PENTAIR plc
Form 10-Q
October 23, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the Quarterly Period Ended September 30, 2018
OR
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission file number 001-11625
Pentair plc

(Exact name of Registrant as specified in its charter)

Ireland	98-1141328
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification number)

Station Road, Longstanton, Cambridge, CB24 3DS, United Kingdom
(Address of principal executive offices)
Registrant's telephone number, including area code: 44-19-5426-2325
Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§223.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o	Emerging growth company o
		(Do not check if a smaller reporting company)		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨
Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ
On September 30, 2018, 173,601,030 shares of Registrant's common stock were outstanding.

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Pentair plc and Subsidiaries

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PART I FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS
Pentair plc and Subsidiaries
Condensed Consolidated Statements of Operations and Comprehensive Income (Unaudited)

In millions, except per-share data	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net sales	$711.4	$ 687.6	$2,224.6	$ 2,124.9
Cost of goods sold	467.6	451.1	1,444.9	1,391.1
Gross profit	243.8	236.5	779.7	733.8
Selling, general and administrative	116.3	116.8	399.0	386.2
Research and development	19.1	17.9	57.0	54.7
Operating income	108.4	101.8	323.7	292.9
Other (income) expense:				
Loss on sale of business	0.2	3.8	6.4	3.8
Loss on early extinguishment of debt	—	—	17.1	101.4
Net interest expense	4.3	13.9	27.9	74.2
Other expense (income)	2.1	1.1	(1.7)	3.2
Income from continuing operations before income taxes	101.8	83.0	274.0	110.3
Provision for income taxes	10.6	34.1	46.5	52.1
Net income from continuing operations	91.2	48.9	227.5	58.2
Income from discontinued operations, net of tax	18.9	78.2	27.0	219.8
(Loss) gain from sale of discontinued operations, net of tax	—	(1.7)	—	198.9
Net income	$110.1	$ 125.4	$254.5	$ 476.9
Comprehensive income, net of tax				
Net income	$110.1	$ 125.4	$254.5	$ 476.9
Changes in cumulative translation adjustment (inclusive of divestiture of business reclassified to gain from sale of $0.0 and $374.2 for the three and nine months ended September 30, 2017, respectively)	(2.1)	34.5	23.1	502.8
Changes in market value of derivative financial instruments, net of tax	(1.0)	(3.0)	(0.7)	(2.3)
Comprehensive income	$107.0	$ 156.9	$276.9	$ 977.4
Earnings per ordinary share				
Basic				
Continuing operations	$0.52	$ 0.27	$1.29	$ 0.32
Discontinued operations	0.11	0.42	0.15	2.30
Basic earnings per ordinary share	$0.63	$ 0.69	$1.44	$ 2.62
Diluted				
Continuing operations	$0.52	$ 0.27	$1.28	$ 0.32
Discontinued operations	0.11	0.41	0.15	2.28
Diluted earnings per ordinary share	$0.63	$ 0.68	$1.43	$ 2.60
Weighted average ordinary shares outstanding				
Basic	174.3	181.5	176.8	181.7
Diluted	175.7	183.5	178.5	183.7
Cash dividends paid per ordinary share	$0.175	$ 0.345	$0.875	$ 1.035

See accompanying notes to condensed consolidated financial statements.

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Pentair plc and Subsidiaries
Condensed Consolidated Balance Sheets (Unaudited)

In millions, except per-share data	September 30, 2018	December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	$ 64.7	$ 86.3
Accounts and notes receivable, net of allowances of $16.0 and $14.2, respectively	402.4	483.1
Inventories	387.3	356.9
Other current assets	135.2	114.5
Current assets held for sale	—	708.0
Total current assets	989.6	1,748.8
Property, plant and equipment, net	274.2	279.8
Other assets		
Goodwill	2,097.0	2,112.8
Intangibles, net	289.4	321.8
Other non-current assets	159.3	180.9
Non-current assets held for sale	—	3,989.6
Total other assets	2,545.7	6,605.1
Total assets	$ 3,809.5	$ 8,633.7
Liabilities and Equity		
Current liabilities		
Accounts payable	$ 261.3	$ 321.5
Employee compensation and benefits	85.0	115.8
Other current liabilities	361.1	401.3
Current liabilities held for sale	—	360.8
Total current liabilities	707.4	1,199.4
Other liabilities		
Long-term debt	798.8	1,440.7
Pension and other post-retirement compensation and benefits	109.8	96.4
Deferred tax liabilities	106.3	108.6
Other non-current liabilities	207.0	213.8
Non-current liabilities held for sale	—	537.0
Total liabilities	1,929.3	3,595.9
Equity		
Ordinary shares $0.01 par value, 426.0 authorized, 173.6 and 180.3 issued at September 30, 2018 and December 31, 2017, respectively	1.8	1.8
Additional paid-in capital	1,991.9	2,797.7
Retained earnings	107.5	2,481.7
Accumulated other comprehensive loss	(221.0)	(243.4)
Total equity	1,880.2	5,037.8
Total liabilities and equity	$ 3,809.5	$ 8,633.7

See accompanying notes to condensed consolidated financial statements.

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Pentair plc and Subsidiaries
Condensed Consolidated Statements of Cash Flows (Unaudited)

In millions	Nine months ended September 30, 2018	September 30, 2017
Operating activities		
Net income	$254.5	$ 476.9
Income from discontinued operations, net of tax	(27.0)	(219.8)
Gain from sale of discontinued operations, net of tax	—	(198.9)
Adjustments to reconcile net income from continuing operations to net cash provided by (used for) operating activities of continuing operations		
Equity income of unconsolidated subsidiaries	(7.1)	(0.9)
Depreciation	36.9	38.4
Amortization	27.0	27.2
Deferred income taxes	(4.1)	(3.0)
Loss on sale of business	6.4	3.8
Share-based compensation	16.4	32.2
Loss on early extinguishment of debt	17.1	101.4
Changes in assets and liabilities, net of effects of business acquisitions		
Accounts and notes receivable	73.5	66.9
Inventories	(36.3)	(16.0)
Other current assets	(11.0)	(12.9)
Accounts payable	(60.1)	(61.0)
Employee compensation and benefits	(25.4)	(17.3)
Other current liabilities	27.7	(54.3)
Other non-current assets and liabilities	10.7	(15.1)
Net cash provided by (used for) operating activities of continuing operations	299.2	147.6
Net cash provided by (used for) operating activities of discontinued operations	(14.6)	214.2
Net cash provided by (used for) operating activities	284.6	361.8
Investing activities		
Capital expenditures	(33.8)	(25.4)
Proceeds from sale of property and equipment	(0.4)	3.2
(Payments due to) proceeds from the sale of businesses, net	(12.8)	2,764.0
Acquisitions, net of cash acquired	(0.9)	(45.9)
Net cash provided by (used for) investing activities of continuing operations	(47.9)	2,695.9
Net cash provided by (used for) investing activities of discontinued operations	(7.1)	(41.3)
Net cash provided by (used for) investing activities	(55.0)	2,654.6
Financing activities		
Net repayments of short-term borrowings	—	(0.8)
Net receipts (repayments) of commercial paper and revolving long-term debt	46.0	(842.3)
Repayments of long-term debt	(675.1)	(2,009.3)
Debt issuance costs	(2.0)	—
Premium paid on early extinguishment of debt	(16.0)	(94.9)
Transfer of cash to nVent	(74.2)	—
Distribution of cash from nVent	993.6	—
Shares issued to employees, net of shares withheld	16.0	34.3
Repurchases of ordinary shares	(400.0)	(100.0)
Dividends paid	(156.7)	(188.9)
Net cash provided by (used for) financing activities of continuing operations	(268.4)	(3,201.9)

Net cash provided by (used for) financing activities of discontinued operations	—	—
Net cash provided by (used for) financing activities	(268.4)	(3,201.9)
Change in cash held for sale	27.0	(5.6)
Effect of exchange rate changes on cash and cash equivalents	(9.8)	55.5
Change in cash and cash equivalents	(21.6)	(135.6)
Cash and cash equivalents, beginning of period	86.3	216.9
Cash and cash equivalents, end of period	$64.7	$ 81.3

See accompanying notes to condensed consolidated financial statements.

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Pentair plc and Subsidiaries
Condensed Consolidated Statements of Changes in Equity (Unaudited)

In millions	Ordinary shares Number	Ordinary shares Amount	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Total
Balance - December 31, 2017	180.3	$ 1.8	$2,797.7	$2,481.7	$ (243.4)	$5,037.8
Net income	—	—	—	254.5	—	254.5
Cumulative effect of accounting changes	—	—	—	(214.0)	—	(214.0)
Other comprehensive income, net of tax	—	—	—	—	70.3	70.3
Distribution to nVent	—	—	(438.2)	(2,290.7)	(47.9)	(2,776.8)
Dividends declared	—	—	—	(124.0)	—	(124.0)
Share repurchase	(7.8)	—	(400.0)	—	—	(400.0)
Exercise of options, net of shares tendered for payment	0.8	—	22.8	—	—	22.8
Issuance of restricted shares, net of cancellations	0.3	—	—	—	—	—
Shares surrendered by employees to pay taxes	—	—	(6.8)	—	—	(6.8)
Share-based compensation	—	—	16.4	—	—	16.4
Balance - September 30, 2018	173.6	$ 1.8	$1,991.9	$107.5	$ (221.0)	$1,880.2

In millions	Ordinary shares Number	Ordinary shares Amount	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Total
Balance - December 31, 2016	181.8	$ 1.8	$2,920.8	$2,068.1	$ (736.3)	$4,254.4
Net income	—	—	—	476.9	—	476.9
Other comprehensive income, net of tax	—	—	—	—	500.5	500.5
Dividends declared	—	—	—	(189.7)	—	(189.7)
Share repurchase	(1.5)	—	(100.0)	—	—	(100.0)
Exercise of options, net of shares tendered for payment	1.1	—	41.6	—	—	41.6
Issuance of restricted shares, net of cancellations	0.3	—	—	—	—	—
Shares surrendered by employees to pay taxes	(0.1)	—	(7.3)	—	—	(7.3)
Share-based compensation	—	—	32.2	—	—	32.2
Balance - September 30, 2017	181.6	$ 1.8	$2,887.3	$2,355.3	$ (235.8)	$5,008.6

See accompanying notes to condensed consolidated financial statements.

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Pentair plc and Subsidiaries
Notes to condensed consolidated financial statements (unaudited)

1. Basis of Presentation and Responsibility for Interim Financial Statements

The accompanying unaudited condensed consolidated financial statements of Pentair plc and its subsidiaries ("we," "us," "our," "Pentair," or the "Company") have been prepared following the requirements of the U.S. Securities and Exchange Commission ("SEC") for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by accounting principles generally accepted in the United States of America ("GAAP") can be condensed or omitted.

We are responsible for the unaudited condensed consolidated financial statements included in this document. The financial statements include all normal recurring adjustments that are considered necessary for the fair presentation of our financial position and operating results. As these are condensed financial statements, one should also read our consolidated financial statements and notes thereto, which are included in our Annual Report on Form 10-K for the year ended December 31, 2017.

Revenues, expenses, cash flows, assets and liabilities can and do vary during each quarter of the year. Therefore, the results and trends in these interim financial statements may not be indicative of those for a full year.

Our fiscal year ends on December 31. We report our interim quarterly periods on a calendar quarter basis.

Electrical separation

On April 30, 2018, Pentair completed the previously announced separation of its Electrical business from the rest of Pentair (the "Separation") by means of a dividend in specie of the Electrical business, which was effected by the transfer of the Electrical business from Pentair to nVent Electric plc ("nVent") and the issuance by nVent of ordinary shares directly to Pentair shareholders (the "Distribution"). On May 1, 2018, following the Separation and Distribution, nVent became an independent publicly traded company, trading on the New York Stock Exchange under the symbol "NVT." The Company did not retain any equity interest in nVent. nVent's historical financial results are reflected in the Company's condensed consolidated financial statements as a discontinued operation. Refer to Note 3 for further discussion.

In connection with the Distribution of nVent, the Company and nVent entered into several agreements covering administrative and tax matters to provide or obtain services on a transitional basis, as needed, for varying periods after the Distribution. The administrative agreements cover various services such as information technology, human resources and finance. The Company expects all services to be substantially complete within one year after the Distribution.

Adoption of new accounting standards

On January 1, 2018, we adopted Accounting Standards Update ("ASU") No. 2017-07, "Retirement Benefits-Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." As a result of the adoption, the interest cost, expected return on plan assets and net actuarial gain/loss components of net periodic pension and post-retirement benefit cost have been reclassified from Selling, general and administrative expense to Other expense (income). Only the service cost component remains in Operating income and will be eligible for capitalization in assets on a prospective basis.

The effect of the retrospective presentation change related to the net periodic cost of our defined benefit pension and other post-retirement plans on our Condensed Consolidated Statements of Operations and Comprehensive Income was a reclassification of $1.4 million and $4.1 million for the three and nine months ended September 30, 2017, respectively, from Selling, general and administrative expense to Other expense (income).

On January 1, 2018, we adopted ASU No. 2016-16, "Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory." This ASU requires the tax effects of all intra-entity sales of assets other than inventory to be recognized in the period in which the transaction occurs. The adoption resulted in a $215.8 million cumulative-effect adjustment (of which $174.6 million related to nVent) recorded in retained earnings as of the beginning of 2018. The adjustment reflects a $254.3 million reduction of a prepaid long term tax asset, partially offset by the establishment of $38.5 million of deferred tax assets.

On January 1, 2018, we adopted ASU No. 2014-09, “Revenue from Contracts with Customers” and the related amendments (“ASC 606” or “the new revenue standard”) using the modified retrospective method. The cumulative impact to our retained earnings at January 1, 2018 was not material. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. We expect the impact of the adoption of the new standard to be immaterial to our net income on an ongoing basis.

A majority of our net sales continue to be recognized when products are shipped from our manufacturing facilities or delivery has occurred, depending on terms of the sale. Under the new revenue standard, timing for recognition of certain revenue may be accelerated such that a portion of revenue will be recognized prior to shipment or delivery dependent upon contract-specific terms.

The cumulative effect of the changes made to our January 1, 2018 Condensed Consolidated Balance Sheet from the modified retrospective adoption of ASU 2016-16 and ASU 2014-09 was as follows:

Condensed Consolidated Balance Sheets

In millions	Balance at December 31, 2017	Adjustments due to ASU 2016-16	Adjustments due to ASU 2014-09	Balance at January 1, 2018
Assets				
Accounts and notes receivable, net	$ 483.1	$ —	$ 2.7	$ 485.8
Inventories	356.9	—	(1.6)	355.3
Other current assets	114.5	—	1.6	116.1
Current assets held for sale	708.0	—	3.8	711.8
Other non-current assets	180.9	(44.9)	—	136.0
Non-current assets held for sale	3,989.6	(201.6)	—	3,788.0
Liabilities				
Other current liabilities	401.3	—	2.7	404.0
Deferred tax liabilities	108.6	(3.7)	0.1	105.0
Non-current liabilities held for sale	537.0	(27.0)	0.4	510.4
Equity				
Retained Earnings	2,481.7	(215.8)	1.8	2,267.7

New accounting standards issued but not yet adopted

In February 2016, the Financial Accounting Standards Board issued ASU 2016-02, “Leases” (“the new lease standard” or “ASC 842”), which requires an entity to recognize both assets and liabilities arising from financing and operating leases, along with additional qualitative and quantitative disclosures. The new lease standard requirements are effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and early adoption is permitted. The Company has begun evaluating the new lease standard, including the review and implementation of the necessary changes to our existing processes and systems that will be required to implement the new lease standard. While we are unable to quantify the impact at this time, we expect the primary impact upon adoption will be the recognition, on a discounted basis, of our minimum commitments under noncancelable operating leases on our consolidated balance sheets resulting in the recording of right of use assets and lease obligations. We currently do not expect ASC 842 to have a material effect on either our condensed consolidated statements of operations and comprehensive income or condensed consolidated statements of cash flows. We plan to adopt ASC 842 in the first quarter of 2019.

2. Revenue

Revenue recognition

Revenue is recognized when control of the promised goods or services are transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for transferring those goods or providing services. We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

When determining whether the customer has obtained control of the goods or services, we consider any future performance obligations. 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, revenue recognition would be deferred until Pentair has substantially accomplished what it must do to be entitled to the benefits represented by the revenue.

Performance obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in ASC 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The majority of our contracts have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. For contracts with multiple performance obligations, standalone selling price is generally readily observable.

Our performance obligations are satisfied at a point in time or over time as work progresses. Revenue from goods and services transferred to customers at a point in time accounted for 90.5% and 91.3% of our revenue for the three months ended September 30, 2018 and 2017, respectively, and 92.3% and 92.8% of our revenue for the nine months ended September 30, 2018 and 2017, respectively. Revenue on these contracts is recognized when obligations under the terms of the contract with our customer are satisfied; generally this occurs with the transfer of control upon shipment.

Revenue from products and services transferred to customers over time accounted for 9.5% and 8.7% of our revenue for the three months ended September 30, 2018 and 2017, respectively, and 7.7% and 7.2% of our revenue for the nine months ended September 30, 2018 and 2017, respectively. For the majority of our revenue recognized over time, we use an input measure to determine progress towards completion. Under this method, sales and gross profit are recognized as work is performed generally 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. Contract costs include labor, material, overhead and, when appropriate, general and administrative expenses. Changes to the original estimates may be required during the life of the contract, and such estimates are reviewed on a regular basis. Sales 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. For performance obligations related to long term contracts, when estimates of total costs to be incurred on a performance obligation exceed total estimates of revenue to be earned, a provision for the entire loss on the performance obligation is recognized in the period the loss is determined.

On September 30, 2018, we had $69.1 million of remaining performance obligations on contracts with an original expected duration of one year or more. We expect to recognize the majority of our remaining performance obligations on these contracts within the next 12 to 18 months.

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. When the right of return exists, we adjust the transaction price for the estimated effect of returns. We estimate the expected returns based on 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

Our sales contracts may give customers the option to purchase additional goods or services priced at a discount. Options to acquire additional goods or services at a discount can come in many forms, such as customer programs and incentive offerings including pricing arrangements, promotions and other volume-based incentives.

We reduce the transaction price for certain customer programs and incentive offerings including pricing arrangements, promotions and other volume-based incentives that represent variable consideration. Sales incentives given to our customers are recorded using either the expected value method or most likely amount approach for estimating the amount of consideration to which Pentair shall be entitled. The expected value is the sum of probability-weighted amounts in a range of possible consideration amounts. An expected value is an appropriate estimate of the amount of variable consideration when there are a large number of contracts with similar characteristics. The most likely amount is the single most likely amount in a range of possible consideration amounts (that is, the single most likely outcome of the contract). The most likely amount is an appropriate estimate of the amount of variable consideration if the contract has limited possible outcomes (for example, an entity either achieves a performance bonus or does not).

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, one of our businesses allows customers to apply for a refund of a percentage of the original purchase price if they can demonstrate sales to a qualifying end customer. We use the expected value method to 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 of the transaction price.

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 reforecast the most likely amount of the rebate to be paid based on forecasted sales levels. These forecasts are updated at least quarterly for each customer, and the transaction price is 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.

Shipping and handling costs

Amounts billed to customers for shipping and handling activities after the customer obtains control are treated as a promised service performance obligation and recorded in Net sales in the accompanying Condensed Consolidated Statements of Operations and Comprehensive Income. Shipping and handling costs incurred by Pentair for the delivery of goods to customers are considered a cost to fulfill the contract and are included in Cost of goods sold in the accompanying Condensed Consolidated Statements of Operations and Comprehensive Income.

Contract assets and liabilities

Contract assets consist of unbilled amounts resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, such as when the customer retains a small portion of the contract price until completion of the contract. We typically receive interim payments on sales under long-term contracts as work progresses, although for some contracts, we may be entitled to receive an advance payment. Contract liabilities consist of advanced payments, billings in excess of costs incurred and deferred revenue.

Contract assets are recorded within Other current assets, and contract liabilities are recorded within Other current liabilities in the Condensed Consolidated Balance Sheets.

Contract assets and liabilities consisted of the following:

In millions	September 30, 2018	December 31, 2017	$ Change	% Change
Contract assets	$ 44.8	$ 51.5	$ (6.7)	(13.0)%
Contract liabilities	25.5	29.1	(3.6)	(12.4)%
Net contract assets	$ 19.3	$ 22.4	$ (3.1)	(13.8)%

The $3.1 million decrease in net contract assets from December 31, 2017 to September 30, 2018 was primarily the result of timing of milestone payments. Approximately 65% of our contract liabilities at December 31, 2017 were recognized in revenue in the first nine months of 2018. There were no impairment losses recognized on our contract assets for the three and nine months ended September 30, 2018.

Practical expedients and exemptions

We generally expense incremental costs of obtaining a contract when incurred because the amortization period would be less than one year. These costs primarily relate to sales commissions and are recorded in Selling, general and administrative expense in the Condensed Consolidated Statements of Operations and Comprehensive Income.

We do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less. Further, we do not adjust the promised amount of consideration for the effects of a significant financing component if we expect, at contract inception, that the period between when we transfer a promised good or service to a customer and when the customer pays for that good or service will be one year or less.

Revenue by category

We disaggregate our revenue from contracts with customers by segment, geographic location and vertical market, as we believe these best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. Refer to Note 14 for revenue disaggregated by segment.

Pentair plc and Subsidiaries
Notes to condensed consolidated financial statements (unaudited)

Geographic net sales information, based on geographic destination of the sale, was as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
U.S.	$438.5	$ 417.4	$1,395.1	$ 1,317.8
Western Europe	97.1	92.8	311.2	287.7
Developing [1]	117.6	117.3	346.0	346.0
Other Developed [2]	58.2	60.1	172.3	173.4
Consolidated net sales	$711.4	$ 687.6	$2,224.6	$ 2,124.9

[1] Developing includes China, Eastern Europe, Latin America, the Middle East and Southeast Asia.
[2] Other Developed includes Australia, Canada and Japan.

Vertical market net sales information was as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Residential	$397.6	$ 375.5	$1,247.3	$ 1,185.1
Commercial	155.8	148.6	475.4	453.8
Industrial	158.0	163.5	501.9	486.0
Consolidated net sales	$711.4	$ 687.6	$2,224.6	$ 2,124.9

3.Discontinued Operations

Electrical separation

On April 30, 2018, the Company completed the previously announced separation of the Electrical business from the rest of Pentair by means of a dividend in specie of the Electrical business, which was effected by the transfer of the Electrical business from Pentair to nVent and the issuance by nVent of nVent ordinary shares directly to Pentair shareholders. We did not retain an equity interest in nVent.

The results of the Electrical business have been presented as discontinued operations and the related assets and liabilities were reclassified as held for sale for all periods presented. The Electrical business had been previously disclosed as a stand-alone reporting segment. Separation costs related to the Separation and Distribution were $2.5 million and $11.7 million for the three months ended September 30, 2018 and 2017, respectively, and $82.4 million and $19.3 million for the nine months ended September 30, 2018 and 2017, respectively. These costs are reported in discontinued operations as they represent a cost directly related to the Separation and Distribution and were included within Income from discontinued operations, net of tax presented below.

Sale of Valves & Controls

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 of $181.1 million, net of tax. The results of the Valves & Controls business have been presented as discontinued operations. The Valves & Controls business was previously disclosed as a stand-alone reporting segment. Transaction costs of $1.7 million and $55.4 million related to the sale of Valves & Controls were incurred during the three and nine months ended September 30, 2017, respectively, and were recorded within (Loss) gain from sale of discontinued operations before income taxes presented below.

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Operating results of discontinued operations are summarized below:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net sales	$—	$ 540.7	$693.9	$ 2,006.3
Cost of goods sold	—	321.9	424.0	1,268.9
Gross profit	—	218.8	269.9	737.4
Selling, general and administrative	2.5	115.7	233.5	440.6
Research and development	—	10.5	14.6	38.1
Operating (loss) income	$(2.5)	$ 92.6	$21.8	$ 258.7
Income from discontinued operations before income taxes	$14.8	$ 91.8	$34.6	$ 257.1
Income tax (benefit) provision	(4.1)	13.6	7.6	37.3
Income from discontinued operations, net of tax	$18.9	$ 78.2	$27.0	$ 219.8
(Loss) gain from sale of discontinued operations before income taxes	$—	$ (1.7)	$—	$ 201.3
Provision for income taxes	—	—	—	2.4
(Loss) gain from sale of discontinued operations before income taxes	$—	$ (1.7)	$—	$ 198.9

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

In millions	December 31, 2017
Cash and cash equivalents	$ 27.0
Accounts and notes receivable, net	348.5
Inventories	224.1
Other current assets	108.4
Current assets held for sale	$ 708.0
Property, plant and equipment, net	$ 265.8
Goodwill	2,238.2
Intangibles, net	1,236.6
Other non-current assets	249.0
Non-current assets held for sale	$ 3,989.6
Accounts payable	$ 174.1
Employee compensation and benefits	70.8
Other current liabilities	115.9
Current liabilities held for sale	$ 360.8
Pension and other post-retirement compensation and benefits	$ 189.2
Deferred tax liabilities	286.2
Other non-current liabilities	61.6
Non-current liabilities held for sale	$ 537.0

4. Share Plans

Total share-based compensation expense for the three and nine months ended September 30, 2018 and 2017 was as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Restricted stock units	$ 2.4	$ 2.9	$ 6.7	$ 14.4
Stock options	1.3	1.9	3.5	8.3
Performance share units	1.4	1.4	6.2	9.5
Total share-based compensation expense	$ 5.1	$ 6.2	$ 16.4	$ 32.2

Of the total share-based compensation expense noted above, $0.0 million and $1.7 million for the three months ended September 30, 2018 and 2017, respectively, and $3.4 million and $6.0 million for the nine months ended September 30, 2018 and 2017, respectively, was reported as part of Income from discontinued operations, net of tax.

In May 2018, we issued our annual share-based compensation grants under the Pentair plc 2012 Stock and Incentive Plan to eligible employees. The total number of awards issued was approximately 0.8 million, of which 0.2 million were restricted stock units (“RSUs”), 0.5 million were stock options and 0.1 million were performance share units (“PSUs”). The weighted-average grant date fair value of the RSUs, stock options and PSUs issued was $45.42, $10.92, and $45.42, respectively.

We estimated the fair value of each stock option award issued in the annual share-based compensation grant using a Black-Scholes option pricing model, modified for dividends and using the following assumptions:

	2018 Annual Grant
Risk-free interest rate	2.58 %
Expected dividend yield	1.56 %
Expected share price volatility	24.8 %
Expected term (years)	6.1

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 share price volatility, we considered a rolling average of historical volatility measured over a period approximately equal to the expected option term. The risk-free interest 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.

Electrical separation

In connection with the Separation and Distribution, the Company adjusted its outstanding equity awards on May 1, 2018 in accordance with the Employee Matters Agreement between Pentair and nVent. The outstanding awards will continue to vest over the original vesting period, which is generally three years from the grant date.

The RSUs, PSUs, and stock option awards issued before May 9, 2017 (the date of Pentair’s announcement of its intention to separate its Water and Electrical businesses) were converted into awards of both Pentair and nVent regardless of which company the award holder was employed by immediately after the Separation. These awards were converted as follows:

- Restricted stock units: For every unvested Pentair RSU award held, the holder received one nVent RSU.

- Performance share units: Pentair PSUs were converted to Pentair RSUs immediately after the Distribution. The PSUs granted in 2016 were converted at rate of 125% of target, and the PSUs granted in 2017 were converted at a rate of 100% of target. For every converted RSU, the shareholder also received one nVent RSU. The converted RSUs retain the original vesting schedule of the awarded PSUs.

- Stock options: Every holder of unexercised (vested and unvested) Pentair stock options received both adjusted stock options of Pentair and stock options of nVent, with the number of underlying shares and the exercise price adjusted accordingly to preserve the overall intrinsic value of the awards. The number of Pentair stock options was converted based upon the ratio of Pentair's pre-Distribution stock price divided by the sum of the Pentair and nVent post-Distribution closing prices. The exercise price for the converted Pentair stock options was adjusted based on the Pentair post-Distribution closing price divided by the Pentair pre-Distribution closing price.

The number of new nVent stock options awarded is the same as the converted number of Pentair stock options calculated as described above. The exercise price for the new nVent stock options was calculated based on nVent's post-Distribution closing price divided by the Pentair pre-Distribution closing price.

Generally, unvested awards issued after May 9, 2017 were converted to awards of the Company that the shareholder was employed by immediately after the Separation, with adjustments to the number of underlying shares as appropriate to preserve the intrinsic value of such awards immediately prior to the Distribution. The adjustment of the underlying shares was based on the ratio of Pentair's pre-Distribution stock price divided by the post-Distribution closing price of the respective company's ordinary shares. The exercise prices of the stock options were converted using the inverse ratio in a manner designed to preserve the intrinsic value of such awards.

5. Restructuring

During the nine months ended September 30, 2018 and the year ended December 31, 2017, we initiated and continued execution of certain business restructuring initiatives aimed at reducing our fixed cost structure and realigning our business. Initiatives during the nine months ended September 30, 2018 and the year ended December 31, 2017 included the reduction in hourly and salaried headcount of approximately 300 employees and 250 employees, respectively.

Restructuring related costs included in Selling, general and administrative expenses in the Condensed Consolidated Statements of Operations and Comprehensive Income included costs for severance and other restructuring costs as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Severance and related costs	$ 2.8	$ 1.3	$ 12.8	$ 18.7
Other	0.7	0.1	21.3	0.2
Total restructuring costs	$ 3.5	$ 1.4	$ 34.1	$ 18.9

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

Restructuring costs by reportable segment were as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Aquatic Systems	$ 0.6	$ 0.3	$ 3.6	$ 1.9
Filtration Solutions	0.9	0.2	14.4	6.9
Flow Technologies	0.7	0.9	8.7	2.8
Other	1.3	—	7.4	7.3
Consolidated	$ 3.5	$ 1.4	$ 34.1	$ 18.9

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Activity related to accrued severance and related costs recorded in Other current liabilities in the Condensed Consolidated Balance Sheets is summarized as follows for the nine months ended September 30, 2018:

In millions	September 30, 2018
Beginning balance	$ 34.5
Costs incurred	12.8
Cash payments and other	(16.7)
Ending balance	$ 30.6

6. Earnings Per Share

Basic and diluted earnings per share were calculated as follows:

In millions, except per-share data	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net income	$ 110.1	$ 125.4	$254.5	$ 476.9
Net income from continuing operations	$ 91.2	$ 48.9	$227.5	$ 58.2
Weighted average ordinary shares outstanding				
Basic	174.3	181.5	176.8	181.7
Dilutive impact of stock options, restricted stock units and performance share units	1.4	2.0	1.7	2.0
Diluted	175.7	183.5	178.5	183.7
Earnings per ordinary share				
Basic				
Continuing operations	$ 0.52	$ 0.27	$1.29	$ 0.32
Discontinued operations	0.11	0.42	0.15	2.30
Basic earnings per ordinary share	$ 0.63	$ 0.69	$1.44	$ 2.62
Diluted				
Continuing operations	$ 0.52	$ 0.27	$1.28	$ 0.32
Discontinued operations	0.11	0.41	0.15	2.28
Diluted earnings per ordinary share	$ 0.63	$ 0.68	$1.43	$ 2.60
Anti-dilutive stock options excluded from the calculation of diluted earnings per share	1.3	1.6	0.6	1.8

7. Supplemental Balance Sheet Information

In millions	September 30, 2018	December 31, 2017
Inventories		
Raw materials and supplies	$ 205.9	$ 190.8
Work-in-process	66.2	57.9
Finished goods	115.2	108.2
Total inventories	$ 387.3	$ 356.9
Other current assets		
Cost in excess of billings	$ 44.8	$ 51.5
Prepaid expenses	59.4	51.4
Prepaid income taxes	12.5	7.8
Other current assets	18.5	3.8
Total other current assets	$ 135.2	$ 114.5
Property, plant and equipment, net		
Land and land improvements	$ 34.0	$ 33.5
Buildings and leasehold improvements	179.0	184.3
Machinery and equipment	614.2	609.6
Construction in progress	34.8	23.7
Total property, plant and equipment	862.0	851.1
Accumulated depreciation and amortization	587.8	571.3
Total property, plant and equipment, net	$ 274.2	$ 279.8
Other non-current assets		
Prepaid income taxes	$ —	$ 52.8
Deferred income taxes	29.6	29.0
Deferred compensation plan assets	27.5	23.2
Other non-current assets	102.2	75.9
Total other non-current assets	$ 159.3	$ 180.9
Other current liabilities		
Dividends payable	$ 30.4	$ 63.1
Accrued warranty	38.0	38.1
Accrued rebates	65.9	49.8
Billings in excess of cost	15.9	20.1
Income taxes payable	24.3	39.7
Accrued restructuring	30.6	34.5
Other current liabilities	156.0	156.0
Total other current liabilities	$ 361.1	$ 401.3
Other non-current liabilities		
Income taxes payable	$ 51.0	$ 61.3
Self-insurance liabilities	59.4	48.3
Deferred compensation plan liabilities	27.5	23.2
Foreign currency contract liabilities	45.5	47.2
Other non-current liabilities	23.6	33.8
Total other non-current liabilities	$ 207.0	$ 213.8

8. Goodwill and Other Identifiable Intangible Assets

The changes in the carrying amount of goodwill by reportable segment were as follows:

In millions	December 31, 2017	Foreign currency translation/other	September 30, 2018
Aquatic Systems	$ 973.1	$ (6.0)	$ 967.1
Filtration Solutions	472.1	(7.9)	464.2
Flow Technologies	667.6	(1.9)	665.7
Total goodwill	$ 2,112.8	$ (15.8)	$ 2,097.0

Identifiable intangible assets consisted of the following:

	September 30, 2018			December 31, 2017		
In millions	Cost	Accumulated amortization	Net	Cost	Accumulated amortization	Net
Definite-life intangibles						
Customer relationships	$353.3	$ (245.5)	$107.8	$360.9	$ (229.9)	$131.0
Trade names	0.4	(0.4)	—	1.5	(1.4)	0.1
Proprietary technology and patents	88.0	(68.2)	19.8	117.0	(89.3)	27.7
Total definite-life intangibles	441.7	(314.1)	127.6	479.4	(320.6)	158.8
Indefinite-life intangibles						
Trade names	161.8	—	161.8	163.0	—	163.0
Total intangibles	$603.5	$ (314.1)	$289.4	$642.4	$ (320.6)	$321.8

Identifiable intangible asset amortization expense was $8.6 million and $9.2 million for the three months ended September 30, 2018 and 2017, respectively, and $27.0 million and $27.2 million for the nine months ended September 30, 2018 and 2017, respectively.

Estimated future amortization expense for identifiable intangible assets during the remainder of 2018 and the next five years is as follows:

In millions	Q4 2018	2019	2020	2021	2022	2023
Estimated amortization expense	$ 8.3	$28.0	$22.9	$17.6	$10.3	$ 7.9

9. Debt

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

In millions	Average interest rate as of September 30, 2018	Maturity Year	September 30, 2018	December 31, 2017
Commercial paper	2.934%	2023	$ 99.0	$ 34.0
Revolving credit facilities	3.461%	2023	9.4	28.4
Senior notes - fixed rate [1]	2.900%	2018	—	255.3
Senior notes - fixed rate [1]	2.650%	2019	250.0	250.0
Senior notes - fixed rate - Euro [1]	2.450%	2019	160.4	594.4
Senior notes - fixed rate [1]	3.625%	2020	74.0	74.0
Senior notes - fixed rate [1]	5.000%	2021	103.8	103.8
Senior notes - fixed rate [1]	3.150%	2022	88.3	88.3
Senior notes - fixed rate [1]	4.650%	2025	19.3	19.3
Other	N/A	N/A	0.1	—
Unamortized debt issuance costs and discounts	N/A	N/A	(5.5)	(6.8)
Total debt			$ 798.8	$ 1,440.7

[1] Senior notes are guaranteed as to payment by Pentair and PISG

On April 25, 2018, Pentair, Pentair Investments Switzerland GmbH ("PISG"), Pentair Finance S.à r.l. ("PFSA") and Pentair, Inc. entered into a credit agreement, providing for a five-year $800.0 million senior unsecured revolving credit facility (the "Senior Credit Facility"), with Pentair and PISG as guarantors and PFSA and Pentair, Inc. as borrowers. The Senior Credit Facility replaced PFSA's existing credit facility under that certain Amended and Restated Credit Agreement, dated as of October 3, 2014. PFSA has the option to request to increase the Senior Credit Facility in an aggregate amount of up to $300.0 million, subject to customary conditions, including the commitment of the participating lenders. The Senior Credit Facility has a maturity date of April 25, 2023. Borrowings under the Senior Credit Facility bear interest at a rate equal to an adjusted base rate or the London Interbank Offered Rate, plus, in each case, an applicable margin. The applicable margin is based on, at PFSA's election, Pentair's leverage level or PFSA's public credit rating.

PFSA is authorized to sell short-term commercial paper notes to the extent availability exists under the Senior Credit Facility. PFSA uses the Senior Credit Facility as back-up liquidity to support 100% of commercial paper outstanding. PFSA had $99.0 million of commercial paper outstanding as of September 30, 2018 and $34.0 million as of December 31, 2017, all of which was classified as long-term debt as we have the intent and the ability to refinance such obligations on a long-term basis under the Senior Credit Facility.

Our debt agreements contain various financial covenants, but the most restrictive covenants are contained in the Senior Credit Facility. The Senior Credit Facility contains covenants requiring us not to permit (i) the ratio of our consolidated debt (net of its consolidated unrestricted cash in excess of $5.0 million but not to exceed $250.0 million) to our consolidated net income (excluding, among other things, non-cash gains and losses) before interest, taxes, depreciation, amortization and non-cash share-based compensation expense ("EBITDA") on the last day of any period of four consecutive fiscal quarters to exceed 3.75 to 1.00 (the "Leverage Ratio") and (ii) the ratio of our EBITDA to our consolidated interest expense, 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 Senior 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 September 30, 2018, we were in compliance with all financial covenants in our debt agreements.

Total availability under the Senior Credit Facility was $691.6 million as of September 30, 2018.

In addition to the Senior Credit Facility, we have various other credit facilities with an aggregate availability of $21.1 million, of which there were no outstanding borrowings at September 30, 2018. Borrowings under these credit facilities bear interest at variable rates.

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In June 2018, we used the $993.6 million of cash received from nVent as a result of the Distribution to pay down commercial paper and revolving credit facilities, redeem the remaining $255.3 million aggregate principal of our 2.9% fixed rate senior notes due 2018, and we completed a cash tender offer in the amount of €363.4 million aggregate principal of our 2.45% senior notes due 2019. All costs associated with the repurchases of debt were recorded as a Loss on early extinguishment of debt in the Condensed Consolidated Statements of Operations and Comprehensive Income, including $16.0 million premium paid on early extinguishment and $1.1 million of unamortized deferred financing costs.

Debt outstanding, excluding unamortized issuance costs and discounts, at September 30, 2018 matures on a calendar year basis as follows:

In millions	Q4 2018	2019	2020	2021	2022	2023	Thereafter	Total
Contractual debt obligation maturities	$ —	$410.5	$74.0	$103.8	$88.3	$108.4	$ 19.3	$804.3

10. 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 exchange 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.

At September 30, 2018 and December 31, 2017, we had outstanding foreign currency derivative contracts with gross national U.S. dollar equivalent amounts of $361.6 million and $481.4 million, respectively. The impact of these contracts on the Condensed Consolidated Statements of Operations and Comprehensive Income was not material for any period presented.

Gains or losses on foreign currency contracts designated as hedges are reclassified out of Accumulated Other Comprehensive Loss (“AOCI”) and into Selling, general and administrative expense in the Condensed Consolidated Statements of Operations and Comprehensive Income upon settlement. Such reclassifications during the three and nine months ended September 30, 2018 and 2017 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. In June 2018, the Company completed a tender offer for €363.4 million of the 2019 Euro Notes. The remaining €136.6 million of the 2019 Euro Notes have been re-designated as a net investment hedge 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 September 30, 2018 and December 31, 2017, we had deferred foreign currency losses of $6.1 million and $29.6 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:

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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 instruments:

- 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.

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

In millions	September 30, 2018		December 31, 2017	
	Recorded Amount	Fair Value	Recorded Amount	Fair Value
Variable rate debt	$108.5	$108.5	$62.4	$62.4
Fixed rate debt	695.8	698.7	1,385.1	1,424.0
Total debt	$804.3	$807.2	$1,447.5	$1,486.4

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

In millions	September 30, 2018			
	Level 1	Level 2	Level 3	Total
Recurring fair value measurements				
Foreign currency contract liabilities	$—	$(45.5)	$—	$(45.5)
Deferred compensation plan assets	24.3	3.2	—	27.5
Total recurring fair value measurements	$24.3	$(42.3)	$—	$(18.0)

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	December 31, 2017			
In millions	Level 1	Level 2	Level 3	Total
Recurring fair value measurements				
Foreign currency contract assets	$—	$0.6	$ —	$0.6
Foreign currency contract liabilities	—	(47.2)	—	(47.2)
Deferred compensation plan assets	18.7	4.5	—	23.2
Total recurring fair value measurements	$18.7	$(42.1)	$ —	$(23.4)
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 $8.8 million for a trade name intangible in 2017. The impairment charge reduced the carrying value of the impacted trade name intangible to $10.8 million. 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.

11. Income Taxes

We manage our affairs so that we are centrally managed and controlled in the United Kingdom (“U.K.”) and therefore have our tax residency in the U.K. The provision for income taxes consists of provisions for the U.K. and international income taxes. We operate in an international environment with operations in various locations outside the U.K. Accordingly, the consolidated income tax rate is a composite rate reflecting the earnings in the various locations and the applicable rates.

The effective income tax rate for the nine months ended September 30, 2018 was 17.0%, compared to 47.2% for the nine months ended September 30, 2017. We continue to actively pursue initiatives to reduce our effective tax rate. The tax rate in any quarter can be affected positively or negatively by adjustments that are required to be reported in the specific quarter of resolution. The liability for uncertain tax positions was $52.8 million and $12.0 million at September 30, 2018 and December 31, 2017, respectively. The increase was primarily due to the establishment of uncertain tax positions with the Internal Revenue Service and other jurisdictions. We record penalties and interest related to unrecognized tax benefits in Provision for income taxes and Net interest expense, respectively, on the Condensed Consolidated Statements of Operations and Comprehensive Income, which is consistent with our past practices.

U.S. tax reform

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. For 2018, the Company considered in its estimated annual effective tax rate additional provisions of the Act including changes to the deduction for executive compensation and interest expense, a tax on global intangible low-taxed income provisions (“GILTI”), the base erosion anti-abuse tax, and a deduction for foreign-derived intangible income. The Company has elected to treat tax on GILTI income as a period cost and has therefore included it in its annual estimated effective tax rate.

Given the significance of the Act, Staff Accounting Bulletin No. 118 (“SAB 118”) was issued to address the application of 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.

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The Company calculated its best estimate of the impact of the Act in its December 31, 2017 income tax provision in accordance with its understanding of the Act and guidance available as of the date of the filing of the Annual Report on Form 10-K and as a result recorded a provisional income tax expense of $2.2 million in the fourth quarter of 2017, the period in which the legislation was enacted. For the three months ended September 30, 2018, we recorded a $3.6 million decrease to the provisional income tax expense. 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 $28.0 million. The remeasurement of deferred taxes requires further analysis regarding the state tax impacts of the remeasurement 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 $26.6 million. The determination of the transition tax requires additional analysis regarding state tax impacts, which is expected to be completed in the fourth quarter 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.

12. Benefit Plans

Components of net periodic benefit cost for our pension plans for the three and nine months ended September 30, 2018 and 2017 were as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Service cost	$ 1.0	$ 2.9	$ 3.1	$ 8.8
Interest cost	3.0	4.1	9.0	12.3
Expected return on plan assets	(2.2)	(2.9)	(6.7)	(8.7)
Actuarial loss	2.2	—	2.2	—
Net periodic benefit cost	$ 4.0	$ 4.1	$ 7.6	$ 12.4

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.

Salaried Plan participants whose benefits were not in pay status by July 1, 2018 were given the opportunity to elect a lump-sum (or monthly annuity) payment during a special election window. During the third quarter of 2018, lump-sum payments of $171.9 million resulted in interim mark-to-market accounting for the Salaried Plan. The mark-to-market adjustment is reflected within Actuarial loss in the table above.

As described in Note 1, during the first quarter of 2018, the Company adopted ASU 2017-07. As a result, service costs are classified as employee compensation costs within Cost of goods sold and Selling, general and administrative expense within the Condensed Consolidated Statements of Operations and Comprehensive Income. All other components of net periodic benefit cost are classified within Other expense (income) for the periods presented.

Components of net periodic benefit cost for our other post-retirement plans for the three and nine months ended September 30, 2018 and 2017 were not material.

13. Shareholders' Equity

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 "2014 Authorization"). On May 8, 2018, the Board of Directors authorized the repurchase of our ordinary shares up to a maximum dollar limit of $750.0 million (the "2018 Authorization"), replacing the 2014 Authorization. The 2018 Authorization expires on May 31, 2021. During the nine months ended September 30, 2018, we repurchased 7.8 million of our shares for $400.0 million, of which 2.2 million shares, or $150.0 million, and 5.6 million shares, or $250.0 million, were repurchased pursuant to the 2014 and 2018 Authorizations, respectively. As of September 30, 2018, we had $500.0 million available for share repurchases under the 2018 Authorization.

Dividends payable

On September 18, 2018, the Board of Directors declared a quarterly cash dividend of $0.175, which reflects an adjustment for the Distribution, payable on November 2, 2018 to shareholders of record at the close of business on October 19, 2018. As a result, the balance of dividends payable included in Other current liabilities on our Condensed Consolidated Balance Sheets was $30.4 million and $63.1 million at September 30, 2018 and December 31, 2017, respectively.

14. Segment Information

Effective May 1, 2018, we reorganized our business segments to reflect a new operating structure, resulting in a change to our reporting segments. All prior period amounts related to the segment change have been retrospectively reclassified to conform to the new presentation. As part of this reorganization the legacy Water segment was separated into three reportable business segments:

- Aquatic Systems — This segment manufactures and sells a complete line of energy-efficient residential and commercial pool equipment and accessories including pumps, filters, heaters, lights, automatic controls, automatic cleaners, maintenance equipment and pool accessories. Applications for our Aquatic Systems products include residential and commercial pool maintenance, pool repair, renovation, service and construction and aquaculture solutions.
- Filtration Solutions — This segment manufactures and sells water and fluid treatment products and systems, including pressure tanks and vessels, control valves, activated carbon products, conventional filtration products, point-of-entry and point-of-use systems, gas recovery solutions, membrane bioreactors, wastewater reuse systems and advanced membrane filtration and separation systems into the global residential, industrial and commercial markets. These products are used in a range of applications, including use in fluid filtration, ion exchange, desalination, food and beverage, food service and separation technologies for the oil and gas industry.
- Flow Technologies — This segment manufactures and sells products ranging from light duty diaphragm pumps to high-flow turbine pumps and solid handling pumps while serving the global residential, commercial and industrial markets. These pumps are used in a range of applications, including residential and municipal wells, water treatment, wastewater solids handling, pressure boosting, fluid delivery, circulation and transfer, fire suppression, flood control, agricultural irrigation and crop spray.

We evaluate performance based on net sales 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 income exclusive of intangible amortization, certain acquisition related expenses, costs of restructuring activities, impairments and other unusual non-operating items.

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Financial information by reportable segment is as follows:

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net sales				
Aquatic Systems	$232.7	$ 211.8	$749.3	$ 688.0
Filtration Solutions	240.4	242.4	754.1	737.0
Flow Technologies	238.0	233.0	720.2	698.8
Other	0.3	0.4	1.0	1.1
Consolidated	$711.4	$ 687.6	$2,224.6	$ 2,124.9
Segment income (loss)				
Aquatic Systems	$59.9	$ 53.1	$199.5	$ 182.9
Filtration Solutions	38.4	40.4	124.4	113.4
Flow Technologies	36.6	39.3	119.7	112.7
Other	(13.1)	(12.6)	(40.7)	(40.2)
Consolidated	$121.8	$ 120.2	$402.9	$ 368.8

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

In millions	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Segment income	$121.8	$ 120.2	$402.9	$ 368.8
Restructuring and other	(3.5)	(1.4)	(34.1)	(18.9)
Intangible amortization	(8.6)	(9.2)	(27.0)	(27.2)
Loss on sale of business	(0.2)	(3.8)	(6.4)	(3.8)
Loss of early extinguishment of debt	—	—	(17.1)	(101.4)
Corporate allocations	—	(7.5)	(11.0)	(28.9)
Net interest expense	(4.3)	(13.9)	(27.9)	(74.2)
Other expense	(3.4)	(1.4)	(5.4)	(4.1)
Income from continuing operations before income taxes	$101.8	$ 83.0	$274.0	$ 110.3

15. Commitments and Contingencies

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 position, 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 of continuing operations for the nine months ended September 30, 2018 were as follows:

In millions	September 30, 2018	
Beginning balance	$ 38.1	
Service and product warranty provision	43.2	
Payments	(43.1	)
Foreign currency translation	(0.2	)
Ending balance	$ 38.0	

Stand-by letters of credit, bank guarantees and bonds

In certain situations, Tyco International Ltd., Pentair Ltd.'s former parent company ("Tyco"), guaranteed performance by the flow control business of Pentair Ltd. ("Flow Control") 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.

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 September 30, 2018 and December 31, 2017, the outstanding value of bonds, letters of credit and bank guarantees totaled $124.2 million and $129.2 million, respectively.

16. Supplemental Guarantor Information

Pentair plc (the "Parent Company Guarantor") and PISG (the "Subsidiary Guarantor"), fully and unconditionally, guarantee the Notes of PFSA (the "Subsidiary Issuer"). The Subsidiary Guarantor is a Switzerland limited liability company and 100 percent-owned subsidiary of the Parent Company Guarantor. The Subsidiary Issuer is a Luxembourg private limited liability company and 100 percent-owned subsidiary of the Subsidiary Guarantor. The guarantees provided by the Parent Company Guarantor and Subsidiary Guarantor are joint and several.

The following supplemental financial information sets forth the Company's Condensed Consolidating Statement of Operations and Comprehensive Income (Loss), Condensed Consolidating Balance Sheets and Condensed Consolidating Statement of Cash Flows by relevant group within the Company: Pentair plc and PISG as the guarantors, PFSA as issuer of the debt and all other non-guarantor subsidiaries. Condensed consolidating financial information for Pentair plc, PISG and PFSA on a stand-alone basis is presented using the equity method of accounting for subsidiaries.

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Condensed Consolidating Statement of Operations and Comprehensive Income (Loss)
Three months ended September 30, 2018

In millions	Parent Company Guarantor	Subsidiary Guarantor	Subsidiary Issuer	Non-guarantor Subsidiaries	Eliminations	Consolidated Total
Net sales	$ —	$ —	$ —	$ 711.4	$ —	$ 711.4
Cost of goods sold	—	—	—	467.6	—	467.6
Gross profit	—	—	—	243.8	—	243.8
Selling, general and administrative	2.3	—	0.2	113.8	—	116.3
Research and development	—	—	—	19.1	—	19.1
Operating (loss) income	(2.3)	—	(0.2)	110.9	—	108.4
Loss (earnings) from continuing operations of investment in subsidiaries	(93.5)	(93.3)	(69.5)	—	256.3	—
Other (income) expense:						
Loss on sale of business	—	—	—	0.2	—	0.2
Net interest (income) expense	—	(0.2)	1.7	2.8	—	4.3
Other expense	—	—	—	2.1	—	2.1
Income (loss) from continuing operations before income taxes	91.2	93.5	67.6	105.8	(256.3)	101.8
Provision for income taxes	—	—	—	10.6	—	10.6
Net income (loss) from continuing operations	91.2	93.5	67.6	95.2	(256.3)	91.2
Income from discontinued operations, net of tax	—	—	—	18.9	—	18.9
(Loss) earnings from discontinued operations of investment in subsidiaries	18.9	18.9	18.9	—	(56.7)	—
Net income (loss)	$ 110.1	$ 112.4	$ 86.5	$ 114.1	$ (313.0)	$ 110.1
Comprehensive income (loss), net of tax						
Net income (loss)	$ 110.1	$ 112.4	$ 86.5	$ 114.1	$ (313.0)	$ 110.1
Changes in cumulative translation adjustment	(2.1)	(2.1)	(2.1)	(2.1)	6.3	(2.1)
Changes in market value of derivative financial instruments, net of tax	(1.0)	(1.0)	(1.0)	(1.0)	3.0	(1.0)
Comprehensive income (loss)	$ 107.0	$ 109.3	$ 83.4	$ 111.0	$ (303.7)	$ 107.0

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Condensed Consolidating Statement of Operations and Comprehensive Income (Loss)
Nine months ended September 30, 2018

In millions	Parent Company Guarantor	Subsidiary Guarantor	Subsidiary Issuer	Non-guarantor Subsidiaries	Eliminations	Consolidated Total
Net sales	$ —	$ —	$ —	$ 2,224.6	$ —	$ 2,224.6
Cost of goods sold	—	—	—	1,444.9	—	1,444.9
Gross profit	—	—	—	779.7	—	779.7
Selling, general and administrative	10.4	—	0.7	387.9	—	399.0
Research and development	—	—	—	57.0	—	57.0
Operating (loss) income	(10.4)	—	(0.7)	334.8	—	323.7
(Earnings) loss from continuing operations of investment in subsidiaries	(240.4)	(239.4)	(278.9)	—	758.7	—
Other (income) expense:						
Loss on sale of business	—	—	—	6.4	—	6.4
Loss on early extinguishment of debt	—	—	17.1	—	—	17.1
Net interest (income) expense	—	(1.0)	21.7	7.2	—	27.9
Other income	—	—	—	(1.7)	—	(1.7)
Income (loss) from continuing operations before income taxes	230.0	240.4	239.4	322.9	(758.7)	274.0
Provision for income taxes	2.5	—	—	44.0	—	46.5
Net income (loss) from continuing operations	227.5	240.4	239.4	278.9	(758.7)	227.5
Income from discontinued operations, net of tax	—	—	—	27.0		