fair value of plan assets and net actuarial gains or losses for pension and other post-retirement benefits annually in the fourth quarter each year (“mark-to-market adjustment”) and, if applicable, in any quarter in which an interim remeasurement is triggered. Net actuarial gains and losses occur when the actual

Pentair plc and Subsidiaries

Notes to consolidated financial statements

experience differs from any of the various assumptions used to value our pension and other post-retirement plans or when assumptions change, as they may each year. The remaining components of pension expense, including service and interest costs and estimated return on plan assets, are recorded on a quarterly basis.

Insurance subsidiary

We insure certain general and product liability, property, workers' compensation and automobile liability risks through our regulated wholly-owned captive insurance subsidiary, Penwald Insurance Company ("Penwald"). Reserves for policy claims are established based on actuarial projections of ultimate losses. As of December 31, 2017 and 2016, reserves for policy claims included in *Provisions for liabilities* were \$61.5 million and \$63.0 million, respectively.

Share-based compensation

We account for share-based compensation awards on a fair value basis. The estimated grant date fair value of each option award is recognized in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) on an accelerated basis over the requisite service period (generally the vesting period). The estimated fair value of each option award is calculated using the Black-Scholes option-pricing model. From time to time, we have elected to modify the terms of the original grant. These modified grants are accounted for as a new award and measured using the fair value method, resulting in the inclusion of additional compensation expense in our Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss). Restricted share awards and units are recorded as compensation cost on an accelerated basis over the requisite service periods based on the market value on the date of grant.

Performance share units ("PSU") are stock awards where the ultimate number of shares issued will be contingent on the Company's performance against certain financial performance targets. The fair value of each PSU is based on the market value on the date of grant. We recognize expense related to the estimated vesting of our PSUs granted. The estimated vesting of the PSUs is based on the probability of achieving certain financial performance thresholds over the specified performance period.

Earnings per ordinary share

Basic earnings per share are computed by dividing profit attributable to Pentair plc by the weighted-average number of ordinary shares outstanding. Diluted earnings per share are computed by dividing profit attributable to Pentair plc by the weighted-average number of ordinary shares outstanding including the dilutive effects of ordinary share equivalents.

Derivative financial instruments

We recognize all derivatives, including those embedded in other contracts, as either assets or liabilities at fair value in our Consolidated Balance Sheets. If the derivative is designated and is effective as a cash-flow hedge, the effective portion of changes in the fair value of the derivative are recorded in *Accumulated other comprehensive profit/(loss)* ("AOCI") as a separate component of shareholders' funds in the Consolidated Balance Sheets and is recognized in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) when the hedged item affects earnings. If the underlying hedged transaction ceases to exist or if the hedge becomes ineffective, all changes in fair value of the related derivatives that have not been settled are recognized in current earnings. For a derivative that is not designated as or does not qualify as a hedge, changes in fair value are reported in earnings immediately.

Gains and losses on net investment hedges are included in AOCI as a separate component of equity in the Consolidated Balance Sheets.

We use derivative instruments for the purpose of hedging interest rate and currency exposures, which exist as part of ongoing business operations. We do not hold or issue derivative financial instruments for trading or speculative purposes. All other contracts that contain provisions meeting the definition of a derivative also meet the requirements of and have been designated as, normal purchases or sales. Our policy is not to enter into contracts with terms that cannot be designated as normal purchases or sales. From time to time, we may enter into short duration foreign currency contracts to hedge foreign currency risks.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Fair value measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are classified using the following hierarchy, which is based upon the transparency of inputs to the valuation as of the measurement date:

Level 1: Valuation is based on observable inputs such as quoted market prices (unadjusted) for identical assets or liabilities in active markets.

Level 2: Valuation is based on inputs such as quoted market prices for similar assets or liabilities in active markets or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3: Valuation is based upon other unobservable inputs that are significant to the fair value measurement.

In making fair value measurements, observable market data must be used when available. When inputs used to measure fair value fall within different levels of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement.

Foreign currency translation

The financial statements of subsidiaries located outside of the U.S. are generally measured using the local currency as the functional currency, except for certain corporate entities outside of the U.S. which are measured using USD. Assets and liabilities of these subsidiaries are translated at the rates of exchange at the balance sheet date. Income and expense items are translated at average monthly rates of exchange. The resultant translation adjustments are included in AOCI, a separate component of shareholders' funds.

New accounting standards

In March 2017, the Financial Accounting Standards Board ("FASB") issued a new accounting standard which requires the presentation of all components of net periodic benefit cost other than service costs outside of operating income. Only the service cost component will be included in operating income and eligible for capitalization in assets. The new guidance related to the presentation of the components of net periodic benefit cost within the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) will be applied retrospectively. The new guidance limiting the capitalization of net periodic benefit cost in assets to the service cost component will be applied prospectively. The new standard is effective for fiscal years beginning after December 15, 2017, and interim periods within that reporting period. We adopted this standard on January 1, 2018. As a result of adoption, \$10.7 million and \$13.3 million of pension and post-retirement expense will be reclassified out of operating income for the years ended December 31, 2017 and 2016, respectively.

In March 2016, the FASB issued a new accounting standard for share-based payments. The guidance simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification of excess tax benefits in the Consolidated Statements of Cash Flows. We adopted the new standard in the first quarter of 2017. The impact of the adoption resulted in the following:

- All excess tax benefits and deficiencies arising from employee share-based payment awards, and dividends on those awards, will be recognized within income taxes in the period in which they occur rather than within additional paid-in-capital. Our adoption of this requirement under the new standard had no material impact for the year ended December 31, 2017.
- The Company no longer presents excess tax benefits within cash flows from financing activities in the Consolidated Statements of Cash Flows; instead these are now reflected within cash flows from operating activities. The Company elected to apply this change prospectively.
- The Company elected not to change its policy on accounting for forfeitures and continues to estimate the total number of awards for which the requisite service period will not be rendered.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

- The Company excluded the excess tax benefits from the assumed proceeds available to repurchase shares in the computation of our diluted earnings per share for the year ended December 31, 2017. This increased diluted weighted average common shares outstanding by less than 300,000 shares for the year ended December 31, 2017.

In February 2016, the FASB issued new accounting requirements regarding accounting for leases, which require an entity to recognize both assets and liabilities arising from financing and operating leases, along with additional qualitative and quantitative disclosures. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within that reporting period, and early adoption is permitted. We have not yet determined the potential effects on our financial condition or results of operations.

In May 2014, the FASB issued new accounting requirements for the recognition of revenue from contracts with customers. The new rules require entities to recognize revenue when they transfer control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. The new requirements also include additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The requirements are effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. We adopted the new revenue guidance as of January 1, 2018, using the modified retrospective transition method of adoption applied to those contracts which were not completed as of that date. An adjustment will be recorded to our 2018 beginning retained earnings for the cumulative effect of the change. In preparation for adoption of the new guidance, we have implemented appropriate changes to our business processes, systems and controls to support preparation of financial information and have reached conclusions on key accounting assessments related to the standard. As a result of these assessments, the adoption of the new standard will not have a material impact on our consolidated financial statements, including the presentation of revenues in our Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss).

2. Acquisitions

During 2017, we completed acquisitions of Union Engineering A/S, incorporated in Denmark, and Electrical Prefab Systems, LLC, incorporated in the United States, both of which were accounted for as business combinations. The purchase prices totaled \$59.5 million in cash, net of cash acquired. Identifiable intangible assets acquired included \$19.1 million of definite-lived customer relationships with an estimated useful life of 11 years.

In November 2016, we completed an acquisition as part of our Water segment with a purchase price of \$25.0 million in cash, net of cash acquired.

The pro forma impact of these acquisitions was not material.

3. Discontinued Operations

On April 28, 2017 we completed the sale of the Valves & Controls business to Emerson Electric Co. for \$3.15 billion in cash. The sale resulted in a gain, net of tax, of \$181.1 million.

The results of the Valves & Controls business have been presented as discontinued operations and the related assets and liabilities have been reclassified as held for sale for all periods presented. The Valves & Controls business was previously disclosed as a stand-alone reporting segment. Transaction costs of \$56.4 million related to the sale of Valves & Controls were incurred during the year ended December 31, 2017 and were recorded within *Selling, general and administrative* expenses in the operating results of discontinued operations.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The carrying amounts of major classes of assets and liabilities that were classified as held for sale on the Consolidated Balance Sheets were as follows:

<i>In millions</i>	December 31	
	2017	2016
Trade debtors	\$ —	\$ 365.4
Stocks	—	491.5
Other current assets	—	35.0
Current assets held for sale	\$ —	\$ 891.9
Tangible assets, net	\$ —	\$ 361.5
Goodwill	—	996.4
Intangibles, net	—	703.5
Asbestos-related insurance receivable	—	108.5
Other non-current assets	—	123.0
Fixed assets held for sale	\$ —	\$ 2,292.9
Trade creditors	\$ —	\$ 151.4
Employee compensation and benefits	—	61.5
Other current liabilities	—	93.6
Creditors held for sale (amounts falling due within one year)	\$ —	\$ 306.5
Income taxes payable	\$ —	\$ 27.5
Other non-current liabilities	—	41.7
Creditors held for sale (amounts falling due after more than one year)	\$ —	\$ 69.2
Pension and other post-retirement compensation and benefits	\$ —	\$ 32.2
Deferred taxation	—	162.8
Asbestos-related liabilities	—	228.3
Accrued warranty	—	9.0
Accrued restructuring	—	37.2
Environmental liabilities	—	16.9
Provisions for liabilities held for sale	\$ —	\$ 486.4

Pentair plc and Subsidiaries
Notes to consolidated financial statements

4. Earnings Per Share

Basic and diluted earnings per share were calculated as follows:

<i>In millions, except per share data</i>	Financial years ended December 31	
	2017	2016
Profit of the group for the year	\$ 666.5	\$ 522.2
Profit from continuing operations of the group for the year	\$ 480.0	\$ 451.6
Weighted average ordinary shares outstanding		
Basic	181.7	181.3
Dilutive impact of stock options and restricted stock awards	2.0	1.8
Diluted	183.7	183.1
Earnings per ordinary share		
<i>Basic</i>		
Continuing operations	\$ 2.64	\$ 2.49
Discontinued operations	1.03	0.39
Basic earnings per ordinary share	\$ 3.67	\$ 2.88
<i>Diluted</i>		
Continuing operations	\$ 2.61	\$ 2.47
Discontinued operations	1.02	0.38
Diluted earnings per ordinary share	\$ 3.63	\$ 2.85
Anti-dilutive stock options excluded from the calculation of diluted earnings per share	1.8	1.2

5. Restructuring

During 2017 and 2016, we initiated and continued execution of certain business restructuring initiatives aimed at reducing our fixed cost structure and realigning our business, specifically in 2017 as part of the contemplation of the Proposed Separation. The 2017 initiatives included a reduction in hourly and salaried headcount of approximately 500 employees, which included 250 in the Water segment and 250 in the Electrical segment. The 2016 initiatives included the reduction in hourly and salaried headcount of approximately 650 employees, which included 300 in the Water segment and 350 in the Electrical segment.

Restructuring related costs of continuing operations included in *Selling, general and administrative* expenses in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) included costs for severance and other restructuring costs as follows:

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Severance and related costs	\$ 57.1	\$ 24.5
Other	1.6	—
Total restructuring costs	\$ 58.7	\$ 24.5

Other restructuring costs primarily consist of asset impairment and various contract termination costs.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Restructuring costs of continuing operations by reportable segment were as follows:

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Water	\$ 23.6	\$ 10.5
Electrical	16.8	12.3
Other	18.3	1.7
Consolidated	\$ 58.7	\$ 24.5

Activity related to accrued severance and related costs of continuing operations recorded in Provision for liabilities in the Consolidated Balance Sheets is summarized as follows:

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Beginning balance	\$ 25.4	\$ 37.1
Costs incurred	57.1	24.5
Cash payments and other	(42.7)	(36.2)
Ending balance	\$ 39.8	\$ 25.4

6. Intangible Assets

The changes in the carrying amount of goodwill for the years ended December 31, 2017 and 2016 by reportable segment were as follows:

<i>In millions</i>	December 31, 2016	Acquisitions/ divestitures	Foreign currency translation/other	December 31, 2017
Water	\$ 1,994.6	\$ 27.3	\$ 91.0	\$ 2,112.9
Electrical	2,222.8	5.3	10.1	2,238.2
Total goodwill	\$ 4,217.4	\$ 32.6	\$ 101.1	\$ 4,351.1

<i>In millions</i>	December 31, 2015	Acquisitions/ divestitures	Purchase accounting adjustments	Foreign currency translation/other	December 31, 2016
Water	\$ 2,003.8	\$ 20.8	\$ —	\$ (30.0)	\$ 1,994.6
Electrical	2,255.2	—	(30.9)	(1.5)	2,222.8
Total goodwill	\$ 4,259.0	\$ 20.8	\$ (30.9)	\$ (31.5)	\$ 4,217.4

Accumulated goodwill impairment losses were \$200.5 million as of December 31, 2017 and 2016.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Identifiable intangible assets consisted of the following at December 31:

<i>In millions</i>	2017			2016		
	Cost	Accumulated amortization	Net	Cost	Accumulated amortization	Net
Definite-life intangibles						
Customer relationships	\$ 1,513.9	\$ (437.5)	\$ 1,076.4	\$ 1,478.0	\$ (346.7)	\$ 1,131.3
Trade names	1.5	(1.4)	0.1	1.8	(1.4)	0.4
Proprietary technology and patents	131.9	(94.2)	37.7	141.3	(100.3)	41.0
Total finite-life intangibles	1,647.3	(533.1)	1,114.2	1,621.1	(448.4)	1,172.7
Indefinite-life intangibles						
Trade names	444.2	—	444.2	459.1	—	459.1
Total intangibles	\$ 2,091.5	\$ (533.1)	\$ 1,558.4	\$ 2,080.2	\$ (448.4)	\$ 1,631.8

Identifiable intangible asset amortization expense of continuing operations in 2017 and 2016 was \$97.7 million and \$96.4 million, respectively.

In 2017, we recorded an impairment charge for trade name intangible assets of \$25.2 million in Water and Electrical. In 2016, we recorded an impairment charge for trade name intangible assets of \$13.3 million in Electrical.

Estimated future amortization expense for identifiable intangible assets during the next five years is as follows:

<i>In millions</i>	2018	2019	2020	2021	2022
Estimated amortization expense	\$ 96.3	\$ 89.2	\$ 84.0	\$ 77.5	\$ 70.0

7. Supplemental Cash Flow Information

<i>In millions</i>	Years ended December 31	
	2017	2016
Cash paid for interest, net	\$ 107.2	\$ 143.4
Cash paid for income taxes, net	362.1	145.1

8. Accumulated Other Comprehensive Loss

Components of AOCI consist of the following:

<i>In millions</i>	December 31	
	2017	2016
Cumulative translation adjustments	\$ (221.4)	\$ (718.9)
Change in market value of derivative financial instruments, net of tax	(22.0)	(17.4)
Accumulated other comprehensive loss	\$ (243.4)	\$ (736.3)

9. Stocks

Stocks consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Raw materials and supplies	\$ 255.1	\$ 223.5
Work-in-process	83.0	67.3
Finished goods	242.9	233.4
Total stocks	\$ 581.0	\$ 524.2

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Aggregate reductions in the carrying value of stocks that were still on hand at December 31, 2017 and 2016, that were deemed to be excess, obsolete, slow-moving or in excess of market, were \$60.2 million and \$63.2 million, respectively.

10. Debt

Debt and the average interest rates on debt outstanding were as follows:

<i>In millions</i>	Average	Maturity	December 31	
	interest rate at December 31, 2017		year	2017
Commercial paper	2.340%	2019	\$ 34.0	\$ 398.7
Revolving credit facilities	3.064%	2019	28.4	576.8
Senior notes - fixed rate ⁽¹⁾	1.875%	2017	—	350.0
Senior notes - fixed rate ⁽¹⁾	2.900%	2018	255.3	500.0
Senior notes - fixed rate ⁽¹⁾	2.650%	2019	250.0	250.0
Senior notes - fixed rate - Euro ⁽¹⁾	2.450%	2019	594.4	520.7
Senior notes - fixed rate ⁽¹⁾	3.625%	2020	74.0	400.0
Senior notes - fixed rate ⁽¹⁾	5.000%	2021	103.8	500.0
Senior notes - fixed rate ⁽¹⁾	3.150%	2022	88.3	550.0
Senior notes - fixed rate ⁽¹⁾	4.650%	2025	19.3	250.0
Other	N/A	N/A	—	0.8
Unamortized issuance costs and discounts	N/A	N/A	(6.8)	(17.8)
Total debt			1,440.7	4,279.2
Less: Current maturities and short-term borrowings			(255.3)	(350.8)
Long-term debt			\$ 1,185.4	\$ 3,928.4

(1) Senior notes are guaranteed as to payment by Pentair plc and PISG

In October 2014, Pentair plc, Pentair Investments Switzerland GmbH (“PISG”), Pentair Finance S.à r.l. (“PFSA”) and Pentair, Inc. entered into an amended and restated credit agreement (the “Credit Facility”), with Pentair plc and PISG as guarantors and PFSA and Pentair, Inc. as borrowers. The Credit Facility had a maximum aggregate availability of \$2,100.0 million and a maturity date of October 3, 2019. Borrowings under the Credit Facility generally bear interest at a variable rate equal to the London Interbank Offered Rate (“LIBOR”) plus a specified margin based upon PFSA’s credit ratings. PFSA must pay a facility fee ranging from 9.0 to 25.0 basis points per annum (based upon PFSA’s credit ratings) on the amount of each lender’s commitment and letter of credit fee for each letter of credit issued and outstanding under the Credit Facility.

In August 2015, Pentair plc, PISG and PFSA entered into a First Amendment to the Credit Facility (the “First Amendment”), which, among other things, increased the Leverage Ratio (as defined below). In September 2015, Pentair plc, PISG and PFSA entered into a Second Amendment to the Credit Facility (the “Second Amendment”), which, among other things, increased the maximum aggregate availability to \$2,500.0 million. Additionally, in September 2016, Pentair plc, PISG and PFSA entered into a Third Amendment to the Credit Facility (the “Third Amendment,” and collectively with the First Amendment and Second Amendment, the “Amendments”), which, among other things, increased the Leverage Ratio to the amounts specified below, and amended the definition of EBITDA to include earnings from discontinued operations subject to a sale agreement until such disposition actually occurs.

In May 2017, we repurchased aggregate principal of certain series of outstanding notes totaling \$1,659.3 million. All costs associated with the repurchases were recorded as *Loss on early extinguishment of debt*, including \$6.5 million of unamortized deferred financing costs.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

PFSA is authorized to sell short-term commercial paper notes to the extent availability exists under the Credit Facility. PFSA uses the Credit Facility as back-up liquidity to support 100% of commercial paper outstanding. As of December 31, 2017 and 2016, we had \$34.0 million and \$398.7 million, respectively, of commercial paper outstanding, all of which was classified as long-term as the commercial paper comes due in 2019.

Our debt agreements contain certain financial covenants, the most restrictive of which are in the Credit Facility (as updated for the Amendments), including that we may not permit (i) the ratio of our consolidated debt plus synthetic lease obligations to our consolidated net income (excluding, among other things, non-cash gains and losses) before interest, taxes, depreciation, amortization, non-cash share-based compensation expense, up to a lifetime maximum \$25.0 million of costs, fees and expenses incurred in connection with certain acquisitions, investments, dispositions and the issuance, repayment or refinancing of debt, (“EBITDA”) for the four consecutive fiscal quarters then ended (the “Leverage Ratio”) to exceed 3.50 to 1.00 as of the last day of the period of four consecutive fiscal quarters and (ii) the ratio of our EBITDA for the four consecutive fiscal quarters then ended to our consolidated interest expense, including consolidated yield or discount accrued as to outstanding securitization obligations (if any), for the same period to be less than 3.00 to 1.00 as of the end of each fiscal quarter. For purposes of the Leverage Ratio, the Credit Facility provides for the calculation of EBITDA giving pro forma effect to certain acquisitions, divestitures and liquidations during the period to which such calculation relates. As of December 31, 2017, we were in compliance with all financial covenants in our debt agreements.

Total availability under the Credit Facility was \$2,437.6 million as of December 31, 2017, which was limited to \$1,897.5 million by the Leverage Ratio in the Credit Facility’s credit agreement.

In addition to the Credit Facility, we have various other credit facilities with an aggregate availability of \$30.0 million, of which there were no outstanding borrowings at December 31, 2017. Borrowings under these credit facilities bear interest at variable rates.

Debt outstanding, excluding unamortized issuance costs and discounts, at December 31, 2017 matures on a calendar year basis as follows:

<i>In millions</i>	2018	2019	2020	2021	2022	Thereafter	Total
Contractual debt obligation maturities	\$ 255.3	\$ 906.8	\$ 74.0	\$ 103.8	\$ 88.3	\$ 19.3	\$ 1,447.5

11. Derivatives and Financial Instruments

Derivative financial instruments

We are exposed to market risk related to changes in foreign currency exchange rates. To manage the volatility related to this exposure, we periodically enter into a variety of derivative financial instruments. Our objective is to reduce, where it is deemed appropriate to do so, fluctuations in earnings and cash flows associated with changes in foreign currency rates. The derivative contracts contain credit risk to the extent that our bank counterparties may be unable to meet the terms of the agreements. The amount of such credit risk is generally limited to the unrealized gains, if any, in such contracts. Such risk is minimized by limiting those counterparties to major financial institutions of high credit quality.

Foreign currency contracts

We conduct business in various locations throughout the world and are subject to market risk due to changes in the value of foreign currencies in relation to our reporting currency, the U.S. dollar. We manage our economic and transaction exposure to certain market-based risks through the use of foreign currency derivative financial instruments. Our objective in holding these derivatives is to reduce the volatility of net earnings and cash flows associated with changes in foreign currency exchange rates. The majority of our foreign currency contracts have an original maturity date of less than one year. The derivative contracts contain credit risk to the extent that our bank counterparties may be unable to meet the terms of the agreements. The amount of such credit risk is generally limited to the unrealized gains, if any, in such contracts. Such risk is minimized by limiting those counterparties to major financial institutions of high credit quality.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

At December 31, 2017 and 2016, we had outstanding foreign currency derivative contracts with gross notional U.S. dollar equivalent amounts of \$481.4 million and \$475.6 million, respectively. The impact of these contracts on the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) was not material for any period presented.

Gains or losses on foreign currency contracts designated as hedges are reclassified out of AOCI and into *Selling, general and administrative expense* in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit (Loss) when the hedged item affects earnings. Such reclassifications during 2017 and 2016 were not material.

Net investment hedge

We have net investments in foreign subsidiaries that are subject to changes in the foreign currency exchange rate. In September 2015, we designated the €500 million 2.45% Senior Notes due 2019 (the “2019 Euro Notes”) as a net investment hedge for a portion of our net investment in our Euro denominated subsidiaries. The gains/losses on the 2019 Euro Notes have been included as a component of the cumulative translation adjustment account within AOCI. As of December 31, 2017 and 2016, we had deferred foreign currency loss of \$29.6 million and a gain of \$44.2 million, respectively, in AOCI associated with the net investment hedge activity.

Fair value measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are classified using the following hierarchy, which is based upon the transparency of inputs to the valuation as of the measurement date:

Level 1: Valuation is based on observable inputs such as quoted market prices (unadjusted) for identical assets or liabilities in active markets.

Level 2: Valuation is based on inputs such as quoted market prices for similar assets or liabilities in active markets or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3: Valuation is based upon other unobservable inputs that are significant to the fair value measurement.

In making fair value measurements, observable market data must be used when available. When inputs used to measure fair value fall within different levels of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement.

Fair value of financial instruments

The following methods were used to estimate the fair values of each class of financial instrument:

- short-term financial instruments (cash and cash equivalents, accounts and notes receivable, accounts and notes payable and variable-rate debt) — recorded amount approximates fair value because of the short maturity period;
- long-term fixed-rate debt, including current maturities — fair value is based on market quotes available for issuance of debt with similar terms, which are inputs that are classified as Level 2 in the valuation hierarchy defined by the accounting guidance;
- foreign currency contract agreements — fair values are determined through the use of models that consider various assumptions, including time value, yield curves, as well as other relevant economic measures, which are inputs that are classified as Level 2 in the valuation hierarchy defined by the accounting guidance; and
- deferred compensation plan assets (mutual funds, common/collective trusts and cash equivalents for payment of certain non-qualified benefits for retired, terminated and active employees) — fair value of mutual funds and cash equivalents are based on quoted market prices in active markets that are classified as Level 1 in the valuation hierarchy defined by the accounting guidance; fair value of common/collective trusts are based on observable inputs that are classified as Level 2 in the valuation hierarchy defined by the accounting guidance.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The recorded amounts and estimated fair values of total debt, excluding unamortized issuance costs and discounts, at December 31 were as follows:

<i>In millions</i>	2017		2016	
	Recorded Amount	Fair Value	Recorded Amount	Fair Value
Variable rate debt	\$ 62.4	\$ 62.4	\$ 976.3	\$ 976.3
Fixed rate debt	1,385.1	1,424.0	3,320.7	3,427.1
Total debt	\$ 1,447.5	\$ 1,486.4	\$ 4,297.0	\$ 4,403.4

Financial assets and liabilities measured at fair value on a recurring and nonrecurring basis were as follows:

<i>In millions</i>	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Foreign currency contract assets	\$ —	\$ 0.6	\$ —	\$ 0.6
Foreign currency contract liabilities	—	(47.2)	—	(47.2)
Deferred compensation plan assets	42.8	6.6	—	49.4
Total recurring fair value measurements	\$ 42.8	\$ (40.0)	\$ —	\$ 2.8
Nonrecurring fair value measurements ⁽¹⁾				

<i>In millions</i>	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Foreign currency contract assets	\$ —	\$ 5.5	\$ —	\$ 5.5
Foreign currency contract liabilities	—	(5.4)	—	(5.4)
Deferred compensation plan assets	41.6	6.3	—	47.9
Total recurring fair value measurements	\$ 41.6	\$ 6.4	\$ —	\$ 48.0
Nonrecurring fair value measurements ⁽¹⁾				

- (1) During the fourth quarter of 2017, we completed our annual intangible assets impairment review. As a result, we recorded a pre-tax non-cash impairment charge of \$25.2 million for trade name intangibles in 2017. The impairment charge reduced the total carrying value of the impacted trade name intangibles to \$27.0 million. During the fourth quarter of 2016, we completed our annual intangible assets impairment review. As a result, we recorded a pre-tax non-cash impairment charge of \$13.3 million for a trade name intangible in 2016. The impairment charge reduced the carrying value of the impacted trade name intangible to \$0. The fair value of trade names is measured using the relief-from-royalty method. This method assumes the trade name has value to the extent that the owner is relieved of the obligation to pay royalties for the benefits received from them. This method requires us to estimate the future revenue for the related brands, the appropriate royalty rate and the weighted average cost of capital.

12. Taxation

Profit from continuing operations before taxation consisted of the following:

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Federal ⁽¹⁾	\$ (32.8)	\$ (25.6)
International ⁽²⁾	522.0	586.6
Profit from continuing operations before taxation	\$ 489.2	\$ 561.0

- (1) "Federal" reflects U.K. income from continuing operations before income taxes.

- (2) "International" reflects non-U.K. income from continuing operations before income taxes.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Taxation from continuing operations consisted of the following:

<i>In millions</i>	Financial years ended December 31	
	2017	2016
Current		
Federal ⁽¹⁾	\$ 0.5	\$ (0.1)
International ⁽²⁾	183.8	125.6
Total current taxation	184.3	125.5
Deferred		
Federal ⁽¹⁾	—	(0.4)
International ⁽²⁾	(175.1)	(15.7)
Total deferred taxation	(175.1)	(16.1)
Total taxation	\$ 9.2	\$ 109.4

(1) “Federal” represents U.K. taxes.

(2) “International” represents non-U.K. taxes.

Reconciliations of the federal taxation at the statutory rate to the Group’s effective tax rate on ordinary activities were as follows:

<i>Percentages</i>	Years ended December 31	
	2017	2016
Federal statutory income tax rate ⁽¹⁾	19.3	20.0
Tax effect of international operations ⁽²⁾	(11.3)	(11.8)
Change in valuation allowances	8.0	9.7
Withholding taxes	0.4	0.9
Interest limitations	0.6	0.6
Non-deductible transaction costs	0.7	0.1
Excess tax benefits on stock-based compensation	(1.7)	—
Tax effect of U.S. tax reform	(17.3)	—
Tax effect of early extinguishment of debt	3.2	—
Effective tax rate	1.9	19.5

(1) The statutory rate for 2017 and 2016 reflects the U.K. statutory rate of 19.3 percent and 20.0 percent, respectively.

(2) The tax effect of international operations consists of non-U.K. jurisdictions.

Reconciliations of the Group’s beginning and ending gross unrecognized tax benefits were as follows:

<i>In millions</i>	Years ended December 31	
	2017	2016
Beginning balance	\$ 71.1	\$ 45.6
Gross increases for tax positions in prior periods	5.3	27.4
Gross decreases for tax positions in prior periods	(5.0)	(4.8)
Gross increases based on tax positions related to the current year	1.8	2.0
Gross decreases related to settlements with taxing authorities	(35.7)	(3.4)
Reductions due to statute expiration	(2.2)	(0.8)
Gross (decreases) increases due to currency fluctuations	1.3	(0.2)
Gross increases due to acquisitions	—	5.3
Ending balance	\$ 36.6	\$ 71.1

Pentair plc and Subsidiaries
Notes to consolidated financial statements

We record gross unrecognized tax benefits in *Creditors (amounts falling due within one year)* and *Creditors (amounts falling due after more than one year)* in the Consolidated Balance Sheets. Included in the \$36.6 million of total gross unrecognized tax benefits as of December 31, 2017 was \$34.9 million of tax benefits that, if recognized, would impact the effective tax rate. It is reasonably possible that the gross unrecognized tax benefits as of December 31, 2017 may decrease by a range of zero to \$16.9 million during 2018, primarily as a result of the resolution of non-U.K. examinations, including U.S. federal and state examinations, and the expiration of various statutes of limitations. The \$35.7 million gross decrease during 2017 for settlements with taxing authorities consists primarily of a tentative settlement with the Internal Revenue Service (“IRS”) related to the value of certain intellectual property sold from the U.S. to a non-U.S. affiliate. The decrease related to settlements with taxing authorities had no impact on our effective tax rate.

Based on the outcome of these examinations, or as a result of the expiration of statute of limitations for specific jurisdictions, it is reasonably possible that certain unrecognized tax benefits for tax positions taken on previously filed tax returns will materially change from those recorded as liabilities in our financial statements. During 2017, the IRS completed their examination of the Panthro Acquisition Co. U.S. federal income tax returns for tax years ending December 31, 2012 and December 31, 2013. A number of tax periods from 2004 to present are under audit by tax authorities in various jurisdictions, including Canada, China, Germany, India, the Netherlands and New Zealand. We anticipate that several of these audits may be concluded in the foreseeable future.

We record penalties and interest related to unrecognized tax benefits in *Taxation* and *Interest payable and similar charges*, respectively. As of December 31, 2017 and 2016, we have liabilities of \$2.3 million and \$2.4 million, respectively, for the possible payment of penalties and \$9.4 million and \$11.0 million, respectively, for the possible payment of interest expense, which are recorded in *Creditors (amounts falling due within one year)* in the Consolidated Balance Sheets.

Deferred taxation arises because of different treatment between financial statement accounting and tax accounting, known as “temporary differences.” We record the tax effect of these temporary differences as “deferred tax assets” (generally items that can be used as a tax deduction or credit in future periods) and “deferred tax liabilities” (generally items for which we received a tax deduction but the tax impact has not yet been recorded in the Consolidated Profit and Loss Account and Statement of Comprehensive Profit/(Loss)).

Deferred taxation from continuing operations was recorded in the Consolidated Balance Sheets as follows:

<i>In millions</i>	December 31	
	2017	2016
Deferred taxation (falling due after more than one year) (note 24)	\$ 43.0	\$ 39.0
Provisions for liabilities (note 25)	394.8	609.5
Net deferred taxation	\$ 351.8	\$ 570.5

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The tax effects of the major items recorded as deferred tax assets and liabilities from continuing operations were as follows:

<i>In millions</i>	December 31	
	2017	2016
Deferred tax assets		
Accrued liabilities and reserves	\$ 55.2	\$ 83.2
Pension and other post-retirement compensation and benefits	53.8	48.9
Employee compensation and benefits	43.5	76.6
Tax loss and credit carryforwards	811.7	391.0
Total deferred tax assets	964.2	599.7
Valuation allowance	792.4	380.8
Deferred tax assets, net of valuation allowance	171.8	218.9
Deferred tax liabilities		
Tangible assets	16.5	23.6
Goodwill and other intangibles	484.7	733.7
Other liabilities	22.4	32.1
Total deferred tax liabilities	523.6	789.4
Net deferred taxation	\$ 351.8	\$ 570.5

Included in tax loss and credit carryforwards in the table above is a deferred tax asset of \$28.7 million as of December 31, 2017 related to foreign tax credit carryover from the tax period ended December 31, 2017 and related to transition taxes. The entire amount is subject to a valuation allowance. The foreign tax credit is eligible for carryforward until the tax period ending December 31, 2027.

As of December 31, 2017, tax loss carryforwards of \$4,052.9 million were available to offset future income. A valuation allowance of \$762.2 million exists for deferred income tax benefits related to the tax loss carryforwards which may not be realized. The increase in tax loss carryforwards and valuation allowance from 2016 to 2017 were primarily related to internal restructuring transactions and interest expense. We believe sufficient taxable income will be generated in the respective jurisdictions to allow us to fully recover the remainder of the tax losses. The tax losses primarily relate to non-U.S. carryforwards of \$3,961.0 million which are subject to varying expiration periods. Non-U.S. carryforwards of \$2,253.0 million are located in jurisdictions with unlimited tax loss carryforward periods, while the remainder will begin to expire in 2018. In addition, there were \$91.9 million of state tax loss carryforwards as of December 31, 2017, which will expire in future years through 2037.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Act”) was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017.

Given the significance of the Act, Staff Accounting Bulletin No. 118 (“SAB 118”) was issued to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. SAB 118 allows registrants to record provisional amounts during a one year “measurement period.” The measurement period is deemed to have ended earlier when the registrant has obtained, prepared, and analyzed the information necessary to finalize its accounting. During the measurement period, impacts of the law are expected to be recorded at the time a reasonable estimate for all or a portion of the effects can be made, and provisional amounts can be recognized and adjusted as information becomes available, prepared, or analyzed.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The Company has calculated its best estimate of the impact of the Act in its year end income tax provision in accordance with its understanding of the Act and guidance available as of the date of this filing and as a result has recorded a provisional income tax benefit of \$84.8 million in the fourth quarter of 2017, the period in which the legislation was enacted. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future was a decrease to income tax expense of \$147.7 million. The remeasurement of deferred taxes requires further analysis regarding the impact of the Act on state taxes, taxation of executive compensation arrangements, changes to tax capitalization provisions and other aspects of the Act that may impact our tax balances.

The amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings was an increase to income tax expense of \$62.9 million. The determination of the transition tax requires further analysis regarding the amount and composition of the company's historical foreign earnings, which is expected to be completed in the second half of 2018. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

13. Benefit Plans

Pension and other post-retirement plans

We sponsor U.S. and non-U.S. defined-benefit pension and other post-retirement plans. Pension benefits are based principally on an employee's years of service and/or compensation levels near retirement. In addition, we provide certain post-retirement health care and life insurance benefits. Generally, the post-retirement health care and life insurance plans require contributions from retirees. The Group's periodic contributions to the plans are generally held in trust. In December 2007, we announced that we will be freezing certain U.S. pension plans as of December 31, 2017.

In November 2017, our Board of Directors approved amendments to terminate the Pentair Salaried Plan (the "Salaried Plan"), a U.S. qualified pension plan. The Salaried Plan discontinued accruing benefits on December 31, 2017 and the termination was effective December 31, 2017. It is expected to take 18 to 24 months from the date of the approved amendment to complete the termination of the Salaried Plan.

At December 31, 2017, the projected benefit obligation of the Salaried Plan was \$369.0 million and the plan assets were \$355.4 million. There were approximately 2,610 active participants in the Salaried Plan, of which 2,048 were either active employees or terminated vested participants who had not yet begun to receive their benefits as of December 31, 2017. The Salaried Plan participants will not be adversely affected by the plan termination. Those participants whose plan benefits are not in pay status by July 1, 2018 will be given the opportunity to elect a lump sum (or monthly annuity) during a special election window. For all participants whose Salaried Plan benefits are not paid in a lump sum, Pentair will purchase an annuity for them with an annuity provider after the special election window and after all required government approvals for the termination of the pension plan are received.

The amounts included in the Group's consolidated financial statements are based upon the most recent actuarial valuations, which are generally as of the end of the fiscal year. The actuarial valuations are performed by the individual plan's independent and professionally qualified actuaries. The actuarial reports are not available for public inspection.

The information herein relates to defined-benefit pension and other post-retirement plans of our continuing operations only.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Obligations and funded status

The following tables present reconciliations of plan benefit obligations, fair value of plan assets and the funded status of pension plans and other post-retirement plans as of and for the years ended December 31, 2017 and 2016:

<i>In millions</i>	<u>U.S. pension plans</u>		<u>Non-U.S. pension plans</u>		<u>Other post-retirement plans</u>	
	2017	2016	2017	2016	2017	2016
Change in benefit obligations						
Benefit obligation beginning of year	\$ 413.3	\$ 396.9	\$ 186.8	\$ 173.4	\$ 36.9	\$ 38.8
Service cost	10.3	11.2	8.0	6.6	0.2	0.2
Interest cost	16.3	16.4	4.2	4.1	1.3	1.5
Actuarial loss (gain)	40.0	0.9	(8.5)	16.8	0.2	(0.5)
Foreign currency translation	—	—	23.7	(9.2)	—	—
Benefits paid	(16.9)	(12.1)	(7.0)	(4.9)	(3.0)	(3.1)
Benefit obligation end of year	\$ 463.0	\$ 413.3	\$ 207.2	\$ 186.8	\$ 35.6	\$ 36.9
Change in plan assets						
Fair value of plan assets						
beginning of year	\$ 344.4	\$ 327.7	\$ 45.7	\$ 46.6	\$ —	\$ —
Actual return on plan assets	42.4	24.6	2.1	3.0	—	—
Company contributions	4.6	4.2	8.2	5.8	2.9	3.1
Foreign currency translation	—	—	3.7	(4.8)	—	—
Benefits paid	(16.9)	(12.1)	(8.5)	(4.9)	(2.9)	(3.1)
Fair value of plan assets end of year	\$ 374.5	\$ 344.4	\$ 51.2	\$ 45.7	\$ —	\$ —
Funded status						
Benefit obligations in excess of the fair value of plan assets	\$ (88.5)	\$ (68.9)	\$ (156.0)	\$ (141.1)	\$ (35.6)	\$ (36.9)

Benefit obligations in excess of the fair value of plan assets recognized on the Consolidated Balance Sheets for the Group's defined benefit plans were as follows:

<i>In millions</i>	<u>U.S. pension plans</u>		<u>Non-U.S. pension plans</u>		<u>Other post-retirement plans</u>	
	2017	2016	2017	2016	2017	2016
Amount to be received after one year	\$ —	\$ 0.8	\$ 3.8	\$ 3.2	\$ —	\$ —
Amount to be settled within one year	(6.0)	(4.4)	(3.6)	(2.9)	(3.1)	(3.2)
Amount to be settled after one year	(82.5)	(65.3)	(156.2)	(141.4)	(32.5)	(33.7)
Benefit obligations in excess of the fair value of plan assets	\$ (88.5)	\$ (68.9)	\$ (156.0)	\$ (141.1)	\$ (35.6)	\$ (36.9)

The accumulated benefit obligation for all defined benefit plans was \$656.7 million and \$585.9 million at December 31, 2017 and 2016, respectively.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Information for pension plans with an accumulated benefit obligation or projected benefit obligation in excess of plan assets as of December 31 was as follows:

<i>In millions</i>	Projected benefit obligation exceeds the fair value of plan assets		Accumulated benefit obligation exceeds the fair value of plan assets	
	2017	2016	2017	2016
U.S. pension plans				
Projected benefit obligation	\$ 463.0	\$ 87.2	\$ 463.0	\$ 87.2
Fair value of plan assets	374.5	17.5	374.5	17.5
Accumulated benefit obligation	N/A	N/A	460.3	86.3
Non-U.S. pension plans				
Projected benefit obligation	\$ 182.4	\$ 165.2	\$ 170.3	\$ 165.2
Fair value of plan assets	22.6	20.9	11.4	20.9
Accumulated benefit obligation	NA	NA	160.5	155.7

Components of net periodic benefit expense for our pension plans for the years ended December 31 were as follows:

<i>In millions</i>	U.S. pension plans		Non-U.S. pension plans	
	2017	2016	2017	2016
Service cost	\$ 10.3	\$ 11.2	\$ 8.0	\$ 6.6
Interest cost	16.3	16.4	4.2	4.1
Expected return on plan assets	(11.5)	(11.4)	(1.5)	(1.5)
Net actuarial loss (gain)	9.1	(12.4)	(7.4)	17.2
Net periodic benefit expense	\$ 24.2	\$ 3.8	\$ 3.3	\$ 26.4

Components of net periodic benefit expense for our other post-retirement plans for the years ended December 31 2017 and 2016, were not material.

Assumptions

Weighted-average assumptions used to determine benefit obligations as of December 31 were as follows:

<i>Percentages</i>	U.S. pension plans		Non-U.S. pension plans		Other post-retirement plans	
	2017	2016	2017	2016	2017	2016
Discount rate	3.39%	4.02%	2.18%	2.00%	3.40%	3.80%
Rate of compensation increase	4.00%	4.00%	2.93%	2.91%	—	—

Weighted-average assumptions used to determine net periodic benefit expense (income) for years ended December 31 were as follows:

<i>Percentages</i>	U.S. pension plans		Non-U.S. pension plans		Other post-retirement plans	
	2017	2016	2017	2016	2017	2016
Discount rate	4.02%	4.21%	2.00%	2.52%	3.80%	3.95%
Expected long-term return on plan assets	4.11%	4.28%	3.02%	3.29%	—	—
Rate of compensation increase	4.00%	4.00%	2.91%	2.90%	—	—

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Uncertainty in the securities markets and U.S. economy could result in investment returns less than those assumed. Should the securities markets decline or medical and prescription drug costs increase at a rate greater than assumed, we would expect increasing annual combined net pension and other post-retirement costs for the next several years. Should actual experience differ from actuarial assumptions, the projected pension benefit obligation and net pension cost and accumulated other post-retirement benefit obligation and other post-retirement benefit cost would be affected in future years.

Discount rates

The discount rate reflects the current rate at which the pension liabilities could be effectively settled at the end of the year based on our December 31 measurement date. The discount rate was determined by matching our expected benefit payments to payments from a stream of bonds rated AA or higher available in the marketplace, adjusted to eliminate the effects of call provisions. This produced a weighted-average discount rate for our U.S. pension plans of 3.39% and 4.02% in 2017 and 2016, respectively. The discount rates on our non-U.S. pension plans ranged from 0.50% to 3.50% and 0.50% to 4.00% in 2017 and 2016, respectively. There are no known or anticipated changes in our discount rate assumptions that will impact our pension expense in 2018.

Expected rates of return

Our expected rates of return on U.S. pension plan assets were 4.11% and 4.28% for 2017 and 2016, respectively. The expected rates of return on non-U.S. pension plan assets ranged from 1.00% to 5.50% and 1.00% to 5.50% in 2017 and 2016, respectively. The expected rate of return is designed to be a long-term assumption that may be subject to considerable year-to-year variance from actual returns. In developing the expected long-term rate of return, we considered our historical returns, with consideration given to forecasted economic conditions, our asset allocations, input from external consultants and broader longer-term market indices. U.S. pension plan assets yielded returns of 12.30% and 7.50% in 2017 and 2016, respectively. As a result of our de-risking strategy to reduce U.S. pension plan liability, we anticipate the expected rate of return on our U.S. funded pension plans will continue to be consistent with the discount rate utilized. Any difference in the expected rate and actual returns will be included with the actuarial gain or loss recorded in the fourth quarter when our plans are remeasured.

Healthcare cost trend rates

The assumed healthcare cost trend rates for other post-retirement plans as of December 31 were as follows:

	2017	2016
Healthcare cost trend rate assumed for following year	6.6%	7.0%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.4%	4.4%
Year the cost trend rate reaches the ultimate trend rate	2038	2038

The assumed healthcare cost trend rates can have a significant effect on the amounts reported for healthcare plans. A one-percentage-point change in the assumed healthcare cost trend rates would have the following effects as of and for the year ended December 31, 2017:

<i>In millions</i>	One Percentage Point	
	Increase	Decrease
Increase (decrease) in annual service and interest cost	\$ 0.1	\$ (0.1)
Increase (decrease) in other post-retirement benefit obligations	0.7	(0.6)

Pension plans assets

Objective

The primary objective of our investment strategy is to meet the pension obligation to our employees at a reasonable cost to us. This is primarily accomplished through growth of capital and safety of the funds invested.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Asset allocation

Our actual overall asset allocation for our U.S. and non-U.S. pension plans as compared to our investment policy goals as of December 31 was as follows:

<i>Percentages</i>	U.S. pension plans			
	Actual		Target	
	2017	2016	2017	2016
Fixed income	99%	99%	100%	100%
Alternative	1%	1%	—%	—%

<i>Percentages</i>	Non-U.S. pension plans			
	Actual		Target	
	2017	2016	2017	2016
Equity securities	22%	23%	24%	23%
Fixed income	53%	46%	51%	48%
Alternative	22%	26%	23%	27%
Cash	3%	5%	2%	2%

Fair value measurement

The fair values of our pension plan assets and their respective levels in the fair value hierarchy as of December 31, 2017 and December 31, 2016 were as follows:

<i>In millions</i>	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ —	\$ 2.8	\$ —	\$ 2.8
Fixed income:				
Corporate and non U.S. government	—	289.5	—	289.5
U.S. treasuries	—	43.2	—	43.2
Mortgage-backed securities	—	3.3	—	3.3
Other	—	63.1	—	63.1
Global equity securities:				
Small cap equity	—	1.2	—	1.2
International equity	—	10.2	—	10.2
Other investments	—	11.3	1.1	12.4
Total fair value of plan assets	\$ —	\$ 424.6	\$ 1.1	\$ 425.7

<i>In millions</i>	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ —	\$ 3.4	\$ —	\$ 3.4
Fixed income:				
Corporate and non U.S. government	—	290.5	—	290.5
U.S. treasuries	—	30.5	—	30.5
Mortgage-backed securities	—	4.5	—	4.5
Other	—	37.0	—	37.0
Global equity securities:				
Large cap equity	—	2.2	—	2.2
International equity	—	8.3	—	8.3
Other investments	—	11.7	2.0	13.7
Total fair value of plan assets	\$ —	\$ 388.1	\$ 2.0	\$ 390.1

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Valuation methodologies used for investments measured at fair value were as follows:

- ***Cash and cash equivalents:*** Cash consists of cash held in bank accounts and was classified as Level 1. Cash equivalents consist of investments in commingled funds valued based on observable market data. Such investments were classified as Level 2.
- ***Fixed income:*** Investments in corporate bonds, government securities, mortgages and asset backed securities were valued based upon quoted market prices for similar securities and other observable market data. Investments in commingled funds were generally valued at the net asset value of units held at the end of the period based upon the value of the underlying investments as determined by quoted market prices or by a pricing service. Such investments were classified as Level 2.
- ***Global equity securities:*** Investments in commingled funds were valued at the net asset value of units held at the end of the period based upon the value of the underlying investments as determined by quoted market prices or by a pricing service. Such investments were classified as Level 2.
- ***Other investments:*** Other investments include investments in commingled funds with diversified investment strategies. Investments in commingled funds that were valued at the net asset value of units held at the end of the period based upon the value of the underlying investments as determined by quoted market prices or by a pricing service were classified as Level 2. Investments in commingled funds that were valued based on unobservable inputs due to liquidation restrictions were classified as Level 3.

Activity for our Level 3 pension plan assets held during the years ended December 31, 2017 and 2016 was not material.

Cash flows

Contributions

Pension contributions totaled \$12.8 million and \$10 million in 2017 and 2016, respectively. Our 2018 pension contributions are expected to be approximately \$18.0 million to \$21.0 million. The 2018 expected contributions will equal or exceed our minimum funding requirements.

Estimated future benefit payments

The following benefit payments, which reflect expected future service or payout from termination, as appropriate, are expected to be paid by the plans for the years ended December 31 as follows:

<i>In millions</i>	U.S. pension plans	Non-U.S. pension plans	Other post- retirement plans
2018	\$ 203.7	\$ 5.2	\$ 3.1
2019	178.3	5.8	3.0
2020	6.7	5.5	2.9
2021	6.7	6.1	2.8
2022	6.8	6.3	2.7
Thereafter	33.6	41.1	11.7

Savings plan

We have a 401(k) plan (the “401(k) plan”) with an employee share ownership (“ESOP”) bonus component, which covers certain union and all non-union U.S. employees who meet certain age requirements. Under the 401(k) plan, eligible U.S. employees may voluntarily contribute a percentage of their eligible compensation. We match contributions made by employees who meet certain eligibility and service requirements. Our matching contribution is 100% of eligible employee contributions for the first 1% of eligible compensation and 50% of the next 5% of eligible compensation.

In addition to the matching contribution, all employees who meet certain service requirements receive a discretionary ESOP contribution equal to 1.5% of annual eligible compensation.

Pentair plc and Subsidiaries

Notes to consolidated financial statements

As of January 1, 2018, the 401(k) plan benefits were changed. Plan participants now receive a matching contribution of 100% of eligible employee contributions for the first 5% of eligible compensation. This change will replace the ESOP component discussed above and offers the same 5% total company match.

Our combined expense for the 401(k) plan and the ESOP was \$27.9 million and \$27.1 million in 2017 and 2016, respectively.

Other retirement compensation

Total other accrued retirement compensation, primarily related to deferred compensation and supplemental retirement plans, was \$62.9 million and \$61 million as of December 31, 2017 and 2016, respectively, and is included in *Provisions for liabilities and Creditors (amounts falling due after more than one year)* in the Consolidated Balance Sheets.

14. Shareholders' Funds

Authorized share capital

The authorized share capital of the Company is 426 million ordinary shares of \$0.01 par value. There were no changes to the authorized share capital since the prior financial year end.

Share repurchases

In December 2014, the Board of Directors authorized the repurchase of our ordinary shares up to a maximum dollar limit of \$1.0 billion. The authorization expires on December 31, 2019.

In December 2015, we repurchased 3.1 million of our ordinary shares for \$200 million under the 2014 authorization.

During the year ended December 31, 2017, we repurchased 3.0 million of our ordinary shares for \$200.0 million under the 2014 authorization. We have \$600.0 million remaining availability for repurchases under the under the 2014 authorization. All 3.0 million shares were subsequently canceled.

Dividends payable

On December 5, 2017, the Board of Directors declared a quarterly cash dividend of \$0.35 that was paid on February 9, 2018 to shareholders of record at the close of business on January 26, 2018. Additionally, the Board of Directors approved a plan to increase the 2018 annual cash dividend to \$1.40, which is intended to be paid in four quarterly installments. As a result, the balance of dividends payable included in *Creditors (amounts falling due within one year)* on our Consolidated Balance Sheets was \$63.1 million at December 31, 2017. Dividends paid per ordinary share were \$1.38 and \$1.34 for the years ended December 31, 2017 and 2016, respectively.

See Note 5 of the Company financial statements for shareholders' funds activity of the Company.

15. Share Plans

Share-based compensation expense

Total share-based compensation expense for 2017 and 2016 was as follows:

<i>In millions</i>	December 31	
	2017	2016
Restricted stock units	\$ 17.5	\$ 17.3
Stock options	10.5	10.4
Performance share units	11.6	6.5
Total share-based compensation expense	\$ 39.6	\$ 34.2

Share incentive plans

Prior to the Merger, our Board of Directors, and Tyco as our sole shareholder, approved the Pentair plc 2012 Stock and Incentive Plan (the "2012 Plan"). The 2012 Plan became effective on September 28, 2012 and authorizes the issuance of 9.0 million of our ordinary shares. The shares may be issued as new shares or from shares held in treasury. Prior to the cancellation of our shares held in treasury in August 2015, our practice was to settle equity-based awards from shares held in treasury. Subsequent to the cancellation, our practice is to settle equity-based awards by issuing

Pentair plc and Subsidiaries
Notes to consolidated financial statements

new shares. The 2012 Plan terminates in September 2022. The 2012 Plan allows for the granting to our officers, directors, employees and consultants of non-qualified stock options, incentive stock options, stock appreciation rights, performance shares, performance units, restricted shares, restricted stock units, deferred stock rights, annual incentive awards, dividend equivalent units and other equity-based awards.

The 2012 Plan is administered by our compensation committee (the “Committee”), which is made up of independent members of our Board of Directors. Employees eligible to receive awards under the 2012 Plan are managerial, administrative or other key employees who are in a position to make a material contribution to the continued profitable growth and long-term success of our company. The Committee has the authority to select the recipients of awards, determine the type and size of awards, establish certain terms and conditions of award grants and take certain other actions as permitted under the 2012 Plan. The 2012 Plan prohibits the Committee from re-pricing awards or cancelling and reissuing awards at lower prices.

The 2008 Omnibus Stock Incentive Plan as Amended and Restated (the “2008 Plan”) terminated upon the completion of the Merger. Prior grants of restricted stock units and stock options made under the 2008 Plan and earlier stock incentive plans outstanding at completion of the Merger were converted into equity-based awards with respect to our ordinary shares and were assumed by us on the terms in effect at the time of grant and are outstanding under the 2012 Plan.

Non-qualified and incentive stock options

Under the 2012 Plan, we may grant stock options to any eligible employee with an exercise price equal to the market value of the shares on the dates the options were granted. Options generally vest one-third each year over a three-year period commencing on the grant date and expire 10 years after the grant date.

Restricted shares and restricted stock units

Under the 2012 Plan, eligible employees may be awarded restricted shares or restricted stock units of our common stock. Restricted shares and restricted stock units generally vest one-third each year over a three year period after issuance, subject to continuous employment and certain other conditions. Restricted shares and restricted stock units are valued at market value on the date of grant and are expensed over the vesting period.

Stock appreciation rights, performance shares and performance units

Under the 2012 Plan, the Committee is permitted to issue these awards which are generally earned over a three-year vesting period and tied to specific financial metrics. In December 2015, the Committee approved the granting of performance share units to certain employees that vest based on the satisfaction of a three-year service period and the achievement of certain performance metrics over that same period. Upon vesting, PSU holders receive dividends that accumulate during the vesting period. The fair value of these PSUs is determined based on the closing market price of the Company’s ordinary shares at the date of grant. Compensation expense is recognized over the period an employee is required to provide service based on the estimated vesting of the PSUs granted. The estimated vesting of the PSUs is based on the probability of achieving certain financial performance metrics during the three year vesting period.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Stock options

The following table summarizes stock option activity under all plans for the year ended December 31, 2017:

<i>Shares and intrinsic value in millions</i>	Number of shares	Weighted- average exercise price	Weighted- average remaining contractual life (years)	Aggregate intrinsic value
Outstanding as of January 1, 2017	5.7	\$ 45.72		
Granted	0.9	59.09		
Exercised	(1.2)	37.00		
Forfeited	(0.2)	60.03		
Expired	—	—		
Outstanding as of December 31, 2017	5.2	\$ 49.49	5.5	\$ 113.7
Options exercisable as of December 31, 2017	3.4	\$ 46.00	4.0	\$ 87.5
Options expected to vest as of December 31, 2017	1.8	\$ 56.13	8.3	\$ 25.8

Fair value of options granted

The weighted average grant date fair value of options granted under Pentair plans in 2017 and 2016 was estimated to be \$12.59 and \$9.74 per share, respectively. The total intrinsic value of options that were exercised during 2017 and 2016 was \$34.3 million and \$27.1 million, respectively. At December 31, 2017, the total unrecognized compensation cost related to stock options was \$9.8 million. This cost is expected to be recognized over a weighted average period of 2.0 years.

We estimated the fair value of each stock option award on the date of grant using a Black-Scholes option pricing model, modified for dividends and using the following weighted average assumptions:

	December 31	
	2017	2016
Risk-free interest rate	1.65%	1.56%
Expected dividend yield	2.35%	2.49%
Expected share price volatility	26.9%	27.3%
Expected term (years)	6.3	5.9

These estimates require us to make assumptions based on historical results, observance of trends in our share price, changes in option exercise behavior, future expectations and other relevant factors. If other assumptions had been used, share-based compensation expense, as calculated and recorded under the accounting guidance, could have been affected.

We based the expected life assumption on historical experience as well as the terms and vesting periods of the options granted. For purposes of determining expected volatility, we considered a rolling average of historical volatility measured over a period approximately equal to the expected option term. The risk-free rate for periods that coincide with the expected life of the options is based on the U.S. Treasury Department yield curve in effect at the time of grant.

Cash received from option exercises for the years ended December 31, 2017 and 2016 was \$46.0 million and \$31.6 million, respectively. The actual tax benefit realized for the tax deductions from option exercises totaled \$7.8 million and \$5.5 million for the years ended December 31, 2017 and 2016, respectively.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Restricted stock units

The following table summarizes restricted stock unit activity under all plans for the year ended December 31, 2017:

<i>Shares in millions</i>	Number of shares	Weighted average grant date fair value
Outstanding as of January 1, 2017	0.7	\$ 55.31
Granted	0.4	61.27
Vested	(0.4)	56.73
Forfeited	(0.1)	54.35
Outstanding as of December 31, 2017	0.6	\$ 57.96

As of December 31, 2017, there was \$39.6 million of unrecognized compensation cost related to restricted share compensation arrangements granted under the 2012 Plan and previous plans. That cost is expected to be recognized over a weighted-average period of 2.8 years. The total fair value of shares vested during the years ended December 31, 2017, and 2016, was \$21.7 million and \$27.2 million, respectively. For the years ended December 31, 2017 and 2016, there was no actual tax benefit realized.

Performance share units

The following table summarizes performance share unit activity under all plans for the year ended December 31, 2017:

<i>Shares in millions</i>	Number of shares	Weighted average grant date fair value
Outstanding as of January 1, 2017	0.3	\$ 49.54
Granted	0.2	58.40
Vested	—	—
Forfeited	—	—
Outstanding as of December 31, 2017	0.5	\$ 53.56

The expense recognized each period is dependent upon our estimate of the number of shares that will ultimately be issued. As of December 31, 2017, there was \$10.5 million of unrecognized compensation cost related to performance share compensation arrangements granted under the 2012 Plan and previous plans. That cost is expected to be recognized over a weighted-average period of 1.6 years. There were no actual tax benefits realized related to performance share compensation arrangements for the year ended December 31, 2017.

16. Segment Information

We classify our operations into the following business segments based primarily on types of products offered and markets served:

- **Water** — The Water segment designs, manufactures, markets and services innovative water solutions for the filtration, separation, flow and water management challenges in agriculture, foodservice, food and beverage processing, swimming pools, water supply and disposal and a variety of industrial applications.
- **Electrical** — The Electrical segment designs, manufactures, markets, installs and services high performance products and solutions that connect and protect some of the world's most sensitive equipment, buildings, and critical processes.
- **Other** — Other is primarily composed of unallocated corporate expenses, our captive insurance subsidiary and intermediate finance companies.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The accounting policies of our reporting segments are the same as those described in the summary of significant accounting policies. We evaluate performance based on turnover growth and segment income (loss) and use a variety of ratios to measure performance of our reporting segments. These results are not necessarily indicative of the results of operations that would have occurred had each segment been an independent, stand-alone entity during the periods presented. Segment income (loss) represents equity income of unconsolidated subsidiaries and operating profit from continuing operations exclusive of intangible amortization, certain acquisition related expenses, costs of restructuring activities, “mark-to-market” gain/loss for pension and other post-retirement plans, impairments and other unusual non-operating items.

Financial information of continuing operations by reportable segment is included in the following summary:

<i>In millions</i>	2017		2016	
	Turnover		Segment income (loss)	
Water	\$ 2,844.4	\$ 2,777.7	\$ 546.0	\$ 494.0
Electrical	2,097.9	2,116.0	447.0	447.2
Other	(5.8)	(3.7)	(95.8)	(101.7)
Consolidated	\$ 4,936.5	\$ 4,890.0	\$ 897.2	\$ 839.5

<i>In millions</i>	2017		2016	
	Identifiable assets ⁽¹⁾		Depreciation	
Water	\$ 3,667.1	\$ 3,465.5	\$ 45.6	\$ 46.8
Electrical	4,634.1	4,419.3	34.3	31.6
Other	332.5	3,650.0	5.3	6.2
Consolidated	\$ 8,633.7	\$ 11,534.8	\$ 85.2	\$ 84.6

<i>In millions</i>	2017		2016	
	Capital expenditures			
Water		\$ 36.1		\$ 40.8
Electrical		31.8		74.5
Other		3.0		2.5
Consolidated		\$ 70.9		\$ 117.8

(1) All cash and cash equivalents and assets held for sale are included in “Other.”

The following table presents a reconciliation of consolidated segment income to profit from continuing operations before taxation:

<i>In millions</i>	2017	2016
Segment income	\$ 897.2	\$ 839.5
Restructuring and other	(30.7)	(20.6)
Separation costs	(53.1)	—
Intangible amortization	(97.7)	(96.4)
Pension and other post-retirement mark-to-market loss	(1.6)	(4.2)
Trade name and other impairment	(32.0)	(13.3)
Loss on sale of businesses	(4.2)	(3.9)
Loss on early extinguishment of debt	(101.4)	—
Interest expense, net	(87.3)	(140.1)
Profit from continuing operations before taxation	\$ 489.2	\$ 561.0

Pentair plc and Subsidiaries
Notes to consolidated financial statements

The following tables present certain geographic information by region:

<i>In millions</i>	2017		2016	
	Turnover		Tangible assets	
U.S.	\$ 2,973.7	\$ 2,897.1	\$ 301.4	\$ 309.5
Western Europe	827.2	796.0	61.7	138.6
Developing ⁽¹⁾	723.7	704.0	157.1	65.2
Other Developed ⁽²⁾	411.9	492.9	25.3	25.3
Consolidated	\$ 4,936.5	\$ 4,890.0	\$ 545.5	\$ 538.6

(1) - Developing includes China, Eastern Europe, Latin America, the Middle East and Southeast Asia.

(2) - Other Developed includes Australia, Canada and Japan.

Turnover is based on the geographic destination of the sale. Tangible assets represent property, plant and equipment, net of related depreciation. Turnover shipped to and tangible assets held in Ireland for each year presented above were not material.

We offer a broad array of products and systems to multiple markets and customers for which we do not have the information systems to track turnover by primary product category. However, our turnover by segment are representative of our sales by major product category. We sell our products through various distribution channels including wholesale and retail distributors, original equipment manufacturers and home centers. No customer accounted for more than 10% of turnover in 2017 or 2016.

17. Commitments and Contingencies

Operating lease commitments

Net rental expense under operating leases of continuing operations was as follows:

<i>In millions</i>	Financial years ended	
	December 31	
	2017	2016
Gross rental expense	\$ 40.4	\$ 37.5
Sublease rental income	(0.3)	(0.7)
Net rental expense	\$ 40.1	\$ 36.8

Future minimum lease commitments under non-cancelable operating leases, principally related to facilities, machinery, equipment and vehicles as of December 31, 2017 were as follows:

<i>In millions</i>	2018	2019	2020	2021	2022	Thereafter	Total
Minimum lease payments	\$ 34.3	\$ 29.1	\$ 21.2	\$ 15.6	\$ 13.1	\$ 15.1	\$ 128.4
Minimum sublease rentals	(0.3)	—	—	—	—	—	(0.3)
Net future minimum lease commitments	\$ 34.0	\$ 29.1	\$ 21.2	\$ 15.6	\$ 13.1	\$ 15.1	\$ 128.1

Purchase and marketing obligations

The majority of the Group's purchase obligations represent commitments for raw materials to be utilized in the normal course of business. Arrangements are considered purchase obligations if a contract specifies all significant terms, including fixed or minimum quantities to be purchased, a pricing structure and approximate timing of the transaction. At December 31, 2017, the Group has aggregate purchase and marketing obligations of \$76.5 million, of which \$56.8 million relates to fiscal year 2018.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Other matters

In addition to the matters described above, from time to time, we are subject to disputes, administrative proceedings and other claims arising out of the normal conduct of our business. These matters generally relate to disputes arising out of the use or installation of our products, product liability litigation, personal injury claims, commercial and contract disputes and employment related matters. On the basis of information currently available to it, management does not believe that existing proceedings and claims will have a material impact on our Consolidated Financial Statements. However, litigation is unpredictable, and we could incur judgments or enter into settlements for current or future claims that could adversely affect our financial statements.

Warranties and guarantees

In connection with the disposition of our businesses or product lines, we may agree to indemnify purchasers for various potential liabilities relating to the sold business, such as pre-closing tax, product liability, warranty, environmental, or other obligations. The subject matter, amounts and duration of any such indemnification obligations vary for each type of liability indemnified and may vary widely from transaction to transaction.

Generally, the maximum obligation under such indemnifications is not explicitly stated and as a result, the overall amount of these obligations cannot be reasonably estimated. Historically, we have not made significant payments for these indemnifications. We believe that if we were to incur a loss in any of these matters, the loss would not have a material effect on our financial condition, results of operations or cash flows.

We recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. In connection with the disposition of the Valves & Controls business, we agreed to indemnify Emerson Electric Co. for certain pre-closing tax liabilities. During the second quarter of 2017, we recorded a liability representing the fair value of our expected future obligation for this matter.

We provide service and warranty policies on our products. Liability under service and warranty policies is based upon a review of historical warranty and service claim experience. Adjustments are made to accruals as claim data and historical experience warrant.

The changes in the carrying amount of service and product warranties from continuing operations for the years ended December 31, 2017 and 2016 were as follows:

<i>In millions</i>	Years ended December 31	
	2017	2016
Beginning balance	\$ 38.9	\$ 47.0
Service and product warranty provision	64.1	59.7
Payments	(62.7)	(67.3)
Foreign currency translation	0.7	(0.5)
Ending balance	\$ 41.0	\$ 38.9

Stand-by letters of credit, bank guarantees and bonds

In certain situations, Tyco guaranteed Flow Control's performance to third parties or provided financial guarantees for financial commitments of Flow Control. In situations where Flow Control and Tyco were unable to obtain a release from these guarantees in connection with the spin-off of Flow Control from Tyco, we will indemnify Tyco for any losses it suffers as a result of such guarantees.

In disposing of assets or businesses, we often provide representations, warranties and indemnities to cover various risks including unknown damage to the assets, environmental risks involved in the sale of real estate, liability to investigate and remediate environmental contamination at waste disposal sites and manufacturing facilities and unidentified tax liabilities and legal fees related to periods prior to disposition. We do not have the ability to reasonably estimate the potential liability due to the inchoate and unknown nature of these potential liabilities. However, we have no reason to believe that these uncertainties would have a material adverse effect on our financial position, results of operations or cash flows.

Pentair plc and Subsidiaries

Notes to consolidated financial statements

In the ordinary course of business, we are required to commit to bonds, letters of credit and bank guarantees that require payments to our customers for any non-performance. The outstanding face value of these instruments fluctuates with the value of our projects in process and in our backlog. In addition, we issue financial stand-by letters of credit primarily to secure our performance to third parties under self-insurance programs.

As of December 31, 2017 and 2016, the outstanding value of bonds, letters of credit and bank guarantees totaled \$201.5 million and \$331.0 million, respectively.

18. Interest Payable and Similar Charges

Interest payable and similar charges of continuing operations for 2017 and 2016 were comprised of the following:

<i>In millions</i>	December 31	
	2017	2016
Interest on debt repayable within five years, otherwise than by installment	\$ 72.9	\$ 102.5
Interest on debt repayable beyond five years, otherwise than by installment	5.2	29.0
Amortization of debt issuance and bridge financing costs	4.6	5.7
Other	14.5	11.2
Total interest payable and similar charges	\$ 97.2	\$ 148.4

19. Loss Attributable to Pentair plc

In accordance with Section 304(2) of the Companies Act 2014, the Company is availing of the exemption from presenting and filing its individual profit and loss account. Pentair plc's loss for the years ended December 31, 2017 and 2016 as determined in accordance with FRS 102, the Financial Reporting Standard applicable in the U.K. and Republic of Ireland, was \$69.0 million and \$26.0 million, respectively.

20. Tangible Assets

Tangible assets at cost and accumulated depreciation consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Land and land improvements	\$ 72.6	\$ 66.2
Buildings and leasehold improvements	354.5	335.0
Machinery and equipment	1,011.6	932.5
Construction in progress	35.1	68.6
Total tangible assets	1,473.8	1,402.3
Accumulated depreciation and amortization	928.3	863.7
Total tangible assets, net	\$ 545.5	\$ 538.6

Depreciation expense from continuing operations was \$85.2 million and \$84.6 million in fiscal 2017 and 2016, respectively.

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Tangible assets activity for 2017 and 2016 were as follows:

<i>In millions</i>	Land and land improvements	Buildings and leasehold improvements	Machinery and equipment	Construction in progress	Total Tangible Assets
Cost:					
December 31, 2015	\$ 86.6	\$ 338.9	\$ 960.2	\$ 68.3	\$ 1,454.0
Additions	1.8	40.0	68.3	8.2	118.3
Disposals	(19.1)	(7.6)	(17.7)	(0.1)	(44.5)
Acquisitions	—	—	1.5	—	1.5
Transfers / Other	(1.5)	(26.7)	(66.7)	(5.5)	(100.4)
Currency translation	(1.6)	(9.6)	(13.1)	(2.3)	(26.6)
December 31, 2016	\$ 66.2	\$ 335.0	\$ 932.5	\$ 68.6	\$ 1,402.3
Additions	2.1	17.4	84.1	(33.0)	70.6
Disposals	(0.2)	(15.3)	(40.6)	—	(56.1)
Acquisitions	—	0.4	4.5	—	4.9
Transfers / Other	0.8	(0.3)	(1.5)	(2.0)	(3.0)
Currency translation	3.7	17.3	32.6	1.5	55.1
December 31, 2017	\$ 72.6	\$ 354.5	\$ 1,011.6	\$ 35.1	\$ 1,473.8

Tangible asset accumulated depreciation activity for fiscal 2017 was as follows:

<i>In millions</i>	December 31, 2016	Depreciation expense	Disposals	Other	Currency translation	December 31, 2017
Accumulated depreciation	\$ 863.7	85.2	(51.2)	(1.2)	31.8	\$ 928.3

21. Creditors (amounts falling due within one year)

Creditors (amounts falling due within one year) consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Current maturities of long-term debt and short-term borrowings (note 10)	\$ 255.3	\$ 350.8
Trade creditors	495.7	436.6
Employee compensation and benefits	184.6	163.8
Dividends payable	63.1	61.8
Billings in excess of cost	29.9	22.5
Accrued professional fees	47.7	28.1
Accrued rebates	92.7	78.2
Income taxes payable	31.1	87.3
Accrued excise tax	25.8	17.2
Freight payable	17.1	15.0
Interest payable	9.4	27.1
Other creditors	108.3	99.1
Total creditors falling due within one year	\$ 1,360.7	\$ 1,387.5

Pentair plc and Subsidiaries
Notes to consolidated financial statements

22. Creditors (amounts falling due after more than one year)

Creditors (amounts falling due after more than one year) consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Long-term debt (note 10)	\$ 1,185.4	\$ 3,928.4
Income taxes payable	92.7	36.1
Deferred compensation plan liabilities	49.4	47.9
Other creditors falling due after one year	85.0	28.2
Total creditors falling due after one year	\$ 1,412.5	\$ 4,040.6

23. Financial Assets

The Group's financial assets consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Assets held by Rabbi Trust	\$ 49.4	\$ 47.9
Long-term project receivable	24.9	24.2
Other investments	33.3	33.7
Total financial assets	\$ 107.6	\$ 105.8

24. Debtors

Debtors consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
<i>Amounts falling due within one year</i>		
Trade debtors and notes receivable, net of allowances	\$ 831.6	\$ 764.0
Prepaid income taxes	15.3	67.2
Prepaid expenses	80.7	68.7
Cost in excess of billings	121.4	107.7
Other debtors	5.5	9.8
Total debtors falling due within one year	\$ 1,054.5	\$ 1,017.4
<i>Amounts falling due after more than one year</i>		
Prepaid income taxes	254.3	—
Deferred taxation (note 12)	43.0	39.0
Other debtors	25.0	37.3
Total debtors falling due after more than one year	322.3	76.3
Total debtors	\$ 1,376.8	\$ 1,093.7

Pentair plc and Subsidiaries
Notes to consolidated financial statements

25. Provisions for Liabilities

Provisions for liabilities consisted of the following at December 31:

<i>In millions</i>	December 31	
	2017	2016
Pension and other post-retirement compensation and benefits (note 13)	\$ 285.6	\$ 253.4
Deferred taxation (note 12)	394.8	609.5
Accrued warranty (note 17)	41.0	38.9
Insurance reserves (note 1)	61.5	63.0
Restructuring (note 5)	39.8	25.4
Total provisions for liabilities	\$ 822.7	\$ 990.2

26. Directors' Remuneration

Directors' remuneration is set forth in the tables below. Mr. Hogan, the Company's Chairman and Chief Executive Officer, is not compensated for his services as director. Accordingly, the amounts below include compensation for Mr. Hogan's services as Chief Executive Officer for the year ended December 31, 2017 and 2016.

<i>In millions</i>	December 31	
	2017	2016
Aggregate emoluments paid to or received by directors in respect of qualifying service	\$ 5.5	\$ 6.0
Money or value of other assets, including shares but excluding share options, paid to or receivable by the directors under long-term incentive schemes	7.7	7.5
Money or value of other assets, in relation to share options, paid to or receivable by the directors under long-term incentive schemes	2.9	3.9

<i>In millions, except number of directors</i>	December 31			
	2017		2016	
	Number of directors	Amount	Number of directors	Amount
<i>Aggregate contributions paid, treated as paid or payable during the financial year to a retirement benefit scheme in respect of qualifying services of directors</i>				
Defined contribution schemes	1	\$ —	1	\$ 0.1
Defined benefit schemes	1	—	1	—

Amounts paid or payable to past directors of the Company or of its' subsidiary undertakings were as follows:

<i>In millions</i>	December 31	
	2017	2016
For retirement benefits in relation to services as director	\$ —	\$ 4.4
For other retirement benefits	—	—
Total for retirement benefits (paid or payable)	\$ —	\$ 4.4

Pentair plc and Subsidiaries
Notes to consolidated financial statements

27. Auditors' Remuneration

Auditors' remuneration for 2017 and 2016 was as follows:

<i>In millions</i>	December 31	
	2017	2016
Audit of the group accounts	\$ 0.2	\$ 0.2
Other assurance services	—	—
Tax advisory services	—	—
Other non-audit services	—	—
Total auditors' remuneration	\$ 0.2	\$ 0.2

- (1) The Group incurred additional fees of \$17.2 million and \$15.9 million in 2017 and 2016, respectively, payable to affiliates of Deloitte, Ireland. These additional amounts reflect fees for professional services rendered, including audit fees payable to Deloitte & Touche LLP in the U.S. for the audit of the Group's consolidated annual financial statements and the effectiveness of internal controls over financial reporting and reviews of the Group's quarterly consolidated financial statements.

28. Employees

The average number of persons, including executive directors, employed by the Group for our continuing operations during the financial year was as follows:

	2017	2016
Manufacturing	13,257	14,154
Selling and marketing	3,003	3,185
Research and development	874	859
General and administrative	1,598	1,672
Total average employees	18,732	19,870

Total employee costs for 2017 and 2016 were expensed as follows:

<i>In millions</i>	December 31	
	2017	2016
Wages and salaries	\$ 1,263.2	\$ 1,274.0
Social insurance costs	106.6	114.6
Other retirement benefit costs	44.0	33.2
Total employee costs	\$ 1,413.8	\$ 1,421.8

Pentair plc and Subsidiaries
Notes to consolidated financial statements

29. Subsidiary Undertakings

As of December 31, 2017, the Group had the following subsidiary undertakings:

Company name	Country	Percentage owned	Business purpose	Registered office address
Alberta Electronic Company Limited	Hong Kong	100%	Manufacturing	Suite 1106-8, 11/F, Tai Yau Building, No. 181 Johnston Road, Wanchai, Hong Kong
Alliance Integrated Systems, Inc.	United States	100%	Manufacturing	7433 Harwin Drive, Houston TX 77036, United States
Aplex Industries, Inc.	United States	100%	Manufacturing	2045 S. Loop 250 West, Midland TX 79703, United States
Century Mfg. Co.	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Chansuba Pumps Private Limited	India	47%	Manufacturing	366 / 5B, Thudiyalur Road, Chinnavedampatti, Coimbatore, 641 006, India
Davies Pumps & Co Limited	New Zealand	100%	Manufacturing	Level 30, Vero Centre, 48 Shortland Street, c/o Russell McVeagh, Auckland, 1140, New Zealand
Edward Barber & Company Limited	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Edward Barber (U.K.) Limited	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Electronic Enclosures, LLC	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Epps, Ltd.	Mauritius	100%	Holding Company	L 52-55, Verna Industrial Estate, Phase II, Verna Salcette, Goa, 403 722, India
ERICO B.V.	Netherlands	100%	Manufacturing	Jules Verneweg 75, 5015 BG, Tilburg, Netherlands
ERICO Canada Inc.	Canada	100%	Manufacturing	46 Ingram Drive, Toronto ON M6M 2L6, Canada
ERICO Chile Comercial e Industrial Ltda.	Chile	100%	Manufacturing	Alcantara 200, Piso 6 Of. 17 Las Condes, Santiago Chile
ERICO del Pacifico Comercial e Industrial Ltda.	Chile	100%	Manufacturing	Alcantara 200, Piso 6 Of. 17 Las Condes, Santiago Chile
ERICO do Brasil Comercio e Industria Ltda.	Brazil	100%	Manufacturing	Rua Dom Pedro Henrique de Orleans e Bragança, 276, São Paulo, Sao Paulo, 05117-000, Brazil

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
ERICO Europa (G.B.) Limited	United Kingdom	100%	Manufacturing	Suite 1, 3rd Floor, 11-12 St. James' Square, London, SW1Y 4LB, United Kingdom
ERICO Europe B.V.	Netherlands	100%	Manufacturing	Jules Verneweg 75, 5015 BG, Tilburg, Netherlands
ERICO Europe Holding B.V.	Netherlands	100%	Holding	Jules Verneweg 75, 5015 BG, Tilburg, Netherlands
ERICO France Sarl	France	100%	Manufacturing	rue Charles Dalliere, BP 31, 42161, Andrezieux-Boutheon, France
ERICO Global Company	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
ERICO GmbH	Germany	100%	Holding Company	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
ERICO International Corporation	United States	100%	Holding Company	31700 Solon Road, Solon OH 44139, United States
ERICO Italia S.r.l.	Italy	100%	Manufacturing	16, via Lorenzo Valla, 20141, Milan, Italy
ERICO Lightning Technologies Pty. Limited	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
ERICO Limited	Hong Kong	100%	Manufacturing	Unit 7-10, 28/F., Trendy Centre, 682-684 Castle Peak Road, Kowloon, Hong Kong
ERICO Ltd.	China	100%	Manufacturing	Room 212, Building 1, No.3688 Jindu Road, Minhang District, Shanghai, China
ERICO Mexico, S.A. de C.V.	Mexico	100%	Manufacturing	Av. Melchor Ocampo Torre A, #193, Veronica Anzures, Miguel Hidalgo, Distrito Federal, 11330, Mexico
ERICO Pacific Ltd.	Taiwan	100%	Manufacturing	5F-1, No. 162, Ren De Street Ling Ya District KaoHsiung Taiwan
ERICO Poland SP. Z.o.o.	Poland	100%	Manufacturing	ul. Strefowa, 10, 58-200, Dzierzoniow, Poland
ERICO Products Australia Pty. Limited	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
ERICO US Holding LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
ETE Coliban Pty Limited	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
EuroPentair GmbH	Germany	100%	Holding Company	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Everpure Japan K.K.	Japan	100%	Distribution	25-1, Hashimoto 3-Chome, Midori-Ku, Sagami-hara-shi, Kanagawa, Japan
FARADYNE Motors (Suzhou) Co., Ltd	China	50%	Manufacturing	EPZ Zone A, No. 200 Suhong Middle Road, Suzhou Industrial Park, Suzhou, Jiangsu, 215021, China
Faradyne Motors LLC	United States	50%	Manufacturing	2077 Division Street, Palmyra NY 14522, United States
FilterSoft, LLC	United States	100%	Manufacturing	4301 West Davis, Conroe TX 77304, United States
Fleck Controls, Inc.	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Goyen Controls Co Pty Limited	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
Goyen Controls Co UK Limited	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Goyen Valve LLC	United States	100%	Distribution	1195 Airport Road, Lakewood NJ 08701, United States
Great American Acquaculture, LLC	United States	100%	Manufacturing	64 Avenue of Industry, Waterbury CT 06705, United States
Greenspan Environmental Technology Pty Ltd	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
Greenspan Singapore Private Limited	Singapore	100%	Manufacturing	390 Havelock Road, #04-01 King's Centre, 169662, Singapore
Haffmans B.V.	Netherlands	100%	Manufacturing	Marinus Dammeweg 30, 5928 PW, Venlo, Netherlands
Haffmans North America, Inc.	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Hawley Group Canada Limited	Canada	100%	Holding Company	Brookfield Place, 181 Bay Street, Suite 4400, Toronto ON M5J 2T3, Canada
Hoffman Enclosures (Mex.), LLC	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Hoffman Enclosures Inc.	United States	100%	Manufacturing	2100 Hoffman Way, Anoka MN 55303, United States
Hoffman Enclosures Mexico, S. de R.L. de C.V.	Mexico	100%	Manufacturing	Av. Industrial Falcón, Lotes 6 al 8 S/N, Parque Industrial del Norte, CP, Reynosa, Tamaulipas, 88730, Mexico
Hoffman Schroff PTE Ltd	Singapore	100%	Manufacturing	390 Havelock Road, #04-01 King's Centre, 169662, Singapore

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Holding Nijhuis Pompen B.V.	Netherlands	100%	Holding Company	Parallelweg 4, 7102 DE, Winterswijk, Netherlands
Hypro EU Limited Infinite Water Solutions Private Limited	United Kingdom India	100% 50%	Manufacturing Manufacturing	Station Road, Longstanton, Cambridge, England, CB24 3DS, United Kingdom 701 B1/B2 Marathon Innova, Off Ganpatrao Kadam Marg, Lower Parel, Mumbai- 400013, India
Jung Pumpen GmbH Limited Liability Company Pentair Rus	Germany Russian Federation	100% 100%	Manufacturing Manufacturing	Industriestraße 4-6, 33803, Steinhagen, Germany “Country Park” Business Centre, Panphilova str., estate 19, bld. 1, Khimki, 141407, Moscow Region, Russian Federation
Lincoln Automotive Company	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
McNeil (Ohio) Corporation	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
MECAIR S.r.L. Milperra Developments Pty Limited	Italy Australia	100% 100%	Manufacturing Manufacturing	Via Bertacciola 50, 20813, Bovisio Masciago, Italy 323 Parramatta Road, Auburn NSW 2144, Australia
Moraine Properties, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Nano Terra, Inc.	United States	5%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Nijhuis International B.V.	Netherlands	100%	Manufacturing	Hertmerweg 42B • 7625 RH Zenderen • The Netherlands, Netherlands
Nijhuis Pompen B.V.	Netherlands	100%	Manufacturing	Parallelweg 4, 7102 DE, Winterswijk, Netherlands
Nijhuis Pompen BVBA	Belgium	100%	Manufacturing	Koning Albertstraat 66, 9900 Eeklo, Belgium
Nijhuis Pompen Exploitiemaatschappij B.V.	Netherlands	100%	Manufacturing	Parallelweg 4, 7102 DE, Winterswijk, Netherlands
nVent Finance Group GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
nVent Finance Holding GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
nVent Finance S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
nVent Global S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
nVent Holdings, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
nVent International (UK) Ltd.	United Kingdom	100%	Holding Company	43 London Wall, London, England, EC2M 5TF, United Kingdom
nVent International Holding S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
nVent International Holdings, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
nVent Luxembourg S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
nVent Management Company	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
nVent Middle East FZE	United Arab Emirates	100%	Manufacturing	Jebel Ali Free Zone, Jafza 1 Level 15, United Arab Emirates
nVent Services Canada Limited	Canada	100%	Holding Company	181 Bay Street, Suite 4400, Toronto ON M5J 2T3, Canada
nVent Services GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
nVent Services Holding GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
nVent Thermal Europe GmbH	Switzerland	100%	Manufacturing	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
nVent UK Holdings Limited	United Kingdom	100%	Holding Company	43 London Wall, London, England, EC2M 5TF, United Kingdom
Optima Enclosures Limited	United Kingdom	100%	Manufacturing	3, Melville Street, Edinburgh, EH3 7PE, United Kingdom
Panthro Acquisition Co.	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair (NZ) Limited	New Zealand	100%	Manufacturing	Level 30, Vero Centre, 48 Shortland Street, c/o Russell McVeagh, Auckland, 1140, New Zealand
Pentair Aquatic Eco-Systems (Canada), Inc.	Canada	100%	Manufacturing	1500 Royal Centre, 1055 West Georgia Street, P.O. Box 11117, Vancouver BC V6E 4N7, Canada
Pentair Aquatic Eco-Systems, Inc.	United States	100%	Manufacturing	2395 Apopka Blvd., Apopka FL 32703, United States
Pentair Asia PTE Ltd.	Singapore	100%	Holding company	390 Havelock Road, #04-01 King's Centre, 169662, Singapore
Pentair Australia Holdings Pty Limited	Australia	100%	Holding company	323 Parramatta Road, Auburn NSW 2144, Australia
Pentair Bermuda Holdings	Bermuda	100%	Holding company	2 Church Street, Clarendon House, c/o Codan Services Limited, Hamilton, HM 11, Bermuda
Pentair Bermuda, LLC	United States	100%	Holding company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Beteiligungs GmbH	Germany	100%	Manufacturing	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
Pentair Canada, Inc.	Canada	100%	Distribution	181 Bay Street, Suite 4400, Toronto ON M5J 2T3, Canada
Pentair Chile SpA	Chile	100%	Manufacturing	Cerro El Plomo 5680, of 1204, piso 12, Las Condes, Santiago, Chile
Pentair Clean Process Technologies India Private Limited	India	100%	Manufacturing	Workfella, 37 TTK Road, Alwarpet Chennai, Chennai, Tamilnadu, 600018, India
Pentair Denmark Holding ApS	Denmark	100%	Holding Company	Snaremoesevej 27, Erritsø, 7000, Fredericia, Denmark
Pentair DMP Corp.	United States	100%	Holding company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Electronic Packaging de Mexico, S.a.r.l.	Mexico	100%	Manufacturing	Av. Industrial del Norte #2026, Parque Industrial del Norte, Reynosa, Tamaulipas, 88730, Mexico
Pentair Electronics & Electrical Protection China Co., Ltd.	China	100%	Manufacturing	Airport Industrial Zone - ShuangYuan Road South, Chengyang District, Qingdao, PC 266108, China
Pentair Enclosures Inc.	United States	100%	Holding company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Enclosures S. de R.L. de C.V.	Mexico	100%	Manufacturing	Manuel Escandon, 106 Altos, Modulo 2000, Reynosa Tamaulipas, C.P. 88600, Mexico

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Environmental Systems Ltd	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Pentair Epsilon Limited	Bermuda	100%	Holding Company	Canon's Court, 22 Victoria Street, Appleby Services (Bermuda) Ltd., Hamilton, HM 12, Bermuda
Pentair European Security Holdings SA	France	100%	Holding Company	Parc d'Activités du Vert Galant, 4 rue des Oziers, 95310 Saint Ouen L'Aumône, France
Pentair Federal Pump, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Filtration Solutions, LLC	United States	100%	Holding Company	1040 Muirfield Drive, Hanover Park IL 60133, United States
Pentair Finance Group GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
Pentair Finance Holding GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
Pentair Finance S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair Flow Control Holding NL B.V.	Netherlands	100%	Holding Company	Van Heuven Goedhartlaan 117, 1181, Amstelveen, Netherlands
Pentair Flow Control International Pty Limited	Australia	100%	Holding Company	323 Parramatta Road, Auburn NSW 2144, Australia
Pentair Flow FZE	United Arab Emirates	100%	Manufacturing	P.O. Box 52341, Hamriyah Free Zone, plot 1F-09B, Sharjah, United Arab Emirates
Pentair Flow Services AG	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
Pentair Flow Technologies de Mexico S. de R.L. de C.V.	Mexico	100%	Manufacturing	Los Nogales, Lote 10, Manzana 5, Parque Industrial Villa Florida, Reynosa Tamaulipas, C.P. 88718, Mexico
Pentair Flow Technologies Pacific Pty Ltd	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
Pentair Flow Technologies, LLC	United States	100%	Manufacturing	208 South LaSalle Street, Suite 814, Chicago IL 60604, United States

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair France SARL	France	100%	Manufacturing	Parc d'Activités du Vert Galant, 4 rue des Oziers, 95310 Saint Ouen L'Aumône, France
Pentair Germany GmbH	Germany	100%	Holding Company	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
Pentair Global Holdings B.V.	Netherlands	100%	Holding Company	Marssteden 50, 7547 TC, Enschede, Netherlands
Pentair Global S.à r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair Group (Thailand) Limited	Thailand	100%	Sales & Marketing	33/4 The Ninth Tower Grand Rama 9, Tower B, 16th Floor, Unit TNB03, Rama 9 Road, Huaykwang Sub-district, Huaykwang District, Bangkok, 10310, Thailand
Pentair Holdings C.V.	Netherlands	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Holdings S.à r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair Holdings, Inc.	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Pentair Housing, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Housing, LP	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Iceland Holdings ehf	Iceland	100%	Holding Company	Katrinartin 2, 19th floor, 105 Reykjavik, Iceland
Pentair International Armaturen Holding GmbH	Germany	100%	Holding Company	Werner-von-Siemens-Strasse, D-41352 Korschenbroich, Germany
Pentair International Holding S.a.r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair International PLT Deutschland GmbH	Germany	100%	Manufacturing	Nobelstrasse 14, 41189 Mönchengladbach, Germany
Pentair International S.à r.l.	Switzerland	100%	Holding Company	Avenue de Sevelin 18, 1004, Lausanne, Vaud, Switzerland

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Investments Switzerland GmbH	Switzerland	100%	Holding Company	Freier Platz 10, CH-8200 Schaffhausen, Switzerland
Pentair Ireland Limited	Ireland	100%	Holding Company	Arthur Cox Building, Earlsfort Terrace, Dublin 2, D02 CK83, Ireland
Pentair Janus Holding LLC	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Pentair Janus Holdings	Bermuda	100%	Holding Company	2 Church Street, Clarendon House, c/o Codan Services Limited, Hamilton, HM 11, Bermuda
Pentair Kenya Limited	Kenya	100%	Manufacturing	ICEA Building, 4th Floor, Kenyatta Avenue, Land Reference Number 209/8287, P.O. Box 30333, Nairobi, 00100, Kenya
Pentair Lionel Acquisition Co.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Luxembourg S.à r.l.	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair Management Company	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Manufacturing Belgium BVBA	Belgium	100%	Manufacturing	Toekomstlaan 30, B-2200 Herentals, Belgium
Pentair Manufacturing France S.A.S.	France	100%	Manufacturing	Parc d'Activités du Vert Galant, 4 rue des Oziers, 95310 Saint Ouen L'Aumône, France
Pentair Manufacturing Italy, S.r.l.	Italy	100%	Manufacturing	Corso Europa 2, angolo Via Trieste, 20020, Lainate (MI), Italy
Pentair Middle East FZE	United Arab Emirates	100%	Manufacturing	Office No. S10122A2039, Jebel Ali, Jebel Ali, United Arab Emirates
Pentair Nanosoft Bermuda Holdings	Bermuda	100%	Holding Company	2 Church Street, Clarendon House, c/o Codan Services Limited, Hamilton, HM 11, Bermuda
Pentair Nanosoft US Holdings, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Netherlands Holding B.V.	Netherlands	100%	Holding Company	Jules Verneweg 75, 5015BG, Tilburg, Netherlands

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Pacific Rim (Water) Limited	Hong Kong	100%	Holding Company	Suite 1106-8, 11/F, Tai Yau Building, No. 181 Johnston Road, Wanchai, Hong Kong
Pentair Pacific Rim Limited	Hong Kong	100%	Holding Company	Suite 1106-8, 11/F, Tai Yau Building, No. 181 Johnston Road, Wanchai, Hong Kong
Pentair Philippines, Inc.	Philippines	100%	Sales & Marketing	5th floor, Kalimera Building 1747 Nicanor Garcia Street, corner D. Oliman Street, San Miguel Village, Barangay Poblacion, Makati City, Metro Manila, 1210, Philippines
Pentair Poland Sp.z.o.o.	Poland	100%	Manufacturing	Ul. Kossak - Szczuckiej 7 Legnickie Pole, 02-674, Warszawa, Poland
Pentair Project Services Canada, Inc.	Canada	100%	Service company	Brookfield Place, 181 Bay Street, Suite 4400, Toronto ON M5J 2T3, Canada
Pentair Residential Filtration, LLC	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Services France S.A.S.	France	100%	Manufacturing	Parc d'Activités du Vert Galant, 4 rue des Oziers, 95310 Saint Ouen L'Aumône, France
Pentair Shenzhen Enclosure Company, Ltd.	China	100%	Manufacturing	204, Changhuguangjianxing Building No. 3, Block A, West Shahe Road, Nanshan District, Shenzhen, China
Pentair Steinhauer GmbH	Germany	100%	Manufacturing	St. Jobser Straße 47A, 52146, Würselen, Germany
Pentair Sudmo GmbH	Germany	100%	Manufacturing	Industriestraße 7, 73469, Riesbürg, Germany
Pentair Tamimi LLC	Saudi Arabia	70%	Manufacturing	Dammam Saudi Arabia
Pentair Taunus Eletrometalurgica Ltda.	Brazil	100%	Manufacturing	Rua Joao Marcon 165, Centro-Boituva, Sao Paulo, 18555-000, Brazil
Pentair Technical Products Holdings, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Technical Products India Private Limited	India	100%	Manufacturing	#10C, 2nd Phase, Peenya, Bangalore, Karnataka, 560058, India

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Technical Products SáRL	Luxembourg	100%	Holding Company	Regus Business Center, 26, Boulevard Royal, Grand-Duchy of Luxembourg, L-2449, Luxembourg
Pentair Technical Products Service Co.	United States	100%	Holding Company	P.O. Box 127, Anoka MN 55303, United States
Pentair Technical Products, Inc.	United States	100%	Manufacturing	170 Commerce Drive, Warwick RI 02886, United States
Pentair Technical Products, S. de R.L. de C.V.	Mexico	100%	Manufacturing	Av. Industrial Falcón, Lotes 6 al 8 S/N, Parque Industrial del Norte, CP, Reynosa, Tamaulipas, 88730, Mexico
Pentair Technical Services L.L.C.	United Arab Emirates	49%	Manufacturing	Cornish Road, Al Mizan M1, Office 6, Sheikha Mooza Bint Hamdan Al Nhayan Building, Abu Dhabi Island, Abu Dhabi, United Arab Emirates
Pentair Technical Solutions GmbH	Germany	100%	Manufacturing	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
Pentair Technical Solutions Japan Co., Ltd.	Japan	100%	Manufacturing	YS Shin-Yokohama Building 3rd Floor, 15-10, Shin- Yokohama 2-chome, Kohoku-ku, Yokohama, Japan
Pentair Technical Solutions Nordic AB	Sweden	100%	Manufacturing	Box 214, 431 23, Mölndal, Sweden
Pentair Technical Solutions S.r.l.	Italy	100%	Manufacturing	Corso Europa 2, angolo Via Trieste, 20020, Lainate (MI), Italy
Pentair Technical Solutions SAS	France	100%	Manufacturing	Z.I. 4 rue du Marais, Boîte Postale 16, 67660, Betschdorf, France
Pentair Technical Solutions Shanghai Co., Ltd.	China	100%	Manufacturing	No.33 Guangshun Road, Changning District, Shanghai, China
Pentair Technical Solutions UK Limited	United Kingdom	100%	Manufacturing	3 Rutherford Road, Stephenson Industrial Estate, Washington, Tyen and Wear, NE37 3HX, United Kingdom
Pentair Teknoloji Sistemleri Ticaret Limited Sirketi	Turkey	100%	Manufacturing	FSM Mah. Poligon Cad. no. 8 Buyaka 2 Sitesi 3, no'lu Blok, daire: 90, Tepeüstü-Ümraniye, Istanbul, Turkey
Pentair Thermal (Shanghai) Co., Ltd.	China	100%	Manufacturing	Part A, 3rd Floor, Building No. 18, Fute North Street, Waigaoqiao Boundary Zone, Shanghai, China

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Thermal (Shanghai) Engineering Co., Ltd.	China	100%	Manufacturing	18/F Innovation Building, No. 1009 Yi Shan Road, Shanghai, 200233, China
Pentair Thermal Management Belgium NV	Belgium	100%	Manufacturing	Romeinse Straat 14, 3001 Leuven (Heverlee), Belgium
Pentair Thermal Management Canada Ltd.	Canada	100%	Manufacturing	Brookfield Place, 181 Bay Street, Suite 4400 Toronto ON M5J 2T3 Canada
Pentair Thermal Management Czech, s.ro.	Czech Republic	100%	Manufacturing	Na prikope 988/31, Stare Mesto, 110 00 Praha 1, Czech Republic
Pentair Thermal Management France SAS	France	100%	Manufacturing	Z.I. 4 rue du Marais, Boîte Postale 16, 67660, Betschdorf, France
Pentair Thermal Management Germany GmbH	Germany	100%	Manufacturing	Birlenbacher Str. 19-21, 57078, Siegen, Germany
Pentair Thermal Management Holding Germany GmbH	Germany	100%	Manufacturing	Birlenbacher Str. 19-21, 57078, Siegen, Germany
Pentair Thermal Management Holdings B LLC	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Pentair Thermal Management Holdings LLC	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Pentair Thermal Management India Private Limited	India	100%	Manufacturing	Sucheta Bhawan, Gaate No. 2, 2nd Floor, 11-A, Vishnu Digamber Marg, New Delhi, 110002, India
Pentair Thermal Management Korea Ltd.	Korea, Republic of	100%	Manufacturing	(Samseong-dong, Hyunjuk Building), 5F, 7, Seolleung-ro 94-gil, Gangnam-gu, Seoul, Korea, Republic of
Pentair Thermal Management KZ LLP	Kazakhstan	100%	Manufacturing	4 “a” Smagulova Street, Atyrau, 060005, Kazakhstan
Pentair Thermal Management LLC	United States	100%	Manufacturing	307 Constitution Drive, Menlo Park CA 94025, United States
Pentair Thermal Management Netherlands B.V.	Netherlands	100%	Manufacturing	Van Heuven Goedhartlaan 117, 1181, Amstelveen, Netherlands
Pentair Thermal Management Norway AS	Norway	100%	Sales & Marketing	Sagaveien 13 1443 DRØBAK Norway, Norway

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Thermal Management Polska Sp. z.o.o.	Poland	100%	Manufacturing	ul. Cybernetyki, 19, 02-677, Warsaw, Poland
Pentair Thermal Management Romania SRL	Romania	100%	Manufacturing	Bulevardul Bucuresti, 39A, 3th floor, Ploiesti, Prahova, 100028, Romania
Pentair Trading (Shanghai) Co., Ltd.	China	100%	Sales & Marketing	921B No.55 Xili Road, Free Trade Zone, Shanghai , China
Pentair Transport, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Tubing Limited	United Kingdom	100%	Holding Company	43 London Wall, London, England, EC2M 5TF, United Kingdom
Pentair UK Group Limited	United Kingdom	100%	Holding Company	Unit 4 Grovelands Business Center, Boundary Way, Hemel Hempstead, Hertfordshire, HP2 7TE, United Kingdom
Pentair UK Holdings Limited	United Kingdom	100%	Holding Company	43 London Wall, London, England, EC2M 5TF, United Kingdom
Pentair Valves & Controls del Uruguay S.A.	Uruguay	100%	Distribution	Juncal 1327, Of. 2201, Montevideo, 11000, Uruguay
Pentair Verwaltungs GmbH and Co. KG	Germany	100%	Holding Company	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
Pentair Water (Suzhou) Co. Ltd.	China	100%	Sales & Marketing	No. 371 He Shan Road, New District, Suzhou, Jiangsu, 215 011, China
Pentair Water Asia Pacific Pte. Ltd.	Singapore	100%	Holding Company	390 Havelock Road, #04-01 King's Centre, 169662, Singapore
Pentair Water Australia Pty Ltd	Australia	100%	Holding Company	323 Parramatta Road, Auburn NSW 2144, Australia
Pentair Water Belgium BVBA	Belgium	100%	Manufacturing	Toekomstlaan 30, B-2200 Herentals, Belgium
Pentair Water Brazil LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Water do Brasil Ltda.	Brazil	100%	Manufacturing	Av. Marginal Norte da Via Anhanguera, No 53.700, Vila Rami - Jundiá - SP, 13206-245, Brazil
Pentair Water France SAS	France	100%	Manufacturing	Parc d'Activités du Vert Galant, 4 rue des Oziers, 95310 Saint Ouen L'Aumône, France
Pentair Water Group, Inc.	United States	100%	Manufacturing	293 Wright Street, Delavan WI 53115, United States
Pentair Water Holdings Pty Ltd	Australia	100%	Holding Company	323 Parramatta Road, Auburn NSW 2144, Australia

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Water Holdings, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Water India Private Limited	India	100%	Manufacturing	L 52-55, Verna Industrial Estate, Phase II, Verna Salcette, Goa, 403 722, India
Pentair Water Italy s.r.l.	Italy	100%	Manufacturing	Corso Europa 2, angolo Via Trieste, 20020, Lainate (MI), Italy
Pentair Water Latinamérica S.A.	Argentina	100%	Manufacturing	San José 165 PB, C1076 AAC, Ciudad Autónoma de Buenos Aires, Argentina
Pentair Water New Zealand Limited	New Zealand	100%	Manufacturing	Level 30, Vero Centre, 48 Shortland Street, c/o Russell McVeagh, Auckland, 1140, New Zealand
Pentair Water Operations Australia Pty Limited	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia
Pentair Water Polska Sp.zoo	Poland	100%	Manufacturing	Ul. Plonów 21, 41-200, Sosnowiec, Poland
Pentair Water Pool and Spa, Inc.	United States	100%	Holding Company	400 Regency Forest Drive, Suite 300, Cary NC 27518, United States
Pentair Water Process Technologies Holding B.V.	Netherlands	100%	Holding Company	Marssteden 50, 7547 TC, Enschede, Netherlands
Pentair Water Process Technology B.V.	Netherlands	100%	Manufacturing	Marssteden 50, 7547 TC, Enschede, Netherlands
Pentair Water Purification Systems (Shanghai) Co. Ltd.	China	100%	Sales & Marketing	622, No.55 Xiya Road, Free Trade Zone, Shanghai, China
Pentair Water South Africa (Proprietary) Limited	South Africa	100%	Manufacturing	24 Vuurslag Street, Spartan Ext 7, Spartan, Gauteng, 1620, South Africa
Pentair Water Spain, S.L.	Spain	100%	Manufacturing	AV FRANCESC MACIA Num.60 P.10 PTA.4, 08208, SABADELL, Spain
Pentair Water Treatment (OH) Company	United States	100%	Holding Company	220 Park Drive, Chardon OH 44024-1091, United States
Pentair Water Treatment Company	United States	100%	Holding Company	1385 Bishops Drive, Brookfield WI 53045, United States
Pentair Water Treatment Private Limited	India	74%	Manufacturing	L 52-55, Verna Industrial Estate, Phase II, Verna Salcette, Goa, 403 722, India

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Pentair Water, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Pentair Water-Mexico, S. de R.L. de C.V.	Mexico	100%	Manufacturing	Av de los Nogales Lote 6, AL 11 Manzana 5 SN, Parque Industrial, Villa Florida, Tamaulipas, C.P. 88730, Mexico
Pentair, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Penwald Insurance Company	United States	100%	Insurance	192 S. Main Street, Barre VT 05641, United States
Peocon ehf.	Iceland	100%	Manufacturing	Katrinartin 2, 19th floor, 105 Reykjavik, Iceland
PES Pty Ltd	Australia	100%	Holding Company	323 Parramatta Road, Auburn NSW 2144, Australia
PFAM, Inc.	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Plymouth Products, Inc.	United States	100%	Holding Company	13845 Bishops Drive, Brookfield WI 53045, United States
PNR Technical Solutions Finland Oy	Finland	100%	Sales & Marketing	Kaupparekisteri, Arkadiankatu 6 A, Helsinki, 00100, Finland
Porter-Cable de Mexico S.A. de C.V.	Mexico	100%	Manufacturing	Zacatecas 43 Bis, Centro Hermosillo, Sonora, Entre Blvd, Rodriguez y CL, Mexico
Productos ERICO S.A.	Spain	100%	Manufacturing	Rambla Exposicio, No 61-69, Edificio Neapolis, Vilanova i la Geltru, 08800, Barcelona, Spain
PTG Accessories Corp.	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Raychem HTS Limited	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Schroff Co. Ltd. Taiwan	Taiwan	100%	Sales & Marketing	13F-5 NO. 1, FU HSING N. Road, Taipei, ROC, Taiwan
Schroff Holdings Germany GmbH	Germany	100%	Holding Company	Langenalber Strasse 96-100, 75334, Straubenhardt, Germany
Schroff UK Limited	United Kingdom	100%	Manufacturing	Unit 4 Grovelands Business Center, Boundary Way, Hemel Hempstead, Hertfordshire, HP2 7TE, United Kingdom
Seghers-Applied Pty Ltd	Australia	100%	Manufacturing	323 Parramatta Road, Auburn NSW 2144, Australia

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Seneca Enterprises Co.	United States	100%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Sta-Rite de Mexico, S.A. de C.V.	Mexico	100%	Sales & Marketing	Avenida Milenium, 2012, Parque Industrial, Milenium, Nuevo León, 66350, Mexico
Sta-Rite de Puerto Rico, Inc.	Puerto Rico	100%	Distribution	361 San Francisco St., San Juan, 00901, Puerto Rico
Sta-Rite Industries, LLC	United States	100%	Manufacturing	293 Wright Street, Delavan WI 53115, United States
Sudmo (UK) Ltd.	United Kingdom	100%	Manufacturing	43 London Wall, London, England, EC2M 5TF, United Kingdom
Surface Logix LLC	United States	0.03%	Manufacturing	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Tracer Construction LLC	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Tracer Industries Canada Limited	Canada	100%	Manufacturing	Brookfield Place, 181 Bay Street, Suite 4400, Toronto ON M5J 2T3, Canada
Tracer Industries Management LLC	United States	100%	Holding Company	1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, United States
Tracer Industries, Inc.	United States	100%	Holding Company	7433 Harwin Drive, Houston TX 77036, United States
Tupelo Real Estate, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Union Engineering (NingBo) Co., Ltd.	China	100%	Manufacturing	188# Donghui Road Nordic Industrial Park, Zhenhai District, Ningbo Zhejiang, China, 315221, China
Union Engineering A/S	Denmark	100%	Manufacturing	Snarelosevej 27, Erritsø, 7000, Fredericia, Denmark
Union Engineering Holding II A/S	Denmark	100%	Holding Company	Snarelosevej 27, Erritsø, 7000, Fredericia, Denmark
Union Engineering Holding LLC	United States	100%	Holding Company	1 Industry Drive, Palm Coast FL 32137, United States
Union Engineering Latam Ltda	Brazil	100%	Manufacturing	Rodovia Curitiba Ponta Grossa BR 277, número 6047, Bairro Cidade Industrial, cidade de Curitiba, Estado do Paraná, Paraná, CEP 82305-200, Brazil
Union Engineering North America LLC	United States	100%	Manufacturing	1 Industry Drive, Palm Coast FL 32137, United States

Pentair plc and Subsidiaries
Notes to consolidated financial statements

Company name	Country	Percentage owned	Business purpose	Registered office address
Urban Organics Pentair Group, LLC	United States	70%	Holding Company	700 Minnehaha Avenue East, St. Paul MN 55106, United States
Urban Organics Schmidt Real Estate Group, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Urban Organics St Paul, LLC	United States	100%	Holding Company	5500 Wayzata Blvd., Suite 600, Golden Valley MN 55416-1261, United States
Vaki A/S	Norway	100%	Manufacturing	HiB, Thormøhlens gate 55, 5006 Bergen, Aksjeselskap, Norway
Vaki Aquaculture Systems ehf.	Iceland	100%	Manufacturing	Katrinartín 2, 19th floor, 105 Reykjavík, Iceland
Vaki Chile Ltda	Chile	100%	Manufacturing	Ruta 5 Sur, Camino a Pargua Km 1024, Megacentro 1, Modulo 9, Puerto Montt, 5480000, Chile
Vaki Scotland Ltd	United Kingdom	100%	Manufacturing	20 Castle Terrace, Edinburgh EH1 2EN, Scotland
Voltea Ltd.	United Kingdom	10%	Manufacturing	Wasbeekerlaan 24, 2171 AE, Sassenheim, Netherlands
Webster Electric Company, LLC	United States	100%	Manufacturing	293 Wright Street, Delavan WI 53115, United States
WICOR Industries (Australia) Pty. Ltd.	Australia	100%	Holding Company	323 Parramatta Road, Auburn NSW 2144, Australia
X-Flow B.V.	Netherlands	100%	Manufacturing	Marssteden 50, 7547 TC, Enschede, Netherlands
Yabaida Electronics (Shenzhen) Company Limited	China	100%	Manufacturing	BEI QU 25# 2 LOU, Hi Tech Park, Nanshan District, Shenzhen, Guangdong, China

PENTAIR PLC
Company Financial Statements
For the financial year ended 31 December 2017

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF PENTAIR PLC (the "COMPANY")

Report on the audit of the financial statements

Opinion on the financial statements of Pentair plc (the 'company')

In our opinion the parent company financial statements:

- give a true and fair view of the assets, liabilities and financial position of the company as at 31 December 2017; and
- have been properly prepared in accordance with the relevant financial reporting framework and, in particular, with the requirements of the Companies Act 2014.

The financial statements we have audited comprise:

- the Company Balance Sheet;
- the Company Statement of Cash Flows;
- the Company Statement of Changes in Equity; and
- the related notes 1 to 10, including a summary of significant accounting policies as set out in note 1.

The relevant financial reporting framework that has been applied in the preparation of the parent company financial statements is the Companies Act 2014 and FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" ("the relevant financial reporting framework").

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (Ireland) (ISAs (Ireland)) and applicable law. Our responsibilities under those standards are described below in the "*Auditor's responsibilities for the audit of the financial statements*" section of our report.

We are independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Ireland, including the Ethical Standard issued by the Irish Auditing and Accounting Supervisory Authority, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (Ireland) require us to report to you where:

- the directors' use of the going concern basis of accounting in preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Other information

The directors are responsible for the other information. The other information comprises the information included in the company financial statements, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Responsibilities of directors

As explained more fully in the Directors' Responsibilities Statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view and otherwise comply with the Companies Act 2014, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (Ireland) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (Ireland), we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of the auditor's report. However, future events or conditions may cause the entity (or where relevant, the group) to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that the auditor identifies during the audit.

This report is made solely to the company's members, as a body, in accordance with Section 391 of the Companies Act 2014. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Report on other legal and regulatory requirements

Opinion on other matters prescribed by the Companies Act 2014

Based solely on the work undertaken in the course of the audit, we report that:

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- In our opinion the accounting records of the company were sufficient to permit the financial statements to be readily and properly audited.
- The parent company financial statements are in agreement with the accounting records.
- In our opinion the information given in the directors' report is consistent with the financial statements and the directors' report has been prepared in accordance with the Companies Act 2014.

Matters on which we are required to report by exception

Based on the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified material misstatements in the directors' report.

We have nothing to report in respect of the provisions in the Companies Act 2014 which require us to report to you if, in our opinion, the disclosures of directors' remuneration and transactions specified by law are not made.

/s/ Richard Howard

For and on behalf of Deloitte

Chartered Accountants and Statutory Audit Firm

Dublin

Date: February 27, 2018

Pentair plc
Company Balance Sheets

<i>In millions</i>	Note	31 December 2017	31 December 2016
Financial assets			
Shares in group undertakings	3	\$ 9,065	\$ 9,608
Other investments other than loans		2	2
Total financial assets		9,067	9,610
Current assets			
Prepaid expenses		1	1
Amounts due from subsidiaries		26	—
Income taxes receivable		1	1
Total current assets		28	2
Creditors (amounts falling due within one year)			
Amounts owed to group undertakings		—	16
Other creditors		22	5
Total creditors (amounts falling due within one year)		22	21
Net current assets		6	(19)
Total assets less current liabilities		9,073	9,591
Creditors (amounts falling after more than one year)			
Amounts owed to group undertakings		48	148
Other creditors		30	13
Net assets		\$ 8,995	\$ 9,430
Capital and reserves			
Called-up share capital presented as equity		\$ 2	\$ 2
Share premium account		77	31
Profit and loss account		8,799	9,320
Other reserves		117	77
Total shareholders' funds		\$ 8,995	\$ 9,430

Approved by the Board of Directors on February 27, 2018 and signed on its behalf by:

/s/Randall J. Hogan

Director

/s/ Glynis A. Bryan

Director

Pentair plc
Company Statements of Cash Flows

The below table provides a reconciliation of net loss for the financial period to cash provided by (used in) operating activities for the financial periods ended 31 December 2017 and 2016:

<i>In millions</i>	Financial periods ended	
	31 December 2017	31 December 2016
Operating activities		
Net loss for the financial period	\$ (69)	\$ (26)
Cash provided by (used in) operating activities before movement in working capital	(69)	(26)
Change in debtors	(124)	18
Change in creditors	34	(1)
Net cash flows provided by (used in) operating activities	(159)	(9)
Investing activities		
Dividends received from subsidiaries	641	486
Net cash flows provided by (used in) investing activities	641	486
Financing activities		
Dividends paid	(252)	(244)
Repurchases of ordinary shares	(200)	—
Shares issued to employees, net of shares withheld	40	34
Net (repayments to) borrowings from subsidiaries	(70)	(267)
Net cash flows provided by (used in) investing activities	(482)	(477)
Change in cash at bank and in hand	—	—
Cash at bank and in hand, beginning of the year	—	—
Cash at bank and in hand, end of the year	\$ —	\$ —

Pentair plc
Company Statements of Changes in Equity

Shareholders' funds activity of the parent Company for the financial years ended 31 December 2017 and 2016 was as follows:

<i>In millions</i>	Called up & fully paid share capital	Share premium reserve	Capital redemption reserve	Profit and loss account	Other reserves	Total
Balance - 31 December 2015	\$ 2	\$ 3	\$ —	\$ 9,590	\$ 43	\$ 9,638
Loss for the financial year	—	—	—	(26)	—	(26)
Share-based compensation	—	—	—	—	34	34
Exercise of options, net of shares tendered for payment	—	28	—	—	—	28
Declaration of dividends	—	—	—	(244)	—	(244)
Balance - 31 December 2016	\$ 2	\$ 31	\$ —	\$ 9,320	\$ 77	\$ 9,430
Loss for the financial year	—	—	—	(69)	—	(69)
Repurchase of shares	—	—	—	(200)	—	(200)
Share-based compensation	—	—	—	—	40	40
Exercise of options, net of shares tendered for payment	—	46	—	—	—	46
Declaration of dividends	—	—	—	(252)	—	(252)
Balance - 31 December 2017	\$ 2	\$ 77	\$ —	\$ 8,799	\$ 117	\$ 8,995

During 2015, the Board of Directors declared dividends of \$0.32 per share that were paid during the third and fourth quarters of 2015, resulting in total dividends paid of \$1.28 per share in 2015. Additionally, on 8 December 2015, the Board of Directors declared a quarterly cash dividend of \$0.33 that was paid on February 12, 2016 to shareholders of record at the close of business on January 29, 2016. As this dividend was not approved by shareholders as of 31 December 2015, it did not meet the criteria to be provided for as a liability in the Company Balance Sheets. The amount paid on February 12, 2016 related to this dividend was \$60 million.

On December 6, 2016, the Board of Directors declared a quarterly cash dividend of \$0.345 that was paid on February 10, 2017 to shareholders of record at the close of business on January 27, 2017. As this dividend was not approved by shareholders as of 31 December 2016, it did not meet the criteria to be provided for as a liability in the Company Balance Sheets. The amount paid on February 10, 2017 related to this dividend was \$62 million.

On December 5, 2017, the Board of Directors declared a quarterly cash dividend of \$0.35 that was paid on February 9, 2018 to shareholders of record at the close of business on January 26, 2018. As this dividend was not approved by shareholders as of 31 December 2017, it did not meet the criteria to be provided for as a liability in the Company Balance Sheets. The amount paid on February 9, 2018 related to this dividend was \$63 million.

Note 14 of the consolidated Group financial statements provides additional details regarding shareholders' funds.

Pentair plc
Notes to company financial statements

1. Basis of Presentation and Summary of Significant Accounting Policies

General information and basis of accounting

Pentair plc (the “Company,” “we,” “us,” or “our”) is a company incorporated in Ireland under the Companies Act 2014. The address of the registered office is given on page 17. The nature of the company’s operations and its principal activities are set out in the directors’ report on page 1.

The parent company financial statements of the Company for the financial years ended 31 December 2017 and 2016 have been prepared in accordance with generally accepted accounting practice in Ireland (“Irish GAAP”), comprising the Financial Reporting Standards 102 (“FRS 102”), the Financial Reporting Framework applicable in the UK and Republic of Ireland (“relevant financial reporting framework”), together with the Companies Act 2014. These financial statements are prepared under Irish GAAP as they are prepared specifically to comply with Irish legislative requirements and represent the results and financial position of the Company, which is incorporated and registered in the Republic of Ireland.

Functional currency

Items included in these financial statements are measured using the currency of the primary economic environment in which Pentair plc operates (the “functional currency”). The financial statements are presented in United States (“U.S.”) dollars, which is the Company’s functional and presentation currency.

Currency translation

Gains and losses resulting from foreign currency transactions are included in profit and loss.

Investments in group undertakings

Pentair plc’s investment in Pentair Investments Switzerland GmbH (“PISG”) was recorded at fair value on 3 June 2014, the date Pentair plc acquired 100% of the ordinary share capital of PISG as part of the Merger (defined in Note 2 below). The fair value was based on the Company’s market capitalization at that date. This initial valuation became Pentair plc’s cost basis for its investment in PISG. The investment is tested for impairment if circumstances or indicators suggest that impairment may exist. The amount of impairment is the difference between the asset’s carrying amount and the present value of estimated future cash flows.

Dividends

Dividends may only be declared and paid out of the profits available for distribution in accordance with accounting practice generally accepted in Ireland and applicable Irish company law. Any dividends, if and when declared, will be declared and paid in U.S. dollars. Total dividends paid during 2017 and 2016 were \$1.38 per share and \$1.34 per share, respectively.

Share-based compensation

The Company applies the requirements of FRS 102 Section 26 Share-Based Payment in accounting for all share-based compensation, consequently, the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors is based on estimated fair values.

The Company issues equity-settled share options appreciation rights to certain employees of its subsidiaries. Equity-settled share-based payment transactions are measured at fair value (excluding the effect of non market-based vesting conditions) at the date of grant. Where this expense is not recharged by the Company to its subsidiaries, it is accounted for as a capital contribution included in Shares in group undertakings as reflected in Note 3. See Note 15 of the Consolidated Financial Statements for further discussion of share-based compensation.

Going concern

The directors have a reasonable expectation that the Company has adequate resources to continue in operational existence for the foreseeable future. Thus they continue to adopt the going concern basis of accounting in preparing the annual financial statements.

Pentair plc
Notes to company financial statements

Critical accounting judgments and key sources of estimation uncertainty

In the application of the Company's accounting policies, which are described above, the directors are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

2. History of the Company

Pentair plc was incorporated in Ireland, as a public limited company, on 28 November 2013 in order to assist the change of the Company's jurisdiction of incorporation from Switzerland to Ireland. The former group holding company, Pentair Ltd., was incorporated in Switzerland and was listed on the New York Stock Exchange ("NYSE"). Pentair Ltd. became the group holding company on 28 September 2012, subsequent to a spin-off of Pentair Ltd. from its then parent, Tyco International Ltd. ("Tyco") and a reverse acquisition involving Pentair, Inc. (a Minnesota corporation that was listed on the NYSE and predecessor to Pentair Ltd.).

On 10 December 2013, the Board of Directors of Pentair Ltd. approved a merger agreement (the "Merger Agreement") between the Company and Pentair Ltd. (the "Merger"). At an extraordinary meeting of shareholders of Pentair Ltd. held on 20 May 2014, Pentair Ltd. shareholders voted to approve the Merger Agreement. The Merger was completed on 3 June 2014, following entry of the Merger in the Schaffhausen Cantonal register in Switzerland and the jurisdiction of organisation of the Pentair group changed from Switzerland to Ireland.

The reorganisation was effected by: (i) Pentair Ltd. transferring certain assets, liabilities and agreements by way of a contribution to the equity of PISG, a newly-formed wholly-owned, direct subsidiary of Pentair Ltd. organised under the laws of Switzerland (the "Contribution"), followed by; (ii) the Merger, with the Company surviving as the publicly-traded parent entity and successor to Pentair Ltd.

Accordingly, all of the outstanding common shares of Pentair Ltd. were canceled and all holders of such shares were issued Pentair plc ordinary shares on a one-for-one basis. Shares of the Irish company, Pentair plc, began trading on the NYSE on 3 June 2014 under the symbol "PNR," the same symbol under which Pentair Ltd. shares were previously traded. Prior to 3 June 2014, Pentair plc had no substantive operating activity.

3. Shares in Group Undertakings

Pentair plc owns 100% of the ordinary share capital of PISG. The principal activity of PISG is an investment holding company. As discussed in Note 1, Pentair plc's investment in PISG was recorded at fair value on the date of the reorganisation based on the Company's market capitalization at that date. This initial valuation became Pentair plc's cost basis in PISG. The table below presents a rollforward of activity during the financial years ended 31 December 2017 and 2016 within the investment in subsidiary account.

<i>In millions</i>	2017
At 31 December 2015, at cost less impairment	\$ 10,000
Return of capital from PISG	(486)
Investment in subsidiary undertakings	94
At 31 December 2016, at cost less impairment	\$ 9,608
Return of capital from PISG	(641)
Investment in subsidiary undertakings	98
At 31 December 2017, at cost less impairment	\$ 9,065

In June 2017 and June 2016, PISG paid dividends to Pentair plc of \$641 million and \$486 million, respectively, that were utilized to pay down amounts owed by Pentair plc to Pentair Finance S.A. ("PFSA"), a Luxembourg company and indirect wholly-owned subsidiary of the Company, for dividend payments and share repurchases. These dividends were accounted for as returns of capital from PISG.

Pentair plc

Notes to company financial statements

The \$98 million and \$94 million of investments in subsidiary undertakings during 2017 and 2016, respectively, represent equity-settled share-based payment transactions not recharged to subsidiaries and recorded as a capital contribution for the financial years ended 31 December 2017 and 2016.

As a result of our annual impairment test completed as of 31 December 2017 and 2016, we recorded no impairment charges.

4. Guarantees and Contingencies

Indemnifications of officers and directors

The Company has indemnification agreements with the members of its board of directors to indemnify them to the extent permitted by law against any and all liabilities, costs, expenses, amounts paid in settlement and damages incurred by any director as a result of any lawsuit or any judicial, administrative or investigative proceeding brought against such director as a result of their service as a member of the Company's board of directors.

Debt

As of 31 December 2017, PFSA and Pentair, Inc., a U.S. company and indirect wholly-owned subsidiary of the Company, have a \$2,500 million unsecured revolving credit facility expiring in 2019 and PFSA has \$1,384 million aggregate principal amount of public notes outstanding comprised of the following: \$255 million of 2.90% notes due 2018, \$250 million of 2.65% notes due 2019, €500 million of 2.45% notes due 2019, \$74 million of 3.625% notes due 2020, \$104 million of 5.0% notes due 2021, \$88 million of 3.15% notes due 2022 and \$19 million of 4.65% notes due 2025. In addition to being the issuer of the listed senior notes and a borrower under the revolving credit facility, PFSA is also the issuer of commercial paper.

The senior notes are guaranteed as to payment by Pentair plc and Pentair Investments Switzerland GmbH ("PISG").

Effective 3 June 2014, the credit facility, public notes of both PFSA and Pentair, Inc. and notes issued under the commercial paper program all became fully and unconditionally guaranteed joint and severally on a senior unsecured basis by Pentair plc and PISG.

Guarantees

In certain situations, Tyco guaranteed Flow Control's performance to third parties or provided financial guarantees for financial commitments of Flow Control. In situations where Flow Control and Tyco were unable to obtain a release of these guarantees in connection with the spin-off of Flow Control from Tyco, we will indemnify Tyco for any losses it suffers as a result of such guarantees.

In disposing of assets or businesses, we often provide representations, warranties and indemnities to cover various risks including unknown damage to the assets, environmental risks involved in the sale of real estate, liability to investigate and remediate environmental contamination at waste disposal sites and manufacturing facilities and unidentified tax liabilities and legal fees related to periods prior to disposition. We do not have the ability to reasonably estimate the potential liability due to the unknown nature of these potential liabilities. However, we have no reason to believe that these uncertainties would have a material adverse effect on our financial position, results of operations or cash flows.

In the ordinary course of business, we are required to commit to bonds, letters of credit and bank guarantees that require payment to our customers for any non-performance. The outstanding face value of these instruments fluctuates with the value of our projects in process and in our backlog. In addition, we issue financial stand-by letters of credit primarily to secure our performance to third parties under self-insurance programs.

As of 31 December 2017 and 2016, the outstanding value of bonds, letters of credit and bank guarantees totaled \$202 million and \$331 million, respectively.

In addition, we provide support in the form of financial and/or performance guarantees to various subsidiary operating entities. While some of these performance guarantees have no limit, the value of these guarantees that are capped was approximately \$2.2 billion and \$2.7 billion at 31 December 2017 and 2016, respectively.

Pentair plc

Notes to company financial statements

5. Called up Share Capital Presented as Equity

The authorized share capital of the Company is 426 million ordinary shares of \$0.01 par value.

Called up share capital activity of the parent Company for the financial years ended 31 December 2017 and 2016 was as follows:

	Ordinary Shares
Balance - 31 December 2015	180,459,113
Exercise of options, net of shares tendered for payment	963,658
Ordinary shares of \$0.01 par value issued for share-based compensation activity	536,995
Shares surrendered by employees to pay taxes	(193,215)
Balance - 31 December 2016	181,766,551
Repurchase of shares	(2,962,184)
Exercise of options, net of shares tendered for payment	1,240,037
Ordinary shares of \$0.01 par value issued for share-based compensation activity	396,676
Shares surrendered by employees to pay taxes	(134,464)
Balance - 31 December 2017	180,306,616

Share repurchases

In December 2014, the Board of Directors authorized the repurchase of our ordinary shares up to a maximum dollar limit of \$1.0 billion. The authorization expires on 31 December 2019. During 2017, we repurchased 3 million shares (approximately 1.7% of our outstanding shares at 31 December 2017) for \$200 million, pursuant to the December 2014 authorization, at prices ranging from \$63 to \$70 per share. All 3 million shares were subsequently canceled.

As a result of the 2017 repurchase activity, there is \$600 million of remaining availability under the December 2014 authorization as of 31 December 2017.

The repurchase of our ordinary shares under these authorizations from the Board of Directors from time to time, based on market conditions, allow management to return excess cash to enhance shareholder value.

6. Loss Attributable to Pentair plc

In accordance with Section 304(2) of the Companies Act 2014, the Company is availing of the exemption from presenting and filing its individual profit and loss account. Pentair plc's loss for the years ended 31 December 2017 and 2016 as determined in accordance with FRS 102, the financial reporting standard applicable in the United Kingdom and Republic of Ireland, was \$69 million and \$26 million, respectively.

7. Directors Remuneration

Note 26 of the consolidated Group financial statements provides details of directors' remuneration borne by the Company.

8. Auditors' Remuneration

Auditors' remuneration for the financial years ended 31 December 2017 and 2016 was as follows:

<i>In millions</i>	2017	2016
Audit of the individual accounts	\$ 0.2	\$ 0.1
Other assurance services	—	0.1
Tax advisory services	—	—
Non-audit services	—	—
Total auditors' remuneration	\$ 0.2	\$ 0.2

Note 27 of the consolidated Group financial statements provides additional details of fees paid by the Group.

Pentair plc

Notes to company financial statements

9. Related Party Transactions

The Company has availed of the exemption provided in FRS 102 Section 33, Related Party Disclosures, for disclosure of transactions with subsidiary undertakings, 100% of whose voting rights are controlled within the Group. Consequently, the financial statements do not contain disclosures of such transactions with entities in the Pentair plc group.

The directors have determined that key management are the director group. Remuneration related to key management personnel is disclosed in Note 26 of the consolidated Group financial statements.

10. Subsidiary Undertakings

Pentair plc owns Pentair Investments Switzerland GmbH. All of Pentair Investments Switzerland GmbH's subsidiaries are included in Note 29 of the consolidated Group financial statements.

