UGI INTERNATIONAL, LLC
AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS
And
MANAGEMENT DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
for the years ended September 30, 2018, 2017 and 2016

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

TABLE OF CONTENTS

	Page
Financial Statements:	
Report of Independent Auditors	3
Consolidated Balance Sheets as of September 30, 2018 and 2017	5
Consolidated Statements of Income for the years ended September 30, 2018, 2017 and 2016	6
Consolidated Statements of Comprehensive Income for the years ended September 30, 2018, 2017 and 2016	7
Consolidated Statements of Cash Flows for the years ended September 30, 2018, 2017 and 2016	8
Consolidated Statements of Changes in Equity for the years ended September 30, 2018, 2017 and 2016	9
Notes to Consolidated Financial Statements	10
Management Discussion and Analysis of Financial Condition and Results of Operations (Unaudited)	35

Building a better working world

Ernst & Young LLP
One Commerce Square
Suite 700
2005 Market Street
Philadelphia, PA 19103

Tel: +1 215 448 5000
Fax: +1 215 448 5500
ey.com

Report of Independent Auditors

To the Member and Management of UGI International, LLC:

We have audited the accompanying consolidated financial statements of UGI International, LLC and subsidiaries, which comprise the consolidated balance sheets as of September 30, 2018 and 2017, and the related consolidated statements of income, comprehensive income, cash flows and changes in equity for each of the three years in the period ended September 30, 2018, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in conformity with U.S. generally accepted accounting principles; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Building a better working world

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of UGI International, LLC and subsidiaries at September 30, 2018 and 2017, and the consolidated results of their operations and their cash flows for each of the three years in the period ended September 30, 2018, in conformity with U.S. generally accepted accounting principles.

Ernst & Young LLP

December 14, 2018

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(Thousands of dollars)

	September 30, 2018	September 30, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 237,539	$ 360,574
Restricted cash	657	800
Accounts receivable (less allowances for doubtful accounts of $11,150 and $9,611, respectively)	371,425	300,009
Inventories	109,260	84,174
Derivative instruments	94,315	33,717
Prepaid expenses and other current assets	48,994	38,335
Total current assets	862,190	817,609
Property, plant and equipment:		
Gross property, plant and equipment	1,823,109	1,735,325
Accumulated depreciation	(702,739)	(606,941)
Net property, plant and equipment	1,120,370	1,128,384
Goodwill	963,748	925,677
Intangible assets, net	220,981	205,174
Derivative instruments	36,614	6,906
Deferred income taxes	1,463	8,317
Other assets	68,864	65,740
Total assets	$ 3,274,230	$ 3,157,807
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 287	$ 78,365
Short-term borrowings	1,397	17,943
Accounts payable — trade	246,492	191,829
Accounts payable — related parties	2,815	3,222
Employee compensation and benefits accrued	35,384	42,155
Derivative instruments	5,512	17,432
Customer deposits and advances	62,563	61,915
Other current liabilities	145,940	137,501
Total current liabilities	500,390	550,362
Long-term debt	748,146	760,424
Deferred income taxes	254,929	239,989
Derivative instruments	4,309	20,006
Customer tank and cylinder deposits	272,037	279,935
Other noncurrent liabilities	48,395	53,426
Total liabilities	1,828,206	1,904,142
Commitments and contingencies (Note 11)		
Equity:		
Member's equity	1,436,296	1,240,492
Noncontrolling interests	9,728	13,173
Total equity	1,446,024	1,253,665
Total liabilities and equity	$ 3,274,230	$ 3,157,807

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME
(Thousands of dollars)

	Year Ended September 30,		
	2018	2017	2016
Revenues	$ 2,683,788	$ 1,877,503	$ 1,862,065
Costs and expenses:			
Cost of sales	1,527,226	916,354	866,069
Operating and administrative expenses	703,217	627,686	637,393
Operating and administrative expenses - related parties	9,920	9,620	9,363
Depreciation and amortization	140,551	120,814	112,089
Other operating (income) expense, net	(3,198)	(2,144)	6,876
	2,377,716	1,672,330	1,631,790
Operating income	306,072	205,173	230,275
Loss from equity investees	(529)	(96)	(182)
Gain (loss) on foreign currency contracts, net	16,198	(23,853)	—
Interest expense	(21,105)	(20,649)	(24,363)
Income before income taxes	300,636	160,575	205,730
Income tax expense	(85,407)	(8,555)	(76,732)
Net income including noncontrolling interests	215,229	152,020	128,998
Add net loss (deduct net income) attributable to noncontrolling interests	2,998	(155)	36
Net income attributable to UGI International, LLC	$ 218,227	$ 151,865	$ 129,034

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Thousands of dollars)

	Year Ended September 30,		
	2018	2017	2016
Net income including noncontrolling interests	$ 215,229	$ 152,020	$ 128,998
Other comprehensive income (loss):			
Net gains on derivative instruments (net of tax of $(669), $(586) and $593, respectively)	993	1,654	355
Reclassifications of net losses (gains) on derivative instruments (net of tax of $(1,479), $5,501 and $6,108, respectively)	1,955	(11,674)	(9,663)
Foreign currency translation adjustments (net of tax of $(479), $(576) and $0, respectively)	(21,341)	34,599	(4,484)
Foreign currency (losses) gains on long-term intra-company transactions	(9,100)	24,797	(1,930)
Benefit plans, principally actuarial (losses) gains (net of tax of $1,844, $(2,088) and $3,312, respectively)	(3,504)	3,976	(5,413)
Reclassifications of benefit plans net actuarial losses and prior service benefits (net of tax of $(2,344), $(914) and $(200), respectively)	4,283	1,775	380
Other comprehensive (loss) income	(26,714)	55,127	(20,755)
Comprehensive income including noncontrolling interests	188,515	207,147	108,243
Add comprehensive loss (deduct comprehensive income) attributable to noncontrolling interests	2,998	(155)	36
Comprehensive income attributable to UGI International, LLC	$ 191,513	$ 206,992	$ 108,279

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Thousands of dollars)

	Year Ended September 30, 2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income including noncontrolling interests	$ 215,229	$ 152,020	$ 128,998
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:			
Depreciation and amortization	140,551	120,814	112,089
Deferred income tax expense (benefit), net	8,741	(36,145)	(5,876)
Provision for uncollectible accounts	3,259	5,005	2,339
Loss on sales of assets	335	1,752	4,742
Changes in unrealized gains and losses on derivative instruments	(121,750)	4,806	(31,855)
Noncash operating and administrative expenses - related parties	9,920	9,620	9,363
Other, net	2,502	(4,564)	16,749
Net change in:			
Accounts receivable	(56,931)	(47,403)	27,448
Inventories	(22,118)	(14,084)	5,154
Accounts payable	22,826	5,233	25
Other current assets	(3,090)	249	(12,449)
Other current liabilities	(5,649)	4,506	9,473
Net cash provided by operating activities	193,825	201,809	266,200
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(111,359)	(89,321)	(99,888)
Acquisitions of businesses, net of cash acquired	(106,858)	(64,733)	(23,607)
Other, net	13,190	8,254	7,333
Net cash used by investing activities	(205,027)	(145,800)	(116,162)
CASH FLOWS FROM FINANCING ACTIVITIES			
(Decrease) increase in short-term borrowings	(16,546)	17,440	(157)
Distributions paid	(2,450)	(110,000)	(69,750)
Capital contribution received	—	38,000	—
Repayments of long-term debt and capital leases	(85,055)	(527)	(505)
Other	(2,774)	—	—
Net cash used by financing activities	(106,825)	(55,087)	(70,412)
Foreign exchange effect on cash and cash equivalents	(5,008)	1,153	(2,861)
Cash and cash equivalents (decrease) increase	$ (123,035)	$ 2,075	$ 76,765
CASH AND CASH EQUIVALENTS			
End of year	$ 237,539	$ 360,574	$ 358,499
Beginning of year	360,574	358,499	281,734
(Decrease) increase	$ (123,035)	$ 2,075	$ 76,765
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid for:			
Interest	$ 17,923	$ 18,139	$ 22,729
Income taxes	$ 75,840	$ 58,530	$ 94,372

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Thousands of dollars)

	Member's Equity	Noncontrolling Interests	Total
Balance September 30, 2015	$ 1,057,576	$ 9,123	$ 1,066,699
Net income (loss)	129,034	(36)	128,998
Capital contribution - allocated expenses (Note 16)	5,476	—	5,476
Cash distributions	(69,750)	—	(69,750)
Dividend of Midlands Note and accrued interest (Note 16)	(30,091)	—	(30,091)
Changes in AOCI balance (Note 14)	(20,755)	—	(20,755)
Other	—	3,334	3,334
Balance September 30, 2016	$ 1,071,490	$ 12,421	$ 1,083,911
Net income	151,865	155	152,020
Capital contribution - cash	38,000	—	38,000
Capital contribution - Midlands Note (Note 16)	28,384	—	28,384
Capital contribution - allocated expenses (Note 16)	5,626	—	5,626
Cash distributions	(110,000)	—	(110,000)
Changes in AOCI balance (Note 14)	55,127	—	55,127
Other	—	597	597
Balance September 30, 2017	$ 1,240,492	$ 13,173	$ 1,253,665
Net income (loss)	218,227	(2,998)	215,229
Capital contribution - allocated expenses (Note 16)	6,741	—	6,741
Cash distributions	(2,450)	—	(2,450)
Changes in AOCI balance (Note 14)	(26,714)	—	(26,714)
Other	—	(447)	(447)
Balance September 30, 2018	$ 1,436,296	$ 9,728	$ 1,446,024

See accompanying notes to consolidated financial statements.

Index to Notes

Note 1 — Nature of Operations
Note 2 — Summary of Significant Accounting Policies
Note 3 — Accounting Changes
Note 4 — Acquisitions
Note 5 — Debt
Note 6 — Income Taxes
Note 7 — Employee Retirement Plans
Note 8 — Inventories
Note 9 — Property, Plant and Equipment
Note 10 — Goodwill and Intangible Assets
Note 11 — Commitments and Contingencies
Note 12 — Fair Value Measurements
Note 13 — Derivative Instruments and Hedging Activities
Note 14 — Accumulated Other Comprehensive Income
Note 15 — Other Operating Income (Expense), Net
Note 16 — Related Party Transactions
Note 17 — Finagaz Voluntary Departure Plans

Note 1 — Nature of Operations

UGI International, LLC ("UGI International") is a limited liability company domiciled in the Commonwealth of Pennsylvania in the United States of America ("U.S."). UGI International is a wholly owned subsidiary of UGI Enterprises, LLC ("Enterprises"), a Pennsylvania limited liability company, and is a second-tier wholly owned subsidiary of UGI Corporation ("UGI"). UGI is a U.S.-based holding company that, through subsidiaries, distributes, stores, transports and markets energy products and related services principally in the U.S. and Europe. We refer to UGI International and its consolidated subsidiaries collectively as "the Company," "we" or "us."

UGI International, through its subsidiaries, conducts (1) a liquefied petroleum gas ("LPG") distribution business throughout much of Europe and (2) an energy marketing business in France, Belgium, the Netherlands and the United Kingdom. These businesses are conducted principally through our primary subsidiaries, UGI France SAS ("UGI France"), Flaga GmbH ("Flaga"), AvantiGas Limited ("AvantiGas"), DVEP Investeringen B.V. ("DVEP") and UniverGas Italia S.r.l. ("UniverGas").

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the U.S. ("GAAP"). The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and costs. These estimates are based on management's knowledge of current events, historical experience and various other assumptions that are believed to be reasonable under the circumstances. Accordingly, actual results may be different from these estimates and assumptions.

Certain prior-year amounts have been reclassified to conform to the current-year presentation.

Principles of Consolidation

The consolidated financial statements include the accounts of UGI International and its controlled subsidiary companies which are majority-owned. We report outside ownership interests in consolidated but less than 100%-owned subsidiaries as noncontrolling interests. We eliminate intercompany accounts and transactions when we consolidate.

Entities in which we do not have control, but have significant influence over operating and financial policies, are accounted for by the equity method. Investments in business entities that are not publicly traded and in which we do not have significant influence over operating and financial policies are accounted for using the cost method. Our equity and cost method investments totaled $65,386 and $62,377 at September 30, 2018 and 2017, respectively, and are included in "Other assets" on the Consolidated Balance Sheets.

Fair Value Measurements

The Company applies fair value measurements on a recurring and, as otherwise required under GAAP, on a nonrecurring basis. Fair value in GAAP is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. Fair value measurements performed on a recurring basis principally relate to derivative instruments.

GAAP establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three levels. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). A level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

We use the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

- Level 1 - Quoted prices (unadjusted) in active markets for identical assets and liabilities that we have the ability to access at the measurement date.

- Level 2 - Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived from observable market data by correlation or other means.

- Level 3 - Unobservable inputs for the asset or liability including situations where there is little, if any, market activity for the asset or liability.

Fair value is based upon assumptions that market participants would use when pricing an asset or liability, including assumptions about risk and risks inherent in valuation techniques and inputs to valuations. This includes not only the credit standing of counterparties and credit enhancements but also the impact of our own nonperformance risk on our liabilities. We evaluate the need for credit adjustments to our derivative instrument fair values. These credit adjustments were not material to the fair values of our derivative instruments.

Derivative Instruments

Derivative instruments are reported on the Consolidated Balance Sheets at their fair values, unless the normal purchase and normal sale ("NPNS") exception is elected. The accounting for changes in fair value depends upon the purpose of the derivative instrument and whether it qualifies and is designated as a hedge for accounting purposes.

Certain of our derivative instruments qualify and are designated as cash flow hedges. For cash flow hedges, changes in the fair values of the derivative instruments are recorded in accumulated other comprehensive income (loss) ("AOCI"), to the extent effective at offsetting changes in the hedged item, until earnings are affected by the hedged item. We discontinue cash flow hedge accounting if occurrence of the forecasted transaction is determined to be no longer probable. Hedge accounting is also discontinued for derivatives that cease to be highly effective. We do not designate our commodity and certain foreign currency derivative instruments as hedges under GAAP. Changes in the fair values of these derivative instruments are reflected in net income.

Beginning October 1, 2016, in order to reduce the volatility in net income associated with our foreign operations, principally as a result of changes in the U.S. dollar exchange rate between the euro and British pound sterling, we have entered into forward foreign currency exchange contracts. Because these contracts do not qualify for hedge accounting treatment, realized and unrealized gains and losses on these contracts are recorded in "Gain (loss) on foreign currency contracts, net" on the Consolidated Statements of Income.

Cash flows from derivative instruments, other than certain cross-currency swaps, if any, are included in cash flows from operating activities on the Consolidated Statements of Cash Flows. Cash flows from the interest portion of our cross-currency hedges, if any, are included in cash flows from operating activities, while cash flows from the currency portion of such hedges, if any, are included in cash flows from financing activities.

For a more detailed description of the derivative instruments we use, our accounting for derivatives, our objectives for using them and other information, see Note 13.

Foreign Currency Translation

Balance sheets of international subsidiaries are translated into U.S. dollars using the exchange rate at the balance sheet date. Income statements and equity investee results are translated into U.S. dollars using an average exchange rate for each reporting period. Where the local currency is the functional currency, translation adjustments are recorded in other comprehensive income. Transactions denominated in currencies other than the functional currency are recorded based on exchange rates at the time such transactions arise with the impact of subsequent changes in such rates reflected in the income statement. The functional currency of a significant portion of our operations is the euro.

Revenue Recognition

Revenues from the sale of LPG are recognized principally upon delivery. Our energy marketing businesses record revenues when energy products are delivered or services are provided to customers.

Accounts Receivable

Accounts receivable are reported on the Consolidated Balance Sheets at the gross outstanding amount adjusted for an allowance for doubtful accounts. Accounts receivable that are acquired are initially recorded at fair value on the date of acquisition. Provisions for uncollectible accounts are established based upon our collection experience and the assessment of the collectability of specific amounts. Accounts receivable are written off in the period in which the receivable is deemed uncollectible.

LPG Delivery Expenses

Expenses associated with the delivery of LPG to customers (including vehicle expenses, expenses of delivery personnel, vehicle repair and maintenance and general liability expenses) are classified as "Operating and administrative expenses" on the Consolidated Statements of Income. Depreciation expense associated with delivery vehicles is classified in "Depreciation and amortization" on the Consolidated Statements of Income.

Income Taxes

We file income tax returns in the United States and in 17 European countries, including France. We join with UGI and its subsidiaries in filing a consolidated U.S. federal income tax return. We joined with UGI in Fiscal 2018 and joined with UGI Enterprises in Fiscal 2017 and Fiscal 2016 in filing state tax returns. Our U.S. subsidiaries are charged or credited for their share of current taxes resulting from the effects of transactions in the UGI consolidated federal income tax return including giving effect to intercompany transactions. With respect to state income taxes, our U.S. subsidiaries are charged or credited for their share of current taxes resulting from the effects of transactions in the UGI state income tax return in Fiscal 2018, and the UGI Enterprises state income tax returns in Fiscal 2017 and 2016, including giving effect to intercompany transactions. The result of these allocations is consistent with income taxes calculated on a separate return basis. Accordingly, income tax-related payments and accrued income tax balances reflect both the impact of separate jurisdictional filings in European countries and transactions with UGI or UGI Enterprises resulting from the allocation from the U.S. consolidation. We record interest on tax deficiencies and income tax penalties, if any, in "Income tax expense" on the Consolidated Statements of Income.

See Note 6 for information regarding the December 22, 2017, enactment of the Tax Cuts and Jobs Act ("TCJA") in the U.S. and changes in French tax laws.

Cash and Cash Equivalents

For cash flow purposes, cash and cash equivalents include cash on hand, cash in banks and highly liquid investments with maturities of three months or less when purchased.

Restricted Cash

Restricted cash principally represents those cash balances in our commodity futures brokerage accounts that are restricted from withdrawal.

(Currency in thousands, except where indicated otherwise)

Inventories

Our inventories are stated at the lower of cost or net realizable value. We determine cost primarily using an average cost method.

Property, Plant and Equipment and Related Depreciation

We record property, plant and equipment at the lower of original cost or fair value, if impaired. Capitalized costs include labor, materials and other direct and indirect costs. We also include in property, plant and equipment costs associated with computer software we develop or obtain for use in our business. The amounts assigned to property, plant and equipment of acquired businesses are based upon estimated fair value at date of acquisition. When we retire or otherwise dispose of plant and equipment, we eliminate the associated cost and accumulated depreciation and recognize any resulting gain or loss in "Other operating (income) expense, net" on the Consolidated Statements of Income.

We record depreciation expense on property, plant and equipment on a straight-line basis over estimated economic useful lives. At September 30, 2018, estimated useful lives by asset type were as follows:

Asset Type	Minimum Estimated Useful Life (in years)	Maximum Estimated Useful Life (in years)
Buildings and improvements	10	40
Equipment, primarily cylinders and tanks	5	30
Transportation equipment and office furniture and fixtures	3	10
Computer software	1	5

We classify amortization of computer software and related IT system installation costs included in property, plant and equipment as depreciation expense. Depreciation expense totaled $124,109, $110,834 and $99,000 for Fiscal 2018, Fiscal 2017 and Fiscal 2016, respectively. No depreciation expense is included in "Cost of sales" on the Consolidated Statements of Income.

Segment Information

We have determined that we have a single reportable operating segment that primarily engages in the distribution of LPG and related equipment and supplies. Substantially all of our revenues are derived from sources in Europe and substantially all of our long-lived assets are located in Europe. Our revenues and long-lived assets associated with operations in France represent approximately 50% and 75% of the respective consolidated amounts. No single customer represents ten percent or more of consolidated revenues.

Goodwill and Intangible Assets

Intangible Assets. We amortize intangible assets over their estimated useful lives unless we determine their lives to be indefinite. No amortization expense of intangible assets is included in "Cost of sales" on the Consolidated Statements of Income (see Note 10). Estimated useful lives of definite-lived intangible assets, primarily consisting of customer relationships and certain tradenames, do not exceed 15 years. We review definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the associated carrying amounts may not be recoverable. Determining whether an impairment loss occurred requires comparing the carrying amount to the sum of undiscounted cash flows expected to be generated by the asset. Intangible assets with indefinite lives, consisting of certain tradenames and trademarks, are not amortized but are tested for impairment annually (and more frequently if events or changes in circumstances between annual tests indicate that it is more likely than not that they are impaired) and written down to fair value, if impaired.

Goodwill. We do not amortize goodwill, but test it at least annually for impairment at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (a component) if discrete financial information is prepared and regularly reviewed by segment management. Components are aggregated as a single reporting unit if they have similar economic characteristics. Each of our reporting units with goodwill is required to perform impairment tests annually or whenever events or circumstances indicate that the value of goodwill may be impaired.

From time to time, we assess qualitative factors to determine whether it is more likely than not that the fair value of such reporting unit is less than its carrying amount. From time to time, we bypass the qualitative assessment and perform the quantitative assessment by comparing the fair values of the reporting units with their carrying amounts, including goodwill. We determine fair values generally based on a weighting of income and market approaches. For purposes of the income approach, fair values are determined based upon the present value of the reporting unit's estimated future cash flows, including an estimate of the reporting unit's terminal value based upon these cash flows, discounted at appropriate risk-adjusted rates. We use our internal forecasts to estimate future cash flows which may include estimates of long-term future growth rates based upon our most recent reviews of the long-term outlook for each reporting unit. Cash flow estimates used to establish fair values under our income approach involve management judgments based on a broad range of information and historical results. In addition, external economic and competitive conditions can influence future performance. For purposes of the market approach, we use valuation multiples for companies comparable to our reporting units. The market approach requires judgment to determine the appropriate valuation multiples. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to such excess but not to exceed the total amount of the goodwill of the reporting unit.

There were no accumulated goodwill impairment losses at September 30, 2018 and 2017, and no provisions for goodwill or other intangible asset impairments were recorded during Fiscal 2018, Fiscal 2017 or Fiscal 2016.

Impairment of Long-Lived Assets

We evaluate long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. We evaluate recoverability based upon undiscounted future cash flows expected to be generated by such assets. We reduce the carrying values of our cost basis investments when we determine that a decline in fair value is other than temporary. No material provisions for impairments were recorded during Fiscal 2018, Fiscal 2017 or Fiscal 2016.

Refundable Tank and Cylinder Deposits

Included in "Customer deposits and advances" and "Customer tank and cylinder deposits" on our Consolidated Balance Sheets are customer paid deposits on tanks and cylinders primarily owned by subsidiaries of UGI France. Deposits are refundable to customers when the tanks or cylinders are returned in accordance with contract terms. We record cylinder deposit income when our refund obligation is extinguished including by contract terms, government statute or cylinder abandonment. Refunds of deposits were not material during Fiscal 2018, Fiscal 2017 or Fiscal 2016.

Subsequent Events

Management has evaluated the impact of subsequent events through December 14, 2018, the date these consolidated financial statements were issued and the effects, if any, of such evaluation have been reflected in the consolidated financial statements and related disclosures.

Note 3 — Accounting Changes

New Accounting Standards Adopted Effective October 1, 2018

Revenue Recognition. In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers" ("ASU 2014-09"). The guidance provided under this ASU, as amended, supersedes the revenue recognition requirements in Accounting Standards Codification ("ASC") No. 605, "Revenue Recognition," and most industry-specific guidance included in the ASC. ASU 2014-09 requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the new guidance requires enhanced disclosures to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenues and cash flows arising from contracts with customers and requires, among other things, the disaggregation of revenues into categories that show how economic factors affect the nature, timing and uncertainty of revenues and cash flows. We adopted this ASU effective October 1, 2018, using the modified retrospective transition method.

The Company has completed the process of analyzing the impact of the new guidance using an integrated approach which includes evaluating differences in the amount and timing of revenue recognition from applying the requirements of the new guidance, reviewing its accounting policies and practices, and assessing the need for changes to its processes, accounting systems and design of internal controls. The adoption of this new guidance will not have a material impact on our consolidated financial statements.

Cloud Computing Implementation Costs. In August 2018, the FASB issued ASU No. 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." The new guidance requires a customer in a cloud computing arrangement that is a service contract to capitalize certain implementation costs as if the arrangement was an internal-use software project. These deferred implementation costs are expensed over the fixed, noncancelable term of the service arrangement plus any reasonably certain renewal periods. The new guidance also requires the entity to present the expense related to the capitalized implementation costs in the same income statement line as the hosting service fees; to classify payments for capitalized implementation costs in the statement of cash flows in the same manner as payments for hosting service fees; and to present the capitalized implementation costs in the balance sheet in the same line item in which prepaid hosting service fees are presented. The new guidance can be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We adopted this ASU effective October 1, 2018, and applied the guidance prospectively to all implementation costs associated with cloud computing arrangements that are service contracts incurred after October 1, 2018.

Pension and Other Postretirement Benefit Costs. In March 2017, the FASB issued ASU No. 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." This ASU requires entities to disaggregate the service cost component from the other components of net periodic benefit costs and present it with compensation costs for related employees in the income statement. The other components are required to be presented elsewhere in the income statement and outside of income from operations. The amendments in this ASU permit only the service cost component to be eligible for capitalization, when applicable. The new guidance became effective for us on October 1, 2018 with a retrospective adoption for income statement presentation and a prospective adoption for capitalization. Other than the presentation of the non-service cost components on the statements of income, the adoption of this new guidance will not have a material impact on our consolidated financial statements.

Statement of Cash flows - Restricted Cash. In November 2016, the FASB issued ASU No. 2016-18, "Statement of Cash Flows: Restricted Cash." The guidance in this ASU requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, as well as restricted cash or restricted cash equivalents. As a result, amounts generally described as restricted cash and restricted cash equivalents will be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts on the statement of cash flows. The amendments in the ASU are required to be adopted on a retrospective basis. We adopted this ASU effective October 1, 2018. Adoption of this new guidance will result in a change in presentation of restricted cash on the Consolidated Statement of Cash Flows; otherwise this guidance will not have a significant impact on our Consolidated Statement of Cash Flows and disclosures.

Other Accounting Principles Not Yet Adopted

Pension and Other Postretirement Benefit Costs Disclosures. In August 2018, the FASB issued ASU No. 2018-14, "Changes to the Disclosure Requirements for Defined Benefit Plans." This ASU modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans by removing and adding certain disclosures for these plans. The amendments in this ASU are effective for interim and annual periods ending after December 15, 2020 (Fiscal 2021). The guidance shall be adopted retrospectively for all periods presented in the financial statements. Early adoption is permitted. The Company is in the process of assessing the impact on its financial statement disclosures from the adoption of the new guidance and determining the period in which the new guidance will be adopted.

Fair Value Measurements Disclosures. In August 2018, the FASB issued ASU No. 2018-13, "Changes to the Disclosure Requirements for Fair Value Measurement." This ASU modifies the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. The amendments in this ASU are effective for annual periods beginning after December 15, 2019 (Fiscal 2021). The guidance regarding removed and modified disclosures will be adopted on a retrospective basis and the guidance regarding new disclosures will be adopted on a prospective basis. Early adoption is permitted. The Company is in the process of assessing the impact on its financial statement disclosures from the adoption of the new guidance and determining the period in which the new guidance will be adopted.

Derivatives and Hedging. In August 2017, the FASB issued ASU No. 2017-12, "Targeted Improvements to Accounting for Hedging Activities." This ASU amends and simplifies existing guidance to allow companies to more accurately present the economic effects of risk management activities in the financial statements. The amendments in this ASU are effective for the Company for interim and annual periods beginning October 1, 2019 (Fiscal 2020). Early adoption is permitted. For cash flow and net investment hedges as of the adoption date, the guidance requires a modified retrospective approach. The amended presentation and disclosure guidance is required only prospectively. The Company is in the process of assessing the impact on its financial statements from the adoption of the new guidance and determining the period in which the new guidance will be adopted.

(Currency in thousands, except where indicated otherwise)

Leases. In February 2016, the FASB issued ASU No. 2016-02, "Leases." This ASU, as subsequently updated, amends existing guidance to require entities that lease assets to recognize the assets and liabilities for the rights and obligations created by those leases on the balance sheet. The new guidance also requires additional disclosures about the amount, timing and uncertainty of cash flows from leases. The amendments in this ASU are effective for the Company for interim and annual periods beginning October 1, 2019 (Fiscal 2020). Early adoption is permitted. Lessees must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements unless an entity chooses the transition option in ASU 2018-11, "Leases: Targeted Improvements" which among other things, provides entities with a transition option to recognize the cumulative-effect adjustment from the modified retrospective application to the opening balance of retained earnings in the period of adoption. We will adopt ASU No. 2016-02, as updated, effective October 1, 2019 and expect to elect the proposed transition option which would allow the Company to maintain historical presentation for periods before October 1, 2019. The Company has completed a preliminary assessment for evaluating the impact of the guidance and anticipates that its adoption will result in a significant amount of right-of-use assets and lease liabilities for leases in effect at the adoption date. The Company has begun implementation activities including accumulating contracts and lease data in formats compatible with a new lease management system that will assist with the initial adoption of the standard.

Note 4 — Acquisitions

DVEP Acquisition. On August 31, 2017, UGI International, through its wholly owned indirect subsidiary, UGI International Holdings B.V., acquired all of the outstanding shares of DVEP Investeringen B.V., an energy marketer in the Netherlands, for €88,449 ($105,342) in cash ("DVEP Acquisition"). The DVEP Acquisition was consummated pursuant to a Share Purchase Agreement ("SPA") dated July 28, 2017 between the Company and Majoto Holding B.V. The DVEP Acquisition expands our energy marketing business in Europe and is consistent with our growth strategies, one of which is to grow our natural gas and electricity marketing business in Europe. The DVEP Acquisition was funded from existing cash balances of €70,949 ($84,500) and a €17,500 ($20,842) note payable to the seller due August 2022.

The Company accounted for the DVEP Acquisition using the acquisition method. The components of the final purchase price allocation are as follows:

Assets acquired:	
Cash	$ 32,152
Accounts receivable (a)	4,475
Prepaid expenses and other current assets (including commodity derivatives of $12,333)	13,544
Property, plant and equipment	3,856
Intangible assets (b)	47,549
Other assets (including commodity derivatives of $3,741)	4,201
Total assets acquired	$ 105,777
Liabilities assumed:	
Accounts payable	14,373
Other current liabilities (including commodity derivatives of $3,291)	33,801
Deferred income taxes	12,521
Other noncurrent liabilities (including commodity derivatives of $1,443)	2,294
Total liabilities assumed	$ 62,989
Goodwill	62,554
Net consideration transferred (including working capital adjustments)	$ 105,342

(a) Approximates the gross contractual amounts of receivables acquired.
(b) Comprises $40,755 of customer relationships having amortization periods not exceeding 15 years and $6,794 of tradenames (which is not subject to amortization).

The excess of the purchase price for the DVEP Acquisition over the fair values of the assets acquired and liabilities assumed has been reflected as goodwill, and results principally from value creation and anticipated synergies resulting from the Company's expansion of its energy marketing business in Europe. The goodwill is not deductible for income tax purposes.

(Currency in thousands, except where indicated otherwise)

Direct transaction-related costs associated with the DVEP Acquisition during Fiscal 2017 were not material.

We allocated the purchase prices of the DVEP Acquisition to identifiable intangible assets, property, plant and equipment and commodity derivative contracts based on estimated fair values determined as follows:

- Customer relationships were valued using a multi-period, excess earnings method. Key assumptions used in this method include discount rates, growth rates and cash flow projections. These assumptions are most sensitive and susceptible to change as they require significant management judgment;
- Tradenames were valued using the relief from royalty method, which estimates our theoretical royalty savings from ownership of the tradenames. Key assumptions used in this method include discount rates, royalty rates, growth rates and sales projections. These assumptions are most sensitive and susceptible to change as they require significant management judgment; and
- Property, plant and equipment were valued based on estimated fair values primarily using depreciated replacement cost and market value methods.
- The fair values of commodity derivative contracts were valued using market prices in active markets for standard electricity and natural gas marketing gas forwards.

UniverGas Acquisition. On October 5, 2017, UGI International, through its wholly owned indirect subsidiary, UGI Italia, acquired all of the outstanding shares of Totalgaz Italia S.r.l. (now known as "UniverGas"), a retail distributor of LPG in Italy, for €103,200 ($121,920) in cash (the "UniverGas Acquisition"). The UniverGas Acquisition was consummated pursuant to the terms of an SPA dated September 20, 2017, between the Company and certain affiliates of Total. The UniverGas Acquisition was funded from existing cash balances.

The Company accounted for the UniverGas Acquisition using the acquisition method. The components of the final purchase price allocation are as follows:

Assets acquired:	
Cash	$ 1,772
Accounts receivable (a)	22,092
Prepaid expenses and other current assets	14,768
Property, plant and equipment	51,155
Intangible assets (b)	29,062
Other assets	5,315
Total assets acquired	$ 124,164
Liabilities assumed:	
Accounts payable	28,944
Other current liabilities	4,017
Deferred income taxes	15,594
Other noncurrent liabilities	8,624
Total liabilities assumed	$ 57,179
Goodwill	54,935
Net consideration transferred (including working capital adjustments)	$ 121,920

(a) Approximates the gross contractual amounts of receivables acquired.
(b) Comprises customer relationships having amortization periods not exceeding 15 years.

The allocation of the purchase price to the identifiable intangible assets and property, plant and equipment, was determined using the methods described above.

(Currency in thousands, except where indicated otherwise)

The excess of the purchase price for the UniverGas Acquisition over the fair values of the assets acquired and liabilities assumed has been reflected as goodwill, and results principally from anticipated synergies and value creation resulting from the Company's combined LPG businesses in Europe. The goodwill is not deductible for income tax purposes.

Direct transaction-related costs associated with the UniverGas Acquisition during Fiscal 2018 were not material.

Other Fiscal 2017 and Fiscal 2016 Acquisitions

During Fiscal 2017, in addition to the DVEP Acquisition, UGI International acquired an LPG distribution business with operations in Sweden for total cash consideration of $14,970. During Fiscal 2016, UGI International acquired several LPG distribution businesses with operations in Austria, Norway and the United Kingdom for total cash consideration of $23,981.

Note 5 — Debt

Long-term Debt

Long-term debt comprises the following at September 30:

	2018	2017
UGI France Senior Facilities term loan (a)	$ 626,994	$ 708,840
Flaga variable-rate term loan (b)	53,178	54,108
Flaga U.S. dollar variable-rate term loan (c)	49,914	59,078
Other (d)	20,892	21,332
Unamortized debt issuance costs	(2,545)	(4,569)
Total long-term debt	748,433	838,789
Less current maturities	(287)	(78,365)
Total long-term debt due after one year	$ 748,146	$ 760,424

(a) Borrowings bear interest at rates per annum comprising the aggregate of the applicable margin and the associated euribor rate, which euribor rate has a floor of 0.0%. The margin on term loan borrowings (which ranges from 1.60% to 2.70%) is dependent upon the ratio of UGI France's consolidated total net debt to EBITDA, each as defined. At September 30, 2018 and 2017, such margin was 1.75% and 1.90%, respectively. UGI France has entered into pay-fixed, receive-variable interest rate swaps through April 30, 2019, to fix the underlying euribor rate on term loan borrowings at 0.18%. At September 30, 2018 and 2017, the effective interest rate on the term loan was approximately 1.93% and 2.08%, respectively. Principal amounts outstanding under the term loan are due as follows: €60,000 due April 2019; and €480,000 due April 2020. This term loan was repaid on October 25, 2018, in conjunction with the UGI International refinancing transaction (see "Subsequent Event - UGI International Refinancing" below).

(b) Borrowings bear interest at three-month euribor rates, plus a margin and other fees. The margin and other fees range from 1.20% to 2.60% and are based upon certain UGI consolidated equity, return on assets and debt to EBITDA ratios, as defined, as well as fees defined by the local jurisdiction. Flaga has entered into pay-fixed, receive-variable interest rate swaps that generally fix the underlying market rate at 0.23%, effective October 2016. The effective interest rate on this term loan at September 30, 2018 and 2017, was 1.93% and 1.80%, respectively. This term loan was repaid on October 25, 2018, in conjunction with the UGI International refinancing transaction (see "Subsequent Event - UGI International Refinancing" below).

(c) Borrowings bear interest at a one-month LIBOR rate plus a margin of 1.125%. Flaga has effectively fixed the LIBOR component of the interest rate, and has effectively fixed the U.S. dollar value of the interest and principal payments by entering into a cross-currency swap arrangement with a bank. At September 30, 2018 and 2017, the effective interest rate on this term loan was 0.55% and 0.87%, respectively. This term loan was repaid on October 25, 2018, in conjunction with the UGI International refinancing transaction (see "Subsequent Event - UGI International Refinancing" below).

(d) Borrowings at September 30, 2018, include a note payable of €17,300 ($20,087 and $20,438 at September 30, 2018 and 2017, respectively) due August 2022 resulting from the DVEP Acquisition (see Note 4). The note payable bears interest at increasing rates from 0% to 5% through the date of maturity. The Company may prepay the note payable in full or in part without penalty.

(Currency in thousands, except where indicated otherwise)

Scheduled principal repayments of long-term debt due in fiscal years 2019 to 2023 are as follow:

	2019	2020	2021	2022	2023
Total (a)	$ 69,953	$ 607,557	$ 53,317	$ 20,151	$ —

(a) Reflects scheduled repayments as of September 30, 2018, relating to the UGI France Senior Facilities term loan; the Flaga variable-rate term loan; and the Flaga U.S. dollar variable-rate term loan. These term loans were repaid on October 25, 2018 with net proceeds from the issuance of the UGI International 3.25% Senior Notes due November 2025 and the term loan borrowings under the 2018 UGI International Credit Facilities Agreement due October 2023 and cash on hand (see "Subsequent Event - UGI International Refinancing" below).

Credit Facilities and Short-term Borrowings

Information about the Company's principal credit agreements as of September 30, 2018 and 2017, is presented in the following table. Borrowings outstanding under these agreements, if any, are classified as "Short-term borrowings" on the Consolidated Balance Sheets.

	Expiration Date	Total Capacity	Borrowings Outstanding	Letters of Credit and Guarantees Outstanding	Available Borrowing Capacity	Weighted Average Interest Rate - End of Year
September 30, 2018						
UGI International, LLC (a)	April 2020	€ 300,000	€ —	€ —	€ 300,000	N.A.
UGI France (b)	April 2020	€ 60,000	€ —	€ —	€ 60,000	N.A.
Flaga (c)	October 2020	€ 55,000	€ —	€ 493	€ 54,507	N.A.
September 30, 2017						
UGI France (b)	April 2020	€ 60,000	€ —	€ —	€ 60,000	N.A.
Flaga (c)	October 2020	€ 55,000	€ —	€ 6,476	€ 48,524	N.A.

(a) The UGI International Credit Agreement permits UGI International, LLC to borrow in euros or U.S. dollars. Loans made in euros bear interest at the associated euribor rate plus a margin ranging from 1.45% to 2.35%. Loans made in U.S. dollars bear interest at LIBOR plus a margin ranging from 1.70% to 2.60%. The aforementioned margins are dependent upon certain indebtedness at UGI International, LLC. This facility was terminated concurrent with entering into the 2018 UGI International Credit Facilities Agreement on October 25, 2018 (see "Subsequent Event - UGI International Refinancing" below).

(b) Borrowings under UGI France's revolving credit facility bear interest at market rates (one-, two-, three-, or six-month euribor) plus a margin. The margin on credit facility borrowings ranges from 1.45% to 2.55% based upon UGI France's ratio of consolidated total net debt to EBITDA, as defined. This facility was terminated concurrent with entering into the 2018 UGI International Credit Facilities Agreement on October 25, 2018 (see "Subsequent Event - UGI International Refinancing" below).

(c) Flaga's credit facility agreement includes a €25,000 multi-currency revolving credit facility, a €5,000 overdraft facility and a €25,000 guarantee facility. Revolving credit facility borrowings bear interest at market rates (generally one, three or six-month euribor rates) plus margins. The margins on revolving facility borrowings, which range from 1.45% to 3.65%, are based upon the actual currency borrowed and certain consolidated equity, return on assets and debt to EBITDA ratios, each as defined. Facility fees on the unused amount of the revolving credit facility are 30% of the lowest applicable margin. Guarantees outstanding reduce the available capacity on the €25,000 guarantee facility. This facility was terminated concurrent with entering into the 2018 UGI International Credit Facilities Agreement on October 25, 2018 (see "Subsequent Event - UGI International Refinancing" below).

Restrictive Covenants and Guarantees. Our long-term debt and credit facility agreements generally contain customary covenants and default provisions which may include, among other things, restrictions on the incurrence of additional indebtedness and also restrict liens, guarantees, investments, loans and advances, payments, mergers, consolidations, asset transfers, transactions with affiliates, sales of assets, acquisitions and other transactions.

Significant Financing Activities

Flaga. In December 2017, Flaga repaid $9,164 of the outstanding principal amount of its then-existing $59,078 U.S. dollar denominated variable-rate term loan due September 2018. Concurrently, Flaga entered into an amendment to the aforementioned term loan, which amended the previous agreement to extend the maturity of the term loan to April 2020 ("Flaga U.S. Dollar Term Loan"). Prior to its repayment in October 2018 (see "Subsequent Event - UGI International Refinancing" below), borrowings under the Flaga U.S. Dollar Term Loan bore interest at the one-month LIBOR rate plus a margin of 1.125%. Flaga effectively fixed the LIBOR component of the interest rate, and effectively fixed the U.S. dollar value of the interest and principal payments payable under the Flaga U.S. Dollar Term Loan, by entering into a cross-currency swap arrangement with a bank.

UGI International LLC. In December 2017, UGI International, LLC, a wholly owned subsidiary of UGI, entered into a secured multicurrency revolving facility agreement (the "2017 UGI International Credit Agreement") due April 2020 with a group of banks providing for borrowings up to €300,000. Upon entering the 2018 UGI International Credit Facilities Agreement on October 25, 2018 (see "Subsequent Event - UGI International Refinancing" below), the 2017 UGI International Credit Agreement was terminated. Under the 2017 UGI International Credit Agreement, UGI International, LLC could borrow in euros or U.S. dollars. Loans made in euros bore interest at the associated euribor rate plus a margin ranging from 1.45% to 2.35%. Loans made in U.S. dollars bore interest at LIBOR plus a margin ranging from 1.70% to 2.60%. The aforementioned margins are dependent upon certain indebtedness at UGI International, LLC. There were no borrowings made under the 2017 UGI International Credit Agreement.

Subsequent Event - UGI International Refinancing

On October 18, 2018, UGI International entered into a five-year unsecured Senior Facilities Agreement with a consortium of banks consisting of (1) a €300,000 variable-rate term loan which was drawn on October 25, 2018, and (2) a €300,000 senior unsecured multicurrency revolving facility agreement (together, the "2018 UGI International Credit Facilities Agreement"). The 2018 UGI International Credit Facilities Agreement matures on October 18, 2023. Term loan borrowings bear interest at rates per annum comprising the aggregate of the applicable margin and the associated euribor rate, which euribor rate has a floor of zero. The margin on term loan borrowings, which ranges from 1.55% to 3.20%, is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined. The initial margin on term loan borrowings is 1.70%. UGI International has entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on term loan borrowings at 0.34%. Under the multicurrency revolving credit facility agreement, UGI International, LLC may borrow in euros or U.S. dollars. Loans made in euros will bear interest at the associated euribor rate plus a margin ranging from 1.20% to 2.85%. Loans made in U.S. dollars will bear interest at the associated LIBOR rate plus a margin ranging from 1.45% to 3.10%. The margin on revolving facility borrowings is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined.

Restrictive covenants under the 2018 UGI International Credit Facilities Agreement include restrictions on the incurrence of additional indebtedness and also restrict liens, guarantees, investments, loans and advances, payments, mergers, consolidations, asset transfers, transactions with affiliates, sales of assets, acquisitions and other transactions. In addition, the 2018 UGI International Credit Facilities Agreement requires a ratio of consolidated total net indebtedness to consolidated EBITDA, as defined, not to exceed 3.85 to 1.00.

On October 25, 2018, UGI International issued in an underwritten private placement €350,000 principal amount of 3.25% senior unsecured notes due November 1, 2025 (the "UGI International 3.25% Senior Notes"). The UGI International 3.25% Senior Notes rank equal in right of payment with indebtedness issued under the 2018 UGI International Credit Facilities Agreement.

The net proceeds from the UGI International 3.25% Senior Notes and the 2018 UGI International Credit Facilities Agreement variable-rate term loan plus cash on hand were used on October 25, 2018 (1) to repay €540,000 outstanding principal of UGI France's variable-rate term loan under its 2015 Senior Facilities Agreement; €45,800 outstanding principal of Flaga's variable-rate term loan; and $49,914 outstanding principal of Flaga's U.S. dollar variable-rate term loan, plus accrued and unpaid interest, and (2) for general corporate purposes. Because these outstanding term loans were refinanced on a long-term basis in October 2018, we have classified €60,000 of such debt due in April 2019 as long-term debt on the September 30, 2018 Consolidated Balance Sheet. Upon entering into the 2018 UGI International Credit Facilities Agreement, we also terminated (1) the 2017 UGI International Credit Agreement, (2) UGI France's revolving credit facility under the 2015 Senior Facilities Agreement and (3) Flaga's credit facility agreement. We have designated term loan borrowings under the 2018 UGI International Credit Facilities Agreement and the UGI International 3.25% Senior Notes as net investment hedges.

(Currency in thousands, except where indicated otherwise)

Note 6 — Income Taxes

The provisions for income taxes consist of the following:

	2018	2017	2016
Current expense (benefit):			
Federal	$ (1,660)	$ (6,554)	$ 4,283
State	651	(5,047)	(935)
Foreign	77,675	56,301	79,260
Total current expense	76,666	44,700	82,608
Deferred expense (benefit):			
Federal	7,656	(6,037)	(895)
State	(793)	1,638	(219)
Foreign	1,878	(31,746)	(4,762)
Total deferred expense (benefit)	8,741	(36,145)	(5,876)
Total income tax expense	$ 85,407	$ 8,555	$ 76,732

Federal income taxes for Fiscal 2018, Fiscal 2017 and Fiscal 2016 are net of foreign tax credits of $12,981, $40,864 and $25,643, respectively.

A reconciliation of income tax expense attributable to continuing operations to the amount of income tax expense that would result from applying the U.S. federal statutory tax rate to income from continuing operations is as follows:

	2018	2017	2016
Income tax expense at U.S. federal statutory tax rate	$ 73,746	$ 56,201	$ 72,005
Difference in income tax expense due to:			
State income tax benefit, net of federal benefit	(108)	(2,216)	(750)
Valuation allowance adjustments	9,188	(7,600)	—
French interest disallowance	4,337	3,244	3,881
French CVAE taxes	4,532	3,609	4,905
Deferred tax effects of French tax rate change	(18,076)	(28,993)	—
French tax refund	(1,271)	(7,404)	—
Other effects of foreign operations[1]	17,722	(10,000)	(5,154)
Other, net	(4,663)	1,714	1,845
Total income tax expense	$ 85,407	$ 8,555	$ 76,732

(1) Comprises foreign tax rate differentials, U.S. tax on foreign earnings net of foreign tax credits, and other foreign tax effects not separately disclosed.

On December 22, 2017, the TCJA was enacted into law. Among the significant changes resulting from the law, the TCJA reduced the U.S. federal income tax rate from 35% to 21%, effective January 1, 2018, created a territorial tax system with a one-time mandatory "toll tax" on previously un-repatriated foreign earnings, and allowed for immediate capital expensing of certain qualified property. It also applied restrictions on the deductibility of interest expense and applied a broader application of compensation limitations.

At September 30, 2018, the accounting for certain income tax effects of the TCJA with respect to existing deferred tax balances and the one-time transition tax reflect provisional amounts. We have made a reasonable estimate of the effects in accordance with U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 118 and are still analyzing certain aspects of the TCJA and refining our calculations, which could potentially result in changes to our current estimates. Revisions to our estimates, if any, will be made by the first quarter of the fiscal year ending September 30, 2019.

(Currency in thousands, except where indicated otherwise)

In Fiscal 2018 we were subject to a blended federal tax rate of 24.5% because our fiscal year contains the effective date of the rate change from 35% to 21%. The effects of the tax law changes on current period results were immaterial.

In Fiscal 2017 and Fiscal 2016, earnings of the Company's foreign subsidiaries were generally subject to U.S. taxation upon repatriation to the U.S. and the Company's tax provisions reflected the related incremental U.S. tax except for certain foreign subsidiaries whose unremitted earnings were considered to be indefinitely reinvested. No deferred tax liability had been recognized with regard to remittance of those earnings because of the availability of U.S. foreign tax credits made it likely that no U.S. tax would be due if such earnings were repatriated. Upon enactment of TCJA, substantially all prior unrepatriated earnings were subjected to U.S. tax under the transition tax rules. The transition tax was immaterial to the Company and we generally expect to have the ability to repatriate prior unrepatriated earnings without material U.S. federal tax cost.

Deferred tax liabilities (assets) comprise the following at September 30:

	2018	2017
Excess book basis over tax basis of property, plant and equipment	$ 190,329	$ 209,685
Intangible assets and goodwill	46,443	46,379
Derivative instruments	10,445	482
Other	28,599	7,906
Gross deferred tax liabilities	275,816	264,452
Employee-related benefits	(7,215)	(11,990)
Operating loss carryforwards	(12,278)	(14,085)
Foreign tax credit carryforwards	(106,143)	(106,148)
Other	(12,413)	(6,618)
Gross deferred tax assets	(138,049)	(138,841)
Deferred tax assets valuation allowance	115,699	106,061
Net deferred tax liabilities	$ 253,466	$ 231,672

In December 2017, the French Parliament approved the Finance Bill for 2018 and the second amended Finance Bill for 2017 (collectively, the "December 2017 French Finance Bills"). One impact of the December 2017 French Finance Bills was an increase in the Fiscal 2018 corporate income tax rate in France from 34.4% to 39.4%. The December 2017 French Finance Bills also include measures to reduce the corporate income tax rate to 25.8%, effective for fiscal years starting after January 1, 2022 (Fiscal 2023).

As a result of the December 2017 French Finance Bills, the Company reduced its net French deferred income tax liabilities and recognized an estimated deferred tax benefit of $12,102 to reflect the estimated impact of the corporate income tax rate reductions that will be implemented through Fiscal 2023. The Company's Fiscal 2018 effective income tax rate reflects the impact of the higher Fiscal 2018 income tax rate in France as a result of the December 2017 French Finance Bills, which increased income tax expense for the year by approximately $594.

In December 2016, the French Parliament approved the Finance Bill for 2017 and amended the Finance Bill for 2016 (collectively the "Finance Bills"). The Finance Bills, among other things, at that time reduced the French corporate income tax rate from the then-current 34.43% to 28.92%, effective for fiscal years starting after January 1, 2020 (Fiscal 2021). As a result of the future income tax rate reduction, during Fiscal 2017 the Company reduced its net deferred income tax liabilities and recognized a deferred tax benefit of $28,993.

At September 30, 2018, foreign net operating loss carryforwards principally relating to Flaga, UGI International Holdings BV and certain subsidiaries of France SAS totaled $14,031, $2,537 and $23,304, respectively, with no expiration dates. At September 30, 2018, deferred tax assets relating to operating loss carryforwards include $2,902 for Flaga, $647 for UGI International Holdings BV, and $8,024 for certain subsidiaries of France SAS.

The valuation allowance for all deferred tax assets increased by $9,638 in Fiscal 2018 due to an increase of $7,600 to re-establish a full valuation allowance associated with future utilization of foreign tax credits, primarily due to impacts of TCJA and an increase in foreign operating loss carryforwards of $2,038. A valuation allowance of $9,556 exists for deferred tax assets related to certain subsidiaries of France SAS, and certain subsidiaries of Flaga and UGI International Holdings BV.

(Currency in thousands, except where indicated otherwise)

In Fiscal 2017, the Company reversed $7,600 in valuation allowances associated with foreign tax credit carryforwards whose utilization before expiration had previously not met a more-likely-than-not threshold. We have foreign tax credit carryforwards of approximately $106,143 expiring through 2028 resulting from the actual and planned repatriation of France SAS's accumulated earnings since acquisition. The Company continuously monitors the potential utilization of these credits and performs the appropriate weighing of positive and negative evidence in reaching a conclusion of whether utilization reaches a level of more likely than not. In Fiscal 2017, the Company concluded it was more likely than not that $98,548 of the credits would expire before utilization and therefore reversed $7,600 of the then existing valuation allowance against these credits. The amount of the deferred tax asset considered realizable could be adjusted if estimates of future utilization during the carryforward period are reduced or increased.

We file tax returns in France and other European countries in which we conduct business and also in the U.S., including numerous state and local jurisdictions. Our U.S. federal income tax returns are settled through the 2014 tax year, our French tax returns are settled through the 2014 tax year, our Austrian tax returns are settled through 2016 and our other European tax returns are effectively settled for various years from 2009 to 2016. State and other income tax returns in the U.S. are generally subject to examination for a period of three to five years after the filing of the respective returns.

UGI Corporation and subsidiaries' 2016 consolidated U.S. federal tax return is currently under examination by the Internal Revenue Service. UGI France and subsidiaries' 2015, 2016 and 2017 tax returns are currently under examination by the French Tax Authority.

As of September 30, 2018, we have unrecognized income tax benefits totaling $9,592 including related accrued interest of $465. If these unrecognized tax benefits were subsequently recognized, they would be recorded as a benefit to income taxes on the Consolidated Statement of Income and, therefore, would impact the reported effective tax rate. Generally, a net reduction in unrecognized tax benefits could occur because of the expiration of the statute of limitations in certain jurisdictions or as a result of settlements with tax authorities. There is no material change expected in unrecognized tax benefits and related interest in the next twelve months.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	2018	2017
Unrecognized tax benefits - beginning of year	$ 9,639	$ 5,150
Additions for tax positions of the current year	1,224	1,897
(Reductions) additions for tax positions taken in prior years	(114)	3,321
Settlements with tax authorities/statute lapses	(1,157)	(729)
Unrecognized tax benefits - end of year	$ 9,592	$ 9,639

Note 7 — Employee Retirement Plans

Defined Benefit Pension and Other Postretirement Plans.

Certain employees of the Company are covered by defined benefit pension and other postretirement benefit plans. Benefits under defined benefit pension plans are generally based upon years of service and final average pay.

The following table provides a reconciliation of the projected benefit obligations ("PBOs") of our pension plans, the accumulated benefit obligations ("ABOs") of our other postretirement benefit plans, the fair values of assets associated with the pension plans, and the funded status of pension and other postretirement plans as of September 30, 2018 and 2017. Benefit payments associated with the other postretirement benefit plans are funded on a pay as you go basis. ABO is the present value of benefits earned to date with benefits based upon current compensation levels. PBO is ABO increased to reflect estimated future compensation.

(Currency in thousands, except where indicated otherwise)

	Pension Benefits		Other Postretirement Benefits	
	2018	2017	2018	2017
Change in benefit obligations				
Benefit obligations - beginning of year	$ 58,514	$ 62,230	$ 9,330	$ 12,951
Service cost	2,718	2,891	269	584
Interest cost	947	562	149	102
Actuarial (gain) loss	(913)	(5,022)	483	(4,172)
Plan amendments	(30)	1,180	(5,782)	—
Curtailment	(596)	(3,560)	(101)	(399)
Foreign currency	(1,004)	2,916	(28)	438
Benefits paid	(1,623)	(2,683)	(177)	(174)
Benefit obligations - end of year	$ 58,013	$ 58,514	$ 4,143	$ 9,330
Change in plan assets				
Fair value of plan assets - beginning of year	$ 31,081	$ 30,256	$ —	$ —
Actual gain (loss) on plan assets	486	(1,331)	—	—
Foreign currency	(553)	1,574	—	—
Employer contributions	1,163	3,229	176	174
Benefits paid	(591)	(2,647)	(176)	(174)
Fair value of plan assets - end of year	$ 31,586	$ 31,081	$ —	$ —
Funded status of the plans -- end of year (a)	$ (26,427)	$ (27,433)	$ (4,143)	$ (9,330)
(a) Amounts are reflected in "Other noncurrent liabilities" on the Consolidated Balance Sheets				
Amounts recorded in UGI International member's equity (pre-tax):				
Prior service cost (benefit)	$ 522	$ 562	$ (1,336)	$ (1,459)
Net actuarial loss (gain)	4,794	6,147	(79)	(574)
Total	$ 5,316	$ 6,709	$ (1,415)	$ (2,033)

The estimated amount of actuarial losses, net of prior service benefits that we will amortize from member’s equity into retiree benefit cost during Fiscal 2019 is not expected to be material.

Assumptions for the pension and other postretirement benefit plans are based upon market conditions in France, Belgium and the Netherlands. The discount rates are determined principally by reference to the yields on high-quality fixed income investments currently available and expected to be available during the period to maturity of the pension benefits. The expected rate of return on assets assumption is based on current and future expected returns on plan assets (as further described below).

(Currency in thousands, except where indicated otherwise)

	Pension Plan			Other Postretirement Benefits		
	2018	2017	2016	2018	2017	2016
Weighted-average assumptions:						
Discount rate – benefit obligations	1.42% to 1.80%	0.95% to 1.60%	0.80% to 1.10%	1.66%	1.88%	0.80%
Discount rate – benefit cost	0.95% to 1.60%	0.80% to 1.00%	2.15%	1.88%	0.80%	2.15% to 2.25%
Expected return on plan assets	1.90% to 2.98%	1.00% to 3.00%	2.75% to 3.25%	N/A	N/A	N/A
Rate of increase in salary levels	2.00% to 4.00%	2.50% to 4.00%	2.50% to 4.50%	N/A	N/A	N/A

N/A - Not applicable

The ABO for the pension plans was $51,523 and $49,031 as of September 30, 2018 and 2017, respectively.

Net periodic pension and other postretirement benefit cost include the following components:

	Pension Benefits			Other Postretirement Benefits		
	2018	2017	2016	2018	2017	2016
Service cost	$ 2,718	$ 2,891	$ 2,297	$ 269	$ 584	$ 355
Interest cost	947	562	1,037	149	102	181
Expected return on assets	(748)	(604)	(670)	—	—	—
Curtailment gain	(218)	(1,427)	(1,203)	—	(399)	—
Amortization of:						
Prior service benefit	(4)	(22)	(74)	(5,984)	(103)	(69)
Actuarial loss (gain)	258	402	365	(15)	160	(1)
Net benefit cost (benefit)	$ 2,953	$ 1,802	$ 1,752	$ (5,581)	$ 344	$ 466

The curtailment gains reflected in the table above are principally due to plan participants in France who ceased employment with the Company as a result of restructuring plans subsequent to the Totalgaz Acquisition in Fiscal 2015 (see Note 17) and as a result of voluntary departures pursuant to the terms of a rehire arrangement with Total for certain employees acquired in the Totalgaz Acquisition. Fiscal 2018 other postretirement prior service benefit amortization of $5,984 included in the table above principally reflects the effects of plan amendments eliminating retiree health and welfare benefits for certain active employees in France.

As of September 30, 2018, pension plan benefits are funded through guaranteed or group insurance contracts. In these types of investment contracts, the Company is not entitled to the actual assets held by the insurance company but has a claim on the insurance company corresponding to the mathematical reserves generally equal to the compounded value of the paid contributions after deducting administrative fees and payments, at the contractual interest rate, or the surrender value. The fair values of the assets associated with the insured plans included in the tables above is generally the greater of the value of the discounted vested benefit or the policy surrender value. These investment balances are classified as Level 2 in the fair value hierarchy. During Fiscal 2018 and Fiscal 2017, we made cash contributions associated with our pension and other postretirement benefit plans of $1,339 and $3,403, respectively. Contributions in Fiscal 2019 are not expected to be material.

(Currency in thousands, except where indicated otherwise)

Estimated future payments for pension and other postretirement welfare benefits are as follows:

	Pension Benefits	Other Postretirement Benefits
Fiscal 2019	$ 2,448	$ 175
Fiscal 2020	$ 1,476	$ 174
Fiscal 2021	$ 2,270	$ 174
Fiscal 2022	$ 6,836	$ 173
Fiscal 2023	$ 6,789	$ 172
Fiscal 2024 - 2028	$ 16,176	$ 848

Certain employees of the Company may be eligible for long-service award lump-sum payments upon their departure from the Company. These awards are accounted for using the full expense method which requires that actuarial gains and losses be reflected in earnings immediately rather than being deferred and amortized over future periods of service. Benefits under these plans are unfunded. Benefit obligations and benefit expense associated with these plans were not material for Fiscal 2018, Fiscal 2017 and Fiscal 2016.

Note 8 — Inventories

Inventories comprise the following at September 30:

	2018	2017
Liquefied petroleum gas	$ 75,536	$ 50,540
Natural gas	21,887	21,243
Other, principally materials & supplies	11,837	12,391
Total inventories	$ 109,260	$ 84,174

Note 9 — Property, Plant and Equipment

Gross property, plant and equipment comprise the following at September 30:

	2018	2017
Land	$ 38,703	$ 36,666
Buildings and improvements	134,781	125,224
Transportation equipment	34,284	31,532
Equipment, primarily cylinders and tanks	1,539,084	1,446,956
Work in process	14,520	28,536
Other	61,737	66,411
Property, plant and equipment	$ 1,823,109	$ 1,735,325

(Currency in thousands, except where indicated otherwise)

Note 10 — Goodwill and Intangible Assets

Changes in the carrying amount of goodwill are as follows:

Balance September 30, 2016	$	817,070
Acquisitions		68,941
Purchase accounting adjustments		(1,757)
Foreign currency translation		41,423
Balance September 30, 2017		925,677
Acquisitions		54,935
Foreign currency translation		(16,864)
Balance September 30, 2018	$	963,748

Intangible assets comprise the following at September 30:

	2018	2017
Customer relationships and other (subject to amortization)	$ 321,455	$ 288,688
Accumulated amortization	(150,765)	(134,685)
Customer relationships and other, net	170,690	154,003
Trademarks and tradenames (not subject to amortization)	50,291	51,171
Total intangible assets	$ 220,981	$ 205,174

Amortization expense of intangible assets was $16,442, $9,980 and $13,089 for Fiscal 2018, Fiscal 2017 and Fiscal 2016, respectively. Estimated amortization of intangible assets during each of the next five fiscal years is as follows: Fiscal 2019 - $15,509; Fiscal 2020 - $15,509; Fiscal 2021 - $15,509; Fiscal 2022 - $15,426; and Fiscal 2023 - $15,260.

Note 11 — Commitments and Contingencies

Commitments

We lease various buildings and other facilities and vehicles, computer and office equipment under operating leases. Certain of our leases contain renewal and purchase options and also contain step-rent provisions. Our aggregate rental expense for such leases was $16,328, $13,183 and $20,920 in Fiscal 2018, Fiscal 2017 and Fiscal 2016, respectively.

Minimum future payments under operating leases with non-affiliates that have initial or remaining noncancelable terms in excess of one year are as follows:

	2019	2020	2021	2022	2023	After 2023
Minimum operating lease payments	$ 11,261	$ 8,817	$ 6,197	$ 5,014	$ 4,617	$ 5,828

Contingencies

There are pending claims and legal actions arising in the normal course of our businesses. Although we cannot predict the final results of these pending claims and legal actions, we believe, after consultation with counsel, that the final outcome of these matters will not have a material effect on our financial position, results of operations or cash flows.

(Currency in thousands, except where indicated otherwise)

Note 12 — Fair Value Measurements

Derivative Financial Instruments

The following table presents on a gross basis our financial assets and liabilities including both current and noncurrent portions, that are measured at fair value on a recurring basis within the fair value hierarchy as described in Note 2, as of September 30, 2018 and 2017:

	Asset (Liability)			
	Level 1	Level 2	Level 3	Total
September 30, 2018				
Derivative instruments:				
Assets:				
Commodity contracts	$ 69,447	$ 54,711	$ —	$ 124,158
Foreign currency contracts	$ —	$ 20,644	$ —	$ 20,644
Cross-currency contracts	$ —	$ 913	$ —	$ 913
Liabilities:				
Commodity contracts	$ (3,989)	$ (281)	$ —	$ (4,270)
Foreign currency contracts	$ —	$ (14,382)	$ —	$ (14,382)
Interest rate contracts	$ —	$ (1,044)	$ —	$ (1,044)
September 30, 2017				
Derivative instruments:				
Assets:				
Commodity contracts	$ 20,824	$ 18,486	$ —	$ 39,310
Foreign currency contracts	$ —	$ 12,219	$ —	$ 12,219
Liabilities:				
Commodity contracts	$ (3,712)	$ (872)	$ —	$ (4,584)
Foreign currency contracts	$ —	$ (38,224)	$ —	$ (38,224)
Interest rate contracts	$ —	$ (2,322)	$ —	$ (2,322)
Cross-currency contracts	$ —	$ (2,943)	$ —	$ (2,943)

The fair values of our Level 1 non-exchange-traded commodity futures and forward contracts are based upon actively quoted market prices for identical assets and liabilities. The remainder of our derivative instruments are designated as Level 2. The fair values of commodity derivatives designated as Level 2 are based upon indicative price quotations available through brokers, industry price publications or recent market transactions and related market indicators. The fair values of our Level 2 interest rate contracts, cross-currency contracts and foreign currency contracts are based upon third-party quotes or indicative values based on recent market transactions.

Other Financial Instruments

The carrying amounts of other financial instruments included in current assets and current liabilities (except for current maturities of long-term debt) approximate their fair values because of their short-term nature. Because substantially all of our long-term debt is subject to variable interest rates, the carrying amounts of our long-term debt at September 30, 2018 and 2017 approximated their fair values.

Financial instruments other than derivative financial instruments, such as cash equivalents, time deposits and trade accounts receivable, could expose us to concentrations of credit risk. We limit our credit risk from cash equivalents and time deposits by investing only in major U.S. and international financial institutions. The credit risk from trade accounts receivable is limited because we have a large customer base which extends across many different markets and several foreign countries. For information regarding concentrations of credit risk associated with our derivative financial instruments, see Note 13.

Note 13 — Derivative Instruments and Hedging Activities

We are exposed to certain market risks related to our ongoing business operations. Management uses derivative financial and commodity instruments, among other things, to manage these risks. The primary risks managed by derivative instruments are (1) commodity price risk, (2) interest rate risk and (3) foreign currency exchange rate risk. Although we use derivative financial and commodity instruments to reduce market risk associated with forecasted transactions, we do not use derivative financial and commodity instruments for speculative or trading purposes. The use of derivative instruments is controlled by our risk management and credit policies which govern, among other things, the derivative instruments we can use, counterparty credit limits and contract authorization limits. Although our commodity derivative instruments extend over a number of years, a significant portion of our commodity derivative instruments economically hedge commodity price risk during the next twelve months. For information on the accounting for our derivative instruments, see Note 2.

Commodity Price Risk

In order to manage market price risk associated changes in prices for LPG, we use over-the-counter price swaps to reduce commodity price volatility associated with a portion of our forecasted LPG purchases. At September 30, 2018 and 2017, total volumes associated with LPG commodity derivative instruments totaled 149.5 million gallons and 111.8 million gallons, respectively. At September 30, 2018, the maximum period over which we are economically hedging our exposure to LPG commodity price risk is 22 months.

In order to manage market price risk associated with fixed-price sales contracts for natural gas and electricity, we enter into natural gas and electricity futures and forward contracts, some of which qualify for NPNS under GAAP. At September 30, 2018, total volumes associated with natural gas forward and futures contracts and electricity long forward and futures contracts totaled 9.0 million dekatherms and 3,603 million kilowatt hours, respectively. At September 30, 2017, total volumes associated with natural gas forward and futures contracts and electricity long forward and futures contracts totaled 10.4 million dekatherms and 3,769 million kilowatt hours, respectively. At September 30, 2018, the maximum periods over which we are economically hedging our exposure to natural gas and electricity commodity price risk are 49 months and 39 months, respectively.

Interest Rate Risk

Prior to their repayment on October 25, 2018 (see Note 5), UGI France's and Flaga's long-term debt agreements had interest rates that were generally indexed to short-term market interest rates. UGI France and Flaga entered into pay-fixed, receive-variable interest rate swap agreements to hedge the underlying euribor and LIBOR rates of interest of this variable-rate term loans. As of September 30, 2018 and 2017, the total notional amount of variable-rate debt subject to interest rate swap agreements (excluding Flaga's cross-currency swap as described below) was €585,800 and €645,800, respectively. These interest rate swaps were settled concurrent with the repayment of the UGI France and Flaga long-term debt. In November 2018, UGI International, LLC entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on 2018 UGI International Credit Facilities Agreement term loan borrowings at 0.34%.

We account for interest rate swaps as cash flow hedges. At September 30, 2018 and 2017, all interest rate hedges were pay-fixed, receive-variable interest rate swaps.

Foreign Currency Exchange Rate Risk

Forward Foreign Currency Exchange Contracts

In order to reduce exposure to foreign exchange rate volatility related to our foreign LPG operations, through September 30, 2016, we entered into forward foreign currency exchange contracts to hedge a portion of anticipated U.S. dollar-denominated LPG product purchases primarily during the heating-season months of October through March. We account for these foreign currency exchange contracts associated with anticipated purchases of U.S. dollar-denominated LPG as cash flow hedges. At September 30, 2018, the amount of net gains associated with currency rate risk expected to be reclassified into earnings during the next twelve months based upon current fair values is $1,145.

Beginning October 1, 2016, in order to reduce the volatility in net income associated with our foreign operations, principally as a result of changes in the U.S. dollar exchange rate between the euro and British pound sterling, we have entered into forward foreign currency exchange contracts. Because these contracts do not qualify for hedge accounting treatment, realized and unrealized gains and losses on these contracts are recorded in "Gain (loss) on foreign currency contracts, net" on the Consolidated Statements of Income.

At September 30, 2018 and 2017, notional amounts associated with forward foreign currency contracts totaled $512,206 and $424,774, respectively. At September 30, 2018, our forward foreign currency contracts settlement dates extend through September 2021.

From time to time we also enter into forward foreign currency exchange contracts to reduce the volatility of the U.S. dollar value of a portion of our UGI International euro-denominated net investments. We account for these foreign currency exchange contracts as net investment hedges. At September 30, 2018 and 2017, there were no unsettled net investment hedges outstanding. In October 2018, in connection with entering into the 2018 UGI International Credit Facilities Agreement and the UGI International Senior Notes, we designated the borrowings under these agreements as net investment hedges (see Note 5).

Cross-Currency Swaps

Prior to its repayment on October 25, 2018 (see Note 5), Flaga entered into cross-currency swaps to hedge its exposure to the variability in expected future cash flows associated with the foreign currency and interest rate risk of U.S. dollar-denominated variable-rate term loan. These cross-currency hedges included initial and final exchanges of principal from a fixed euro denomination to a fixed U.S. dollar-denominated amount, to be exchanged at a specified rate, which was determined by the market spot rate on the date of issuance. These cross-currency swaps also include interest rate swaps of a floating U.S. dollar-denominated interest rate to a fixed euro-denominated interest rate. We designate these cross-currency swaps as cash flow hedges.

At September 30, 2018 and 2017, notional amounts associated with cross-currency swaps totaled $49,914 and $59,077, respectively. At September 30, 2018, the amount of net losses associated with such cross-currency swaps expected to be reclassified into earnings during the next twelve months is not material.

Derivative Instrument Credit Risk

We are exposed to risk of loss in the event of nonperformance by our derivative instrument counterparties. Our derivative instrument counterparties principally comprise large energy companies and major U.S. and international financial institutions. We maintain credit policies with regard to our counterparties that we believe reduce overall credit risk. These policies include evaluating and monitoring our counterparties' financial condition, including their credit ratings, and entering into agreements with counterparties that govern credit limits or entering into netting agreements that allow for offsetting counterparty receivable and payable balances for certain financial transactions, as deemed appropriate. Certain of these agreements call for the posting of collateral by the counterparty or by the Company in the form of letters of credit, parental guarantees or cash. At September 30, 2018 and 2017, restricted cash in brokerage accounts totaled $657 and $800, respectively. Although we have concentrations of credit risk associated with derivative instruments, the maximum amount of loss we would incur if these counterparties failed to perform according to the terms of their contracts, based upon the gross fair values of the derivative instruments, was not material at September 30, 2018.

Offsetting Derivative Assets and Liabilities

Derivative assets and liabilities are presented net by counterparty on our consolidated balance sheets if the right of offset exists. We offset amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral against amounts recognized for derivative instruments executed with the same counterparty. Our derivative instruments principally comprise over-the-counter transactions. Over-the-counter contracts are bilateral contracts that are transacted directly with a third party. Certain over-the-counter contracts contain contractual rights of offset through master netting arrangements, derivative clearing agreements, and contract default provisions. In addition, the contracts are subject to conditional rights of offset through counterparty nonperformance, insolvency, or other conditions.

In general, most of our over-the-counter transactions contracts are subject to collateral requirements. Types of collateral generally include cash or letters of credit. Cash collateral paid by us to our derivative counterparties, if any, is reflected in the table below to offset derivative liabilities. Cash collateral received by us from our over-the-counter derivative counterparties, if any, is reflected in the table below to offset derivative assets. Certain other accounts receivable and accounts payable balances recognized on our consolidated balance sheet with our derivative counterparties are not included in the table below but could reduce our net exposure to such counterparties because such balances are subject to master netting or similar arrangements.

(Currency in thousands, except where indicated otherwise)

Fair Value of Derivative Instruments

The following table presents the Company's derivative assets and liabilities by type, as well as the effects of offsetting as of September 30, 2018 and 2017:

	2018	2017
Derivative assets:		
Derivatives designated as hedging instruments:		
Foreign currency contracts	$ 1,501	$ 3,244
Cross-currency contracts	913	—
	2,414	3,244
Derivatives not designated as hedging instruments:		
Commodity contracts	124,158	39,310
Foreign currency contracts	19,143	8,975
	143,301	48,285
Total derivative assets - gross	145,715	51,529
Gross amounts offset in balance sheet	(9,875)	(10,635)
Cash collateral received	(4,911)	(271)
Total derivative assets - net	$ 130,929	$ 40,623
Derivative liabilities:		
Derivatives designated as hedging instruments:		
Foreign currency contracts	$ (359)	$ (5,470)
Interest rate contracts	(1,044)	(2,322)
Cross-currency contracts	—	(2,943)
	(1,403)	(10,735)
Derivatives not designated as hedging instruments:		
Commodity contracts	(4,270)	(4,584)
Foreign currency contracts	(14,023)	(32,754)
	(18,293)	(37,338)
Total derivative liabilities - gross	(19,696)	(48,073)
Gross amounts offset in balance sheet	9,875	10,635
Total derivative liabilities - net	$ (9,821)	$ (37,438)

(Currency in thousands, except where indicated otherwise)

Effect of Derivative Instruments

The following tables provide information on the effects of derivative instruments in the Statement of Income and changes in AOCI for Fiscal 2018, Fiscal 2017 and Fiscal 2016:

	Gain (Loss) Recognized in AOCI			Gain (Loss) Reclassified from AOCI into Income			Location of Gain (Loss) Reclassified from AOCI into Income
	2018	2017	2016	2018	2017	2016	
Cash Flow Hedges:							
Foreign currency contracts	$ 369	$ 166	$ 3,650	$ (2,999)	$ 17,814	$ 17,235	Cost of sales
Interest rate contracts	113	1,594	(3,942)	(1,585)	(536)	(1,870)	Interest expense
Cross-currency contracts	1,180	480	54	1,150	(103)	406	Interest expense/other operating (income) expense, net
Total	$ 1,662	$ 2,240	$ (238)	$ (3,434)	$ 17,175	$ 15,771	

	Gain (Loss) Recognized in Income			Location of Gain (Loss) Recognized in Income
	2018	2017	2016	
Derivatives Not Designated as Hedging Instruments:				
Commodity contracts	$ 110,975	$ 46,288	$ 2,497	Cost of sales
Foreign currency contracts	16,198	(23,853)	—	Gain (loss) on foreign currency contracts, net
Total	$ 127,173	$ 22,435	$ 2,497	

For Fiscal 2018 and Fiscal 2017, the amounts of derivative gains or losses representing ineffectiveness, and the amounts of gains or losses recognized in income as a result of excluding derivatives from ineffectiveness testing, were not material. For Fiscal 2016 the amounts of derivative gains or losses representing ineffectiveness were losses of $5,521, which were recorded in "Other operating (income) expense, net" on the Consolidated Statements of Income and are related to interest rate swap agreements at UGI France SAS prior to their amendments in March 2016.

We are also a party to a number of other contracts that have elements of a derivative instrument. These contracts include, among others, binding purchase orders and contracts which provide for the purchase and delivery, or sale, of energy products. Although certain of these contracts have the requisite elements of a derivative instrument, these contracts qualify for NPNS exception accounting because they provide for the delivery of products or services in quantities that are expected to be used in the normal course of operating our business and the price in the contract is based on an underlying that is directly associated with the price of the product or service being purchased or sold.

Note 14 — Accumulated Other Comprehensive Income

Comprehensive income comprises net income and other comprehensive income (loss). Other comprehensive income (loss) principally comprises (1) gains and losses on derivative instruments qualifying as cash flow hedges, net of reclassifications to net income; (2) actuarial gains and losses on postretirement benefit plans, net of associated amortization; and (3) foreign currency translation and long-term intracompany transaction adjustments.

Changes in AOCI during Fiscal 2018, Fiscal 2017 and Fiscal 2016 are as follows:

	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - September 30, 2015	$ (3,844)	$ 15,709	$ (106,276)	$ (94,411)
Other comprehensive (loss) income before reclassification adjustments (after-tax)	(5,413)	355	(6,414)	(11,472)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	580	(15,771)	—	(15,191)
Reclassification adjustments tax (benefit) expense	(200)	6,108	—	5,908
Reclassification adjustments (after-tax)	380	(9,663)	—	(9,283)
Other comprehensive loss attributable to UGI	(5,033)	(9,308)	(6,414)	(20,755)
AOCI - September 30, 2016	$ (8,877)	$ 6,401	$ (112,690)	$ (115,166)
Other comprehensive income before reclassification adjustments (after-tax)	3,976	1,654	59,396	65,026
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	2,689	(17,175)	—	(14,486)
Reclassification adjustments tax (benefit) expense	(914)	5,501	—	4,587
Reclassification adjustments (after-tax)	1,775	(11,674)	—	(9,899)
Other comprehensive income (loss) attributable to UGI	5,751	(10,020)	59,396	55,127
AOCI - September 30, 2017	$ (3,126)	$ (3,619)	$ (53,294)	$ (60,039)
Other comprehensive (loss) income before reclassification adjustments (after-tax)	(3,504)	993	(30,441)	(32,952)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	6,627	3,434	—	10,061
Reclassification adjustments tax benefit	(2,344)	(1,479)	—	(3,823)
Reclassification adjustments (after-tax)	4,283	1,955	—	6,238
Other comprehensive income (loss) attributable to UGI	779	2,948	(30,441)	(26,714)
AOCI - September 30, 2018	$ (2,347)	$ (671)	$ (83,735)	$ (86,753)

Note 15 — Other Operating Income (Expense), Net

Other operating income (expense), net, comprises the following:

	2018	2017	2016
Interest and dividend income	$ 1,817	$ 756	$ 1,702
Cylinder deposit income	4,084	3,735	2,578
Loss on sales of assets	(335)	(1,752)	(4,742)
Foreign currency transaction losses	(1,073)	(589)	(775)
Interest rate swap ineffectiveness	—	—	(5,521)
Other	(1,295)	(6)	(118)
Total other operating income (expense), net	$ 3,198	$ 2,144	$ (6,876)

Note 16 — Related Party Transactions

UGI provides certain financial and administrative services to the Company. UGI bills the Company for all direct expenses incurred or paid on behalf of the Company and the Company reimburses UGI for such direct expenses. In addition, Enterprises, as the parent company of UGI International, is billed for the Company's allocated share of UGI indirect corporate expenses. This allocated share is based upon a weighted, three-component formula comprising revenues, operating expenses and net assets employed and considers the Company's relative percentage of such items to the total of such items for all UGI Corporation operating subsidiaries for which general and administrative services are provided. Management believes that this allocation method is reasonable and equitable. The amounts of UGI allocated indirect corporate expenses billed to Enterprises on behalf of the Company have been included in "Operating and administrative expenses - related parties" on the Consolidated Statements of Income. The amount of such allocated expenses billed to Enterprises, net of any income tax benefit, is reflected as a "Capital contribution - allocated expenses" on the Consolidated Statements of Changes in Equity.

(Currency in thousands, except where indicated otherwise)

From October 2011 through the date of its dividend to Enterprises in September 2016 as further described below, UGI International held a British pound sterling denominated note receivable in the amount of £21,874 from UGI Midlands, Ltd. (the "Midlands Note"). During this period, UGI Midlands, Ltd. was a first-tier subsidiary of UGI International. In September 2016, the Midlands Note and associated accrued interest were dividended to Enterprises. The dividend has been reflected as "Dividend of Midlands Note and accrued interest" on the Fiscal 2016 Consolidated Statements of Changes in Equity. In March 2017, the Midlands Note was contributed by Enterprises to UGI International. This contribution has been reflected as "Capital contribution - Midlands Note" on the Fiscal 2017 Consolidated Statements of Changes in Equity.

Note 17 — Finagaz Voluntary Departure Plans

During Fiscal 2016, Fiscal 2017 and Fiscal 2018, UGI France initiated several voluntary departure plans (“VDPs”) pursuant to which employees are incentivized to voluntarily terminate employment or may be subject to involuntary termination to reach certain headcount reductions approved by employee work councils and government regulatory bodies which assure termination plans are in compliance with French labor laws. During Fiscal 2018, Fiscal 2017 and Fiscal 2016, UGI France recorded pre-tax expenses associated with the VDPs totaling $12,548, $24,784 and $7,259, respectively. At September 30, 2018 and 2017, accrued amounts remaining under the VDPs totaled $19,441 and $24,519, respectively. Expenses recorded under the VDPs are included in "Operating and administrative expenses" on the Consolidated Statements of Income.

The following table reflects changes in the accrued amounts during Fiscal 2018, Fiscal 2017 and Fiscal 2016 associated with the VDPs:

Balance at October 1, 2015	$ —
Costs incurred and charged to expense	7,259
Balance at September 30, 2016	$ 7,259
Costs incurred and charged to expense	24,784
Amounts paid or settled	(8,127)
Foreign currency translation	603
Balance at September 30, 2017	$ 24,519
Costs incurred and charged to expense	12,548
Amounts paid or settled	(17,341)
Foreign currency translation	(285)
Balance at September 30, 2018	$ 19,441

Management's Discussion and Analysis of Financial Condition and Results of Operations (Unaudited)

Executive Overview

Net income attributable to UGI International, LLC as determined in accordance with accounting principles generally accepted in the United States of America ("GAAP") was $218.2 million in Fiscal 2018 compared to $151.9 million in Fiscal 2017. Our GAAP results in Fiscal 2018 reflect after-tax gains on commodity derivative instruments not associated with current-period transactions of $66.6 million compared to $13.4 million of after-tax gains in Fiscal 2017. The significantly higher after-tax gains on commodity derivative instruments in Fiscal 2018 principally reflects significant increases in forward prices for electricity and, to a lesser extent, LPG and natural gas that occurred later in Fiscal 2018. Our GAAP results also reflect after-tax unrealized gains (losses) on foreign currency derivative instruments not associated with current period transactions of $19.6 million and $(13.9) million in Fiscal 2018 and Fiscal 2017, respectively. Although these gains and losses are reflected in our GAAP results, we have excluded these gains and losses from our non-GAAP measures presented under "Non-GAAP Financial Measures" below.

Fiscal 2018 operating results reflect the effects of warmer than normal weather in our UGI International service territories and the impacts of recent acquisitions. Temperatures based upon heating degree days were more than 5% warmer than normal and nearly 6% warmer than Fiscal 2017. Notwithstanding the warmer weather, total LPG retail gallons sold were higher in Fiscal 2018 principally reflecting incremental gallons from the October 2017 acquisition of UniverGas, a retail LPG marketer in Italy. Our existing businesses' retail LPG volumes were slightly lower than the prior year as slightly higher bulk sales later in the Fiscal 2018 heating season were offset by the effects of warmer weather and the lower crop-drying volumes earlier in Fiscal 2018. During Fiscal 2018, average wholesale prices for propane and butane in northwest Europe were approximately 23% and 19% higher than in Fiscal 2017, respectively. Fiscal 2018 also reflects the full-year operating results of DVEP, our electricity and natural gas marketing business in the Netherlands acquired in August 2017.

During Fiscal 2018 and Fiscal 2017, the average unweighted euro-to-dollar translation rates were approximately $1.19 and $1.11, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.35 and $1.27, respectively. Although the euro and British pound sterling were stronger during Fiscal 2018, the beneficial impact of the stronger currencies on net income (as adjusted to exclude the unrealized gains on derivative instruments not associated with current-period transactions) was substantially offset by net realized losses on foreign currency exchange contracts.

We incurred approximately $30.5 million of pre-tax Finagaz integration expenses in Fiscal 2018 as we completed the integration of the Finagaz operations acquired in May 2015. With the Finagaz integration activities behind us, we expect to see the full synergistic benefits from these integration activities in our future operating results.

Our net income for Fiscal 2018 was also affected by the December 2017 French Finance Bills and the enactment of the Tax Cuts and Jobs Act (the "TCJA") in the United States. In December 2017, the French Parliament approved the Finance Bill for 2018 and the second amended Finance Bill for 2017 (collectively, the "December 2017 French Finance Bills"). Among other things, the December 2017 French Finance Bills increased the Fiscal 2018 corporate income tax rate in France from 34.4% to 39.4%. In addition, the December 2017 French Finance Bills included measures to reduce the corporate income tax rate to 25.8% effective for fiscal years starting after January 1, 2022 (Fiscal 2023). The corporate income tax rate will decrease ratably each year until it reaches 25.8% in 2022. The TCJA was enacted into law on December 22, 2017. Among other things, the TCJA reduces the U.S. federal income tax rate from 35% to 21% effective January 1, 2018, and creates a territorial tax system with a one-time mandatory "toll tax" on previously un-repatriated foreign earnings. In the U.S. we were subject to a blended U.S. federal income tax rate of 24.5% for Fiscal 2018 because our fiscal year contains the effective date of the rate change from 35% to 21%. We will be subject to a U.S. federal tax rate of 21% beginning in Fiscal 2019. As a result of the enactment of the TCJA's territorial regime, during Fiscal 2018 we re-established a $7.6 million valuation allowance on foreign tax credits which had been previously released in September 2017.

Our financial results include two types of impacts from the enactment of the TCJA and the December 2017 French Finance Bills. The first impact comprises remeasurement adjustments to our deferred income tax assets and liabilities, accrued income taxes and deferred tax valuation allowances existing as of the dates these tax laws were enacted. These remeasurement adjustments have been excluded from adjusted net income attributable to UGI International, LLC, a non-GAAP financial measure, which is presented under "Non-GAAP Financial Measures" below.

The second impact of the TCJA and the December 2017 French Finance Bills primarily comprises the effects of the tax law changes on current-period results. With respect to the December 2017 French Finance Bills, the impact on current-period results principally includes the higher Fiscal 2018 French corporate income tax rate of 39.4% compared to 34.4% in the prior year. With respect to the TCJA, the impact on current-period results principally reflects the lower U.S. corporate income tax rate, which for Fiscal 2018 consists of a blended federal corporate income tax rate of 24.5% compared to 35% in the prior year. The impacts of the TCJA and the December 2017 French Finance Bills on current-year results have been included in our non-GAAP financial measures presented below.

Non-GAAP Financial Measures

UGI International's management presents the non-GAAP measures, adjusted total margin, adjusted operating income, adjusted income before income taxes and adjusted net income attributable to UGI International, LLC, in order to assist in the evaluation of UGI International's overall performance. Management believes that these non-GAAP measures provide meaningful information to investors about UGI International's performance because they eliminate the impact of (1) gains and losses on commodity and certain foreign currency derivative instruments not associated with current-period transactions, principally comprising unrealized gains and losses on such derivative instruments and (2) other significant discrete items that can affect the comparisons of period-over-period results. These financial measures are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not as a substitute for, the comparable GAAP measures.

The following table includes reconciliations of adjusted total margin, adjusted operating income, adjusted income before income taxes and adjusted net income attributable to UGI International, LLC to the most directly comparable financial measures calculated and presented in accordance with GAAP for the periods presented.

	Year Ended September 30,		
(Millions of dollars)	2018	2017	2016
Adjusted total margin:			
Total revenues	$ 2,683.8	$ 1,877.5	$ 1,862.1
Cost of sales	(1,527.2)	(916.4)	(866.1)
Total margin	1,156.6	961.1	996.0
Net gains on commodity derivative instruments not associated with current-period transactions	(92.9)	(19.0)	(31.8)
Adjusted total margin	$ 1,063.7	$ 942.1	$ 964.2
Adjusted operating income:			
Operating income	$ 306.1	$ 205.2	$ 230.3
Net gains on commodity derivative instruments not associated with current-period transactions	(92.9)	(19.0)	(31.8)
Integration expenses associated with Finagaz	30.5	39.9	27.9
Adjusted operating income	$ 243.7	$ 226.1	$ 226.4
Adjusted income before income taxes:			
Income before income taxes	$ 300.6	$ 160.6	$ 205.7
Net gains on commodity derivative instruments not associated with current-period transactions	(92.9)	(19.0)	(31.8)
Unrealized (gains) losses on foreign currency derivative instruments	(28.9)	23.8	—
Integration expenses associated with Finagaz	30.5	39.9	27.9
Adjusted income before income taxes	$ 209.3	$ 205.3	$ 201.8
Adjusted net income attributable to UGI International, LLC:			
Net income attributable to UGI International, LLC	$ 218.2	$ 151.9	$ 129.0
Net gains on commodity derivative instruments not associated with current-period transactions	(66.6)	(13.4)	(22.7)
Unrealized (gains) losses on foreign currency derivative instruments	(19.6)	13.9	—
Integration expenses associated with Finagaz	18.5	26.2	17.3
Remeasurement impact from TCJA	8.1	—	—
Impact from French Finance Bills	(12.1)	(29.0)	—
Adjusted net income attributable to UGI International, LLC	$ 146.5	$ 149.6	$ 123.6

Analysis of Results of Operations

The following analysis compares UGI International's results of operations for the year ended September 30, 2018 ("Fiscal 2018") with the year ended September 30, 2017 ("Fiscal 2017"), and Fiscal 2017 with the year ended September 30, 2016 ("Fiscal 2016").

Fiscal 2018 Compared with Fiscal 2017:

UGI International	2018	2017	Increase (Decrease)	
(Dollars in millions)				
Revenues	$ 2,683.8	$ 1,877.5	$ 806.3	42.9 %
Total margin (a)(b)	$ 1,156.6	$ 961.1	$ 195.5	20.3 %
Operating and administrative expenses (c)	$ 713.1	$ 637.3	$ 75.8	11.9 %
Operating income (b)	$ 306.1	$ 205.2	$ 100.9	49.2 %
Income before income taxes (b)(d)	$ 300.6	$ 160.6	$ 140.0	87.2 %
Net income attributable to UGI International, LLC (b)(d)	$ 218.2	$ 151.9	$ 66.3	43.6 %
Non-GAAP financial measures (e):				
Adjusted total margin	$ 1,063.7	$ 942.1	$ 121.6	12.9 %
Adjusted operating income	$ 243.7	$ 226.1	$ 17.6	7.8 %
Adjusted income before income taxes	$ 209.3	$ 205.3	$ 4.0	1.9 %
Adjusted net income attributable to UGI International, LLC	$ 146.5	$ 149.6	$ (3.1)	(2.1)%
LPG retail gallons sold (millions)	886.3	827.9	58.4	7.1 %
Degree days – % (warmer) colder than normal (f)	(5.3)%	0.7%	—	—

(a) Total margin represents total revenues less total cost of sales.
(b) Total margin, operating income, income before income taxes and net income attributable to UGI International, LLC for Fiscal 2018 and Fiscal 2017 include net pre-tax gains of $92.9 million and $19.0 million, respectively, on commodity derivative instruments not associated with current-period transactions.
(c) Includes Finagaz integration expenses for Fiscal 2018 and Fiscal 2017 of $30.5 million and $39.9 million, respectively.
(d) Income before income taxes and net income attributable to UGI International, LLC in Fiscal 2018 and Fiscal 2017 includes net pre-tax unrealized gains (losses) on certain foreign currency derivative contracts of $28.9 million and $(23.8) million, respectively.
(e) These financial measures are non-GAAP financial measures and are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not a substitute for, the comparable GAAP measures. See "Non-GAAP Financial Measures" above.
(f) Deviation from average heating degree days for the 15-year period 2002-2016 at locations in our UGI International service territories.

Average temperatures during Fiscal 2018 were approximately 5.3% warmer than normal and 5.9% warmer than Fiscal 2017. Total retail gallons sold during Fiscal 2018 were higher reflecting incremental LPG retail gallons sold from our October 2017 acquisition of UniverGas. Our existing businesses' retail volumes were slightly lower than the prior year as slightly higher bulk sales late in the heating season were offset by the effects of warmer weather and lower crop-drying volumes early in Fiscal 2018. During Fiscal 2018, average wholesale prices for propane and butane in northwest Europe were approximately 23% and 19% higher than in Fiscal 2017, respectively.

UGI International base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. The functional currency of a significant portion of our UGI International results is the euro and, to a much lesser extent, the British pound sterling. During Fiscal 2018 and Fiscal 2017, the average unweighted euro-to-dollar translation rates were approximately $1.19 and $1.11, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.35 and $1.27, respectively. Although the euro and British pound sterling were stronger during Fiscal 2018 and affect the comparison of line item amounts presented in the table above, the beneficial impact of the stronger currencies on net income was partially offset by net losses on foreign currency exchange contracts.

Revenues increased $806.3 million during Fiscal 2018 reflecting approximately $439 million of combined incremental revenues from UniverGas and DVEP, higher LPG selling prices and the translation effects on our existing businesses' revenues of the stronger euro and British pound sterling. The higher LPG selling prices reflect in large part the effects of higher LPG product costs. Cost of sales increased $610.8 million in Fiscal 2018 compared to Fiscal 2017. Cost of sales in Fiscal 2018 and Fiscal 2017 are net of gains on commodity derivative instruments not associated with current period transactions of $92.9 million and $19.0 million, respectively. Excluding the effects of these gains on commodity derivative instruments, cost of sales increased $684.7 million reflecting approximately $381 million of incremental cost of sales associated with UniverGas and DVEP, the effects of the higher average LPG commodity costs, and the translation effects of the stronger euro and British pound sterling.

Total margin (which includes the previously mentioned unrealized gains on commodity derivative instruments not associated with current-period transactions) increased $195.5 million. Adjusted total margin increased $121.6 million principally reflecting the translation effects of the stronger euro and British pound sterling on adjusted total margin (approximately $80 million), incremental adjusted margin from UniverGas and DVEP ($58 million), and slightly higher natural gas margin from our existing energy marketing business. These increases in adjusted total margin were partially offset by slightly lower adjusted total margin from our existing retail LPG business reflecting in large part lower Fiscal 2018 income on foreign currency exchange contracts. Adjusted total margin from our existing natural gas business increased approximately $4.9 million reflecting higher subscription fee margin partially offset by lower average unit margins during Fiscal 2018.

Fiscal 2018 operating income (which includes the previously mentioned unrealized gains on commodity derivative instruments not associated with current-period transactions and Finagaz integration expenses) increased $100.9 million. Adjusted operating income increased $17.6 million principally reflecting the previously mentioned $121.6 million increase in adjusted total margin partially offset by an $85.2 million increase in operating and administrative expenses (excluding the impact of Finagaz integration expenses) and a $19.7 million increase in depreciation and amortization expense. The increase in operating and administrative expenses principally reflects the translation effects of the stronger euro and British pound sterling on local currency expenses and approximately $39 million of incremental expenses from UniverGas and DVEP. Our existing businesses' local currency operating and administrative expenses, excluding Finagaz integration costs, were slightly lower than the prior year as lower compensation and benefits expense and lower tank and cylinder repair costs were largely offset by higher compliance costs associated with energy conservation and operational safety requirements and slightly higher distribution costs. Operating and administrative expenses in Fiscal 2018 and Fiscal 2017 include $30.5 million and $39.9 million of Finagaz integration costs, respectively. The increase in depreciation and amortization principally reflects incremental amounts associated with UniverGas and DVEP ($9.9 million) and the translation effects of the stronger currencies.

Income before income taxes (which includes the previously mentioned unrealized gains on commodity derivative instruments not associated with current-period transactions, Finagaz integration expenses and unrealized gains and losses on certain foreign currency contracts) increased $140.0 million. Adjusted income before income taxes increased $4.0 million principally reflecting the previously mentioned $17.6 million increase in adjusted operating income reduced by higher realized losses on foreign currency exchange contracts ($12.7 million) and slightly higher interest expense due to the effects of the stronger euro.

Interest Expense and Income Taxes

Interest expense in Fiscal 2018 was $21.1 million compared to $20.6 million of interest expense in Fiscal 2017. The slightly higher interest expense principally reflects the effects of the stronger euro partially offset by lower average debt outstanding.

As previously mentioned, our consolidated income taxes for Fiscal 2018 were impacted by the enactment of the TCJA in the U.S. and the December 2017 French Finance Bills. Our effective tax rate for Fiscal 2018 reflects the effects of deferred income tax asset and liability remeasurement adjustments resulting from the TCJA and the December 2017 French Finance Bills, which remeasurement adjustments reduced Fiscal 2018 income tax expense by a net $4.0 million, and the lower blended U.S. federal income tax rate of 24.5% compared with 35% in Fiscal 2017. The effective income tax rate in Fiscal 2017 reflects the impact of a December 2016 change in the French corporate income tax rate for future years which reduced consolidated income tax expense by $29.0 million and, to a much lesser extent, the effects of an income tax settlement refund of $6.7 million, plus interest, in France.

Fiscal 2017 Compared with Fiscal 2016:

UGI International		2017		2016		Increase (Decrease)	
(Dollars in millions)							
Revenues	$	1,877.5	$	1,862.1	$	15.4	0.8 %
Total margin (a)(b)	$	961.1	$	996.0	$	(34.9)	(3.5)%
Operating and administrative expenses (c)	$	637.3	$	646.8	$	(9.5)	(1.5)%
Operating income (b)	$	205.2	$	230.3	$	(25.1)	(10.9)%
Income before income taxes (b)(d)	$	160.6	$	205.7	$	(45.1)	(21.9)%
Net income attributable to UGI International, LLC (b)(d)		151.9		129.0	$	22.9	17.8 %
Non-GAAP financial measures (e):							
Adjusted total margin	$	942.1	$	964.2	$	(22.1)	(2.3)%
Adjusted operating income	$	226.1	$	226.4	$	(0.3)	(0.1)%
Adjusted income before income taxes	$	205.3	$	201.8	$	3.5	1.7 %
Adjusted net income attributable to UGI International, LLC	$	149.6	$	123.6	$	26.0	21.0 %
LPG retail gallons sold (millions)		827.9		820.5		7.4	0.9 %
Degree days – % colder (warmer) than normal (f)		0.7%		(7.9)%		—	—

(a) Total margin represents total revenues less total cost of sales.
(b) Total margin, operating income, income before income taxes, and net income attributable to UGI International, LLC for Fiscal 2017 and Fiscal 2016 includes the impact of net pre-tax gains of $19.0 million and $31.8 million, respectively, on commodity derivative instruments not associated with current-period transactions.
(c) Includes Finagaz integration expenses in Fiscal 2017 and Fiscal 2016 of $39.9 million and $27.9 million, respectively.
(d) Income before income taxes and net income attributable to UGI International, LLC in Fiscal 2017 includes the impact of net pre-tax unrealized losses on certain foreign currency derivative contracts of $23.8 million.
(e) These financial measures are non-GAAP financial measures and are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not a substitute for, the comparable GAAP measures. See “Non-GAAP Financial Measures” above.
(f) Deviation from average heating degree days for the 15-year period 2002-2016 at locations in our European service territories.

Average temperatures during Fiscal 2017 in our service territories were 0.7% colder than normal and 9.7% colder than in Fiscal 2016. Total retail gallons sold during Fiscal 2017 were slightly higher as the beneficial volume effects of the colder weather were substantially offset by a 30.7 million gallon decline in autogas volumes, principally as a result of exiting the low-margin, high-volume autogas business in Poland during Fiscal 2016, and lower crop-drying volumes as a result of a dry Fiscal 2017 crop season in France. During Fiscal 2017, average wholesale commodity prices for propane and butane in northwest Europe were approximately 34% and 29%, respectively, higher than in Fiscal 2016.

UGI International base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. The functional currency of a significant portion of our UGI International results is the euro and, to a much lesser extent, the British pound sterling. Although the British pound sterling and the euro during much of Fiscal 2017 were slightly weaker than during Fiscal 2016, the translation effects of these currencies did not negatively impact UGI International net income due to gains on foreign currency exchange contracts used to hedge a portion of U.S. dollar purchases of LPG.

Revenues increased $15.4 million during Fiscal 2017 as higher average bulk and cylinder LPG selling prices and the effects of the colder weather on bulk sales were substantially offset by the translation impact on revenues of the weaker British pound sterling and euro, the effects of exiting the low-margin autogas business in Poland and lower Fiscal 2017 wholesale sales. Total cost of sales during Fiscal 2017 increased $50.3 million from Fiscal 2017. Cost of sales in Fiscal 2017 and Fiscal 2016 include gains on commodity derivative instruments not associated with current period transactions of $19.0 million and $31.8 million, respectively. Excluding the effects of these gains on commodity derivative instruments, UGI International cost of sales increased $37.5 million during Fiscal 2017 as the effects on cost of sales from the higher average LPG commodity costs and the increase in bulk sales were partially offset by the translation impact from the slightly weaker British pound sterling and the euro, the effects of the lower volumes associated with exiting the autogas business in Poland, and the effects of the lower wholesale sales.

Total margin (which includes unrealized gains on commodity derivative instruments not associated with current-period transactions) decreased $34.9 million. Adjusted total margin decreased $22.1 million primarily reflecting (1) the translation effects of the weaker British pound sterling and euro; (2) slightly lower average retail bulk and cylinder LPG unit margins; and (3) the absence of margin from the autogas business in Poland. The slightly lower average retail bulk and cylinder LPG unit margins principally reflect the negative effects on Fiscal 2017 unit margins of higher LPG commodity costs and the beneficial effects on Fiscal 2016 unit margins of declining LPG wholesale commodity costs. The effect of these decreases in unit margin was partially offset by the increase in bulk sales resulting from the colder weather.

Operating income (which includes unrealized gains on commodity derivative instruments not associated with current-period transactions and Finagaz integration expenses) decreased $25.1 million. Adjusted operating income decreased $0.3 million reflecting the $22.1 million decrease in adjusted total margin and an $8.7 million increase in depreciation and amortization expense partially offset by a $21.5 million decrease in operating and administrative expenses (excluding the effects of the Finagaz expenses) and higher other operating income. The decrease in operating and administrative expenses principally reflects lower operating and administrative costs in France resulting from expense synergies associated with the Finagaz integration and, to a much lesser extent, the translation effects of the weaker euro and British pound sterling. The increase in other operating income reflects, in large part, the absence of a $5.5 million loss recorded during Fiscal 2016 associated with interest rate hedge ineffectiveness.

Income before income taxes (which includes unrealized gains on commodity derivative instruments not associated with current-period transactions, Finagaz integration expenses and in Fiscal 2017 unrealized losses on certain foreign currency contracts) decreased $45.1 million. Adjusted income before income taxes increased $3.5 million principally reflecting lower interest expense due in large part to lower Fiscal 2017 average interest rates on UGI France's €600 million Senior Facilities Agreement term loan, partially offset by the $0.3 million decrease in adjusted operating income.

Interest Expense and Income Taxes

Our effective income tax rate as a percentage of income before income taxes was significantly lower in Fiscal 2017 compared to Fiscal 2016. The lower effective income tax rate principally reflects a $29.0 million decrease in net deferred income tax liabilities in France as a result of a reduction in the French statutory tax rate from 34.43% to 28.92%, effective in Fiscal 2021; the release of a $7.6 million valuation allowance against future uses of foreign tax credit carryforwards; and an income tax settlement of $6.7 million, plus interest, in France. Fiscal 2017 adjusted net income attributable to UGI International, LLC excludes the previously mentioned $29.0 million decrease in net deferred income tax liabilities in France.

Liquidity and Capital Resources

We depend on both internal and external sources of liquidity to provide funds for working capital and to fund capital requirements. Our short-term cash requirements not met by cash from operations can generally be satisfied with borrowings under our primary credit facilities, although we have generally not needed to borrow under such credit facilities. Long-term cash requirements are generally met through the issuance of long-term debt or capital contributions. We believe that we have sufficient liquidity in the forms of cash and cash equivalents on hand; cash expected to be generated from operations; credit facility borrowing capacity; and the ability to obtain long-term financing to meet anticipated contractual and projected cash commitments.

The primary sources of UGI International's cash and cash equivalents have been cash flows generated from operations and cash contributions made by UGI Corporation principally to fund acquisitions of businesses. However, there can be no assurance that UGI Corporation will make contributions to our capital or otherwise provide funding in the future. Our primary uses of cash have been to fund acquisitions of businesses, repay long-term debt and pay distributions to our parent company. Our ability to service debt has been, and will continue to be, dependent upon our ability to generate cash from our operations. While UGI Corporation does not have a stated dividend policy with respect to its ownership of UGI International, we expect to continue to pay dividends to our parent company with cash generated from operations.

Our cash and cash equivalents totaled $237.5 million at September 30, 2018 and $360.6 million at September 30, 2017. A substantial portion of this cash is located outside of the United States.

Long-term debt and significant financing activities

UGI International's debt outstanding at September 30, 2018, totaled $749.8 million (including current maturities of long-term debt of $0.3 million and short-term borrowings of $1.4 million). UGI International's debt outstanding at September 30, 2017, totaled $856.7 million (including current maturities of long-term debt of $78.4 million and short-term borrowings of $17.9 million). Total long-term debt outstanding at September 30, 2018, including current maturities, comprises $730.1 million of variable-rate term loans and $20.9 million of other long-term debt, and is net of $2.5 million of unamortized debt issuance costs. The variable-rate term loans were repaid in October 2018 in conjunction with UGI International's refinancing transaction (see "Subsequent Event - UGI International Refinancing" below).

Subsequent Event - UGI International Refinancing

On October 18, 2018, UGI International, LLC entered into a five-year unsecured Senior Facilities Agreement with a consortium of banks consisting of (1) a €300 million variable-rate term loan which was drawn on October 25, 2018, and (2) a €300 million senior unsecured multicurrency revolving facility agreement (together, the "2018 UGI International Credit Facilities Agreement"). The 2018 UGI International Credit Facilities Agreement matures on October 18, 2023. Term loan borrowings bear interest at rates per annum comprising the aggregate of the applicable margin and the associated euribor rate, which euribor rate has a floor of zero. The margin on term loan borrowings, which ranges from 1.55% to 3.20%, is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined. The initial margin on term loan borrowings is 1.70%. UGI International, LLC has entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on term loan borrowings at 0.34%. Under the multicurrency revolving credit facility agreement, UGI International, LLC may borrow in euros or U.S. dollars. Loans made in euros will bear interest at the associated euribor rate plus a margin ranging from 1.20% to 2.85%. Loans made in U.S. dollars will bear interest at the associated LIBOR rate plus a margin ranging from 1.45% to 3.10%. The margin on revolving facility borrowings is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined.

On October 25, 2018, UGI International, LLC issued in an underwritten private placement €350 million principal amount of 3.25% senior unsecured notes due November 1, 2025 (the "UGI International 3.25% Senior Notes"). The UGI International 3.25% Senior Notes rank equal in right of payment with indebtedness issued under the 2018 UGI International Credit Facilities Agreement.

The net proceeds from the UGI International 3.25% Senior Notes and the UGI International Credit Facilities Agreement variable-rate term loan plus cash on hand were used on October 25, 2018 (1) to repay €540 million outstanding principal of UGI France SAS's variable-rate term loan under its 2015 Senior Facilities Agreement due April 2020; €45.8 million of outstanding principal of Flaga's variable-rate term loan due October 2020; and $49.9 million of outstanding principal of Flaga's U.S. dollar variable-rate term loan due April 2020, plus accrued and unpaid interest, and (2) for general corporate purposes.

For further information on these transactions and the Company's other long-term borrowings, see Note 5 to Consolidated Financial Statements.

Analysis of Adjusted EBITDA

We use the non-GAAP measures earnings before interest, income taxes, depreciation and amortization ("EBITDA") and "Adjusted EBITDA" in assessing our ability to service debt and to comply with loan covenants. These financial measures are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not as an alternative to, comparable GAAP measures. See the table below for reconciliations of "EBITDA" and "Adjusted EBITDA" to net income attributable to UGI International, LLC, the most directly comparable financial measure calculated and presented in accordance with GAAP.

	Year Ended September 30,		
(Millions of dollars)	2018	2017	2016
EBITDA and Adjusted EBITDA:			
Net income attributable to UGI International, LLC	$ 218.2	$ 151.9	$ 129.0
(Subtract net loss) add net income attributable to noncontrolling interests (a)	(2.9)	0.2	—
Income tax expense (a)	85.4	8.5	76.8
Interest expense	21.1	20.6	24.4
Depreciation	124.1	110.8	99.0
Amortization	16.4	10.0	13.1
EBITDA	462.3	302.0	342.3
Net gains on commodity derivative instruments not associated with current-period transactions	(92.9)	(19.0)	(31.8)
Unrealized (gains) losses on foreign currency derivative instruments	(28.9)	23.8	—
Integration expenses associated with Finagaz	30.5	39.9	27.9
Adjusted EBITDA	$ 371.0	$ 346.7	$ 338.4

(a) Includes impact of rounding.

Fiscal 2018 and Fiscal 2017

Adjusted EBITDA was $371.0 million in Fiscal 2018, an increase of $24.3 million from Fiscal 2017, principally reflecting an increase in adjusted total margin of $121.6 million partially offset by a $85.2 million increase in operating and administrative expenses (excluding the effects of the Finagaz integration expenses) and a $12.7 million increase in realized losses on certain foreign currency exchange contracts resulting from the stronger euro and British pound sterling. Adjusted total margin increased $121.6 million principally reflecting the translation effects of the stronger euro and British pound sterling on margin (approximately $80 million), incremental margin from UniverGas and DVEP ($58 million), and slightly higher natural gas margin from our existing energy marketing business. These increases in margin were partially offset by slightly lower total margin from our existing retail LPG business reflecting in large part lower Fiscal 2018 income on foreign currency exchange contracts. The increase in operating and administrative expenses principally reflects the translation effects of the stronger euro and British pound sterling on local currency expenses (approximately $45.0 million) and approximately $39 million of incremental expenses from UniverGas and DVEP. Our existing businesses' local currency operating and administrative expenses, excluding Finagaz integration expenses, were slightly lower than the prior year as lower compensation and benefits expense and lower tank and cylinder repair costs were largely offset by higher compliance costs associated with energy conservation and operational safety requirements and slightly higher distribution costs.

Fiscal 2017 and Fiscal 2016

Adjusted EBITDA was $346.7 million in Fiscal 2017, an increase of $8.3 million from Fiscal 2016, principally reflecting a decrease in adjusted total margin of $22.1 million more than offset by a $21.5 million decrease in operating and administrative expenses (excluding the effects of the Finagaz integration expenses) and slightly higher other operating income. The decrease in adjusted total margin primarily reflects (1) the translation effects of the weaker British pound sterling and euro; (2) slightly lower average retail bulk and cylinder LPG unit margins; and (3) the absence of margin from the autogas business in Poland as a result of exiting this low-margin, high-volume business in Fiscal 2016. The slightly lower average retail bulk and cylinder LPG unit margins principally reflect the negative effects on Fiscal 2017 unit margins of higher LPG commodity costs and the beneficial effects on Fiscal 2016 unit margins of declining LPG wholesale commodity costs. The decrease in operating and administrative expenses principally reflects lower operating and administrative costs in France resulting from expense synergies associated with the Finagaz integration and, to a much lesser extent, the translation effects of the weaker euro and British pound sterling.

Cash Flows

Due to the seasonal nature of the Company's businesses, cash flows from operating activities are generally strongest during the second and third fiscal quarters when customers pay for LPG consumed during the peak heating season months. Conversely, operating cash flows are generally at their lowest levels during the fourth and first fiscal quarters when the Company's investment in working capital, principally inventories and accounts receivable, is generally greatest.

Cash flows from operating activities can be significantly affected by year-to-year variations in changes in operating working capital reflecting changes in LPG commodity prices. Cash flow from investing activity is principally affected by cash expenditures for property, plant and equipment; cash paid for acquisitions of businesses; and net cash proceeds from sales and retirements of property, plant and equipment. Changes in cash flow from financing activities are primarily due to issuances and repayments of long-term debt, cash capital contributions from UGI usually in conjunction with material business acquisitions, short-term borrowings, and distributions paid to UGI International's parent company.

Operating Activities:

Cash flow from operating activities was $193.8 million in Fiscal 2018, $201.8 million in Fiscal 2017, and $266.2 million in Fiscal 2016. Cash flows from operating activities before changes in operating working capital were $258.8 million in Fiscal 2018, $253.3 million in Fiscal 2017, and $236.5 million in Fiscal 2016. Changes in operating working capital used operating cash flow of $65.0 million in Fiscal 2018, $51.5 million in Fiscal 2017 and provided operating cash flow of $29.7 million in Fiscal 2016. The use of cash flow from changes in operating working capital in Fiscal 2018 and Fiscal 2017 principally reflects the impact of general increases in LPG prices on changes in accounts receivable, inventories and accounts payable while the source of cash from changes in operating working capital in Fiscal 2016 principally reflects the impact of general decreases in LPG prices.

Investing Activities:

Cash flow used by investing activities was $205.0 million in Fiscal 2018, $145.8 million in Fiscal 2017 and $116.2 million in Fiscal 2016. Cash capital expenditures for property, plant and equipment totaled $111.4 million in Fiscal 2018, $89.3 million in Fiscal 2017 and $99.9 million in Fiscal 2016. The increase in Fiscal 2018 cash expenditures for property, plant and equipment reflects incremental cash expenditures associated with UniverGas and the effects of foreign currency rates. Net cash paid for acquisitions of businesses was $106.9 million in Fiscal 2018, $64.7 million in Fiscal 2017 and $23.6 million in Fiscal 2016. The Fiscal 2018 amount includes the acquisition of UniverGas while the Fiscal 2017 amount includes the DVEP acquisition.

Financing Activities:

Cash flow used by financing activities was $106.8 million in Fiscal 2018, $55.1 million in Fiscal 2017 and $70.4 million in Fiscal 2016. Repayments of debt and capital leases in Fiscal 2018 includes approximately $82.0 million of term loan debt repayments at UGI France and Flaga. The higher distributions paid in Fiscal 2017 primarily reflects the dividend of cash at UGI France.

Capital Expenditures

Our capital expenditures include amounts to replace and maintain our bulk tank and cylinder assets as well as our storage, production and logistics assets. We also incur capital expenditures to expand our bulk and cylinder businesses, including expanding cylinder offerings through vending machines and composite cylinder offerings, and capital costs related to IT and other technology initiatives. During Fiscal 2018, Fiscal 2017, and Fiscal 2016, our capital expenditures totaled $111.4 million, $90.3 million, and $99.9 million, respectively. We expect capital expenditures of approximately $122.0 million in Fiscal 2019.

Contractual Obligations and Commitments

The following is a summary of our significant contractual obligations existing as of September 30, 2018:

	Payments Due by Period				
(Millions of dollars)	Total	Fiscal 2019	Fiscal 2020 - 2021	Fiscal 2022 - 2023	Thereafter
Long-term debt (a)	$ 751.0	$ 70.0	$ 660.9	$ 20.1	$ —
Interest on long-term-fixed rate debt (b)	21.9	12.9	8.0	1.0	—
Operating leases	41.7	11.3	15.0	9.6	5.8
Supply contracts	88.2	88.2	—	—	—
Derivative instruments (c)	8.7	4.6	4.1	—	—
Total	$ 911.5	$ 187.0	$ 688.0	$ 30.7	$ 5.8

(a) Based upon stated maturity dates for debt outstanding at September 30, 2018. Principal repayments relating to the UGI France Senior Facilities term loan due through April 2020; the Flaga variable-rate term loan due October 2020; and the Flaga U.S. dollar variable-rate term loan due April 2020, are included in the table above. These term loans were repaid on October 25, 2018 with net proceeds from the issuance of the UGI International 3.25% Senior Notes due November 2025 and the UGI International Credit Facilities Agreement due October 2023 (see “Subsequent Event - UGI International Refinancing” above and Note 5 to Consolidated Financial Statements).

(b) Based upon stated interest rates adjusted for the effects of interest rate swaps.

(c) Represents the sum of amounts due if derivative instrument liabilities were settled at September 30, 2018, amounts reflected in the Consolidated Balance Sheet (but excluding amounts associated with interest rate and cross-currency swaps).

Critical Accounting Policies and Estimates

Accounting policies and estimates discussed in this section are those that we consider to be the most critical to an understanding of our financial statements because they involve significant judgments and uncertainties. Changes in these policies and estimates could have a material effect on our financial statements. The application of these accounting policies and estimates necessarily requires management’s most subjective or complex judgments regarding estimates and projected outcomes of future events which could have a material impact on our financial statements. Also, see Note 2 to the Consolidated Financial Statements which discuss the significant accounting policies that we have selected from acceptable alternatives.

Goodwill Impairment Evaluation

Our goodwill is the result of business acquisitions. We do not amortize goodwill, but test it at least annually for impairment at the reporting unit level. A reporting unit is the operating segment, or a business one level below the operating segment (a component), if discrete financial information is prepared and regularly reviewed by segment management. Components are aggregated as a single reporting unit if they have similar economic characteristics. A reporting unit with goodwill is required to perform an impairment test annually or whenever events or circumstances indicate that the value of goodwill may be impaired. For our reporting units with goodwill, we perform a quantitative assessment by comparing the fair values of the reporting units with their carrying amounts, including goodwill. We determine fair values generally based on a weighting of income and market approaches. For purposes of the income approach, fair values are determined based upon the present value of the reporting unit's estimated future cash flows, including an estimate of the reporting unit's terminal value based upon these cash flows, discounted at appropriate risk-adjusted rates. We use our internal forecasts to estimate future cash flows which may include estimates of long-term future growth rates based upon our most recent reviews of the long-term outlook for each reporting unit. Cash flow estimates used to establish fair values under our income approach involve management judgments based on a broad range of information and historical results. In addition, external economic and competitive conditions can influence future performance. For purposes of the market approach, we use valuation multiples for companies comparable to our reporting units. The market approach requires judgment to determine the appropriate valuation multiples. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to such excess but not to exceed the total amount of the goodwill of the reporting unit. As of September 30, 2018, our goodwill totaled $963.7 million. No impairments of goodwill were recorded during any of the periods presented.

Impairment of Long-Lived Assets

Impairment testing for individual long-lived assets, or groups of long-lived assets, is required when circumstances indicate that such assets may be impaired. If it is determined that a triggering event has occurred, we prepare a quantitative evaluation based upon undiscounted cash flow projections expected to be realized over the remaining useful life of the asset or the primary asset of an asset group. A long-lived asset or group of assets is considered impaired when the carrying amount of such assets exceeds the associated undiscounted estimated future cash flows. When determining whether an asset or group of assets has been impaired, management groups assets at the lowest level that has identifiable cash flows. Performing an impairment test on long-lived assets involves judgment in areas such as identifying when a triggering event requiring evaluation occurs; identifying and grouping assets; and, if the asset or group of assets is determined to be impaired based upon an excess of carrying amount over estimated undiscounted future cash flows, determining the fair value of the asset or asset group. Although cash flow estimates are based upon relevant information at the time the estimates are made, estimates of future cash flows are by nature highly uncertain and contemplate factors that change over time such as the expected use of the asset including future production and sales volumes, expected fluctuations in prices of commodities and expected proceeds from disposition. No material provisions for impairments of long-lived assets were recorded during Fiscal 2018, Fiscal 2017 or Fiscal 2016.

Purchase Price Allocations

From time to time, the Company enters into material business combinations. In accordance with accounting guidance associated with business combinations, the purchase price is allocated to the various assets acquired and liabilities assumed at their estimated fair value. Fair values of assets acquired and liabilities assumed are based upon available information and we may involve an independent third party to perform appraisals. Estimating fair values can be complex and subject to significant business judgment and most commonly impacts property, plant and equipment and intangible assets, including those with indefinite lives. Generally, we have, if necessary, up to one year from the acquisition date to finalize the purchase price allocation.

Accounting For Derivative Instruments at Fair Value

The Company enters into derivative instruments to economically hedge the risks associated with changes in commodity prices, interest rates and foreign currency rates. Accounting requirements for derivatives and related hedging activities are complex and may be subject to further clarification by standard-setting bodies. These derivatives are recognized as assets and liabilities at fair value on the Consolidated Balance Sheets. Derivative assets and liabilities are presented net by counterparty on our Consolidated Balance Sheets if the right of offset exists. The accounting for changes in fair value depends upon the purpose of the derivative instrument and whether it is designated and qualifies for hedge accounting. Changes in the fair values of certain derivative instruments that qualify and are designated as cash flow hedges are recorded in accumulated other comprehensive income ("AOCI") or noncontrolling interests, both of which are components of equity, to the extent effective at offsetting changes in the hedged item, until earnings are affected by the hedged item. Changes in the fair values of derivative instruments that we do not designate as, or that do not qualify for, hedge accounting under GAAP, which currently comprises all of our commodity and certain of our foreign currency derivative instruments, are recognized in earnings on the Consolidated Statements of Income. The fair values of our derivative instruments are determined based upon actively-quoted market prices for identical assets and liabilities, indicative price quotations available through brokers, industry price publications or recent market transactions and related market indicators. We maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. At September 30, 2018, the net fair value of our derivative assets totaled $130.9 million and the net fair value of our derivative liabilities totaled $9.8 million.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, income tax expense is recognized for the amount of taxes payable or refundable for the current year and for deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. Positions taken by an entity in its tax returns must satisfy a more-likely-than-not recognition threshold assuming the positions will be examined by tax authorities with full knowledge of relevant information. We use assumptions, judgments and estimates to determine our current provision for income taxes. We also use assumptions, judgments and estimates to determine our deferred tax assets and liabilities and any valuation allowance to be recorded against a deferred tax asset. Our assumptions, judgments and estimates relative to the current provision for income tax give consideration to current tax laws, our interpretation of current tax laws and possible outcomes of current and future audits conducted by foreign and domestic tax authorities. Changes in tax law or our interpretation thereof and the resolution of current and future tax audits could significantly impact the amounts provided for income taxes in our consolidated financial statements. Our assumptions, judgments and estimates relative to the amount of deferred income taxes take into account estimates of the amount of future taxable income. Actual taxable income or future estimates of taxable income could render our current assumptions, judgments and estimates inaccurate. Changes in the assumptions, judgments and estimates mentioned above could cause our actual income tax obligations to differ significantly from our estimates. As of September 30, 2018, our net deferred tax liabilities totaled $253.5 million.

Recently Issued Accounting Pronouncements

See Note 3 to the Consolidated Financial Statements for a discussion of the effects of recently issued accounting guidance.

Off-Balance Sheet Arrangements

We do not have any off-balance-sheet arrangements that are expected to have a material effect on our financial condition, change in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Qualitative and Quantitative Disclosures About Market Risk

Our primary market risk exposures are (1) commodity price risk; (2) interest rate risk; and (3) foreign currency exchange rate risk. Although we use derivative financial and commodity instruments to reduce market price risk associated with forecasted transactions, we do not use derivative financial and commodity instruments for speculative or trading purposes.

Commodity Price Risk

The risk associated with fluctuations in the prices we pay for LPG is principally a result of market forces reflecting changes in supply and demand for LPG and other energy commodities. Our profitability is sensitive to changes in LPG supply costs. Increases in supply costs are generally passed on to customers. We may not, however, always be able to pass through product cost increases fully or keep pace with such increases, particularly when product costs rise rapidly. In order to reduce the volatility of LPG market price risk, we use over-the-counter derivative commodity instruments and may from time to time enter into other derivative contracts to reduce market risk associated with a portion of our LPG purchases. Over-the-counter derivative commodity instruments used to economically hedge forecasted purchases of LPG are generally settled at expiration of the contract. In addition, certain of our businesses hedge a portion of our anticipated U.S. dollar-denominated LPG product purchases through the use of forward foreign currency exchange contracts as further described below.

Interest Rate Risk

Prior to their repayment on October 25, 2018, our long-term debt principally comprised UGI France’s and Flaga’s variable-rate term loans. These debt agreements had interest rates that were generally indexed to short-term market interest rates. UGI France and Flaga, through the use of pay-fixed receive-variable interest rate swaps, had fixed the underlying EURIBOR interest rates on their euro-denominated term loans through all, or a substantial portion of, the periods such debt was outstanding. In addition, Flaga’s U.S. dollar-denominated loan had been swapped from a floating-rate U.S. dollar-denominated interest rate to a fixed-rate euro-denominated interest rate through a cross-currency swap, removing interest rate risk (and foreign currency exchange risk as further described below under Foreign Currency Exchange Rate Risk) associated with the underlying interest payments. At September 30, 2018, combined borrowings outstanding under variable-rate debt agreements other than UGI France’s and Flaga’s effectively fixed-rate term loans and Flaga’s U.S. dollar-denominated loan were not material.

As previously mentioned, in October 2018, UGI International entered into the 2018 UGI International Credit Facilities Agreement, which includes a €300 million variable-rate term loan maturing in October 2023. In November 2018, UGI International, LLC entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on 2018 UGI International Credit Facilities Agreement term loan borrowings at 0.34%. We have designated these forward-starting interest rate swaps as cash flow hedges.

Foreign Currency Exchange Rate Risk

Our primary currency exchange rate risk is associated with the U.S. dollar versus the euro and, to a lesser extent, the U.S. dollar versus the British pound sterling. The U.S. dollar value of our foreign currency denominated assets and liabilities will fluctuate with changes in the associated foreign currency exchange rates. From time to time, we use derivative instruments to hedge portions of our net investments in foreign subsidiaries ("net investment hedges"). Gains or losses on net investment hedges remain in accumulated other comprehensive income until such foreign operations are sold or liquidated. At September 30, 2018, there were no unsettled net investment hedges outstanding. With respect to our net investments in foreign (non-U.S. based) operations, a 10% decline in the value of the associated foreign currencies versus the U.S. dollar would reduce their aggregate net book value at September 30, 2018, by approximately $140 million, which amount would be reflected in other comprehensive income. In October 2018, in connection with entering into the 2018 UGI International Credit Facilities Agreement and the UGI International Senior Notes, we designated the borrowings under these agreements as net investment hedges.

In addition, in order to reduce exposure to foreign exchange rate volatility related to our operations, through September 30, 2016, we entered into forward foreign currency exchange contracts to hedge a portion of anticipated U.S. dollar-denominated LPG product purchases primarily during the heating-season months of October through March.

Beginning October 1, 2016, in order to reduce the volatility in net income associated with our operations, principally as a result of changes in the U.S. dollar exchange rate between the euro and British pound sterling, we have entered into forward foreign currency exchange contracts.

As previously mentioned and prior to its related loan repayment on October 25, 2018, Flaga entered into cross-currency swaps to hedge its exposure to the variability in expected future cash flows associated with the foreign currency and interest rate risk of its U.S. dollar denominated variable-rate term loan. These cross-currency hedges included initial and final exchanges of principal from a fixed euro denomination to a fixed U.S. dollar-denominated amount, to be exchanged at a specified rate, which was determined by the market spot rate on the date of issuance. These cross-currency swaps also included interest rate swaps of a floating U.S. dollar-denominated interest rate to a fixed euro-denominated interest rate.

Derivative Instrument Credit Risk

We are exposed to risk of loss in the event of nonperformance by our derivative instrument counterparties. Our derivative instrument counterparties principally comprise large energy companies and major U.S. and international financial institutions. We maintain credit policies with regard to our counterparties that we believe reduce overall credit risk. These policies include evaluating and monitoring our counterparties' financial condition, including their credit ratings, and entering into agreements with counterparties that govern credit limits or entering into netting agreements that allow for offsetting counterparty receivable and payable balances for certain financial transactions as deemed appropriate.

Certain of these derivative instrument agreements call for the posting of collateral by the counterparty or by the Company in the forms of letters of credit, parental guarantees or cash. Additionally, our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. At September 30, 2018, restricted cash in brokerage accounts was not material. Although we have concentrations of credit risk associated with derivative instruments, the maximum amount of loss, based upon the gross fair values of the derivative instruments, we would incur if these counterparties failed to perform according to the terms of their contracts was not material at September 30, 2018.

The following table summarizes the fair values of unsettled market risk sensitive derivative instrument assets (liabilities) held at September 30, 2018. The table also includes the changes in fair values of derivative instruments that would result if there were (1) a 10% adverse change in the market prices of LPG, natural gas and electricity; (2) a 50 basis point adverse change in prevailing market rates; and (3) a 10% change in the value of the Euro and the British pound sterling versus the U.S. dollar.

	Asset (Liability)	
(Millions of dollars)	Fair Value	Change in Fair Value
September 30, 2018:		
Commodity price risk	$ 119.9	$ (42.0)
Interest rate risk	$ (1.0)	$ (1.0)
Foreign currency exchange rate risk	$ 7.1	$ (55.6)