UGI INTERNATIONAL, LLC
AND SUBSIDIARIES

CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
AND
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
for the three and six months ended March 31, 2020 and 2019
(Unaudited)

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

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UGI INTERNATIONAL, LLC AND SUBSIDIARIES

GLOSSARY OF TERMS AND ABBREVIATIONS

Terms and abbreviations used in this document are defined below:

UGI International and Related Entities

AvantiGas - AvantiGas Limited, an indirect wholly owned subsidiary of UGI International

Company - UGI International and its consolidated subsidiaries collectively

DVEP - DVEP Investeringen B.V., an indirect wholly owned subsidiary of UGI International

Enterprises - UGI Enterprises, LLC, a wholly owned subsidiary of UGI

Flaga - Flaga GmbH, an indirect wholly owned subsidiary of UGI International

UGI - UGI Corporation

UGI France - UGI France SAS (*a Société par actions simplifiée*), an indirect wholly owned subsidiary of UGI International

UGI International - UGI International, LLC, a wholly owned subsidiary of Enterprises

UniverGas - UniverGas Italia S.r.l, an indirect wholly owned subsidiary of UGI International

Other Terms and Abbreviations

2018 Credit Facilities Agreement - A five-year unsecured Senior Facilities Agreement entered into in October 2018 by UGI International comprising a €300 million term loan facility and a €300 million revolving credit facility

2019 Annual Report - UGI International's audited financial statements and related notes, along with Management's Discussion and Analysis of Financial Condition and Results of Operations for the fiscal year ended September 30, 2019

2019 six-month period - Six months ended March 31, 2019

2019 three-month period - Three months ended March 31, 2019

2020 six-month period - Six months ended March 31, 2020

2020 three-month period - Three months ended March 31, 2020

3.25% Senior Notes - An underwritten private placement by UGI International of €350 million principal amount of senior unsecured notes due November 1, 2025

AOCI - Accumulated other comprehensive income (loss)

ASC - Accounting Standards Codification

ASC 606 - ASC 606, "Revenue from Contracts with Customers"

ASC 840 - ASC 840, "Leases"

ASC 842 - ASC 842, "Leases" (effective October 1, 2019)

ASU - Accounting Standards Update

CARES Act - Coronavirus Aid, Relief, and Economic Security Act

COVID-19 - A novel strain of coronavirus disease discovered in 2019

Euribor - Euro Interbank Offered Rate

FASB - Financial Accounting Standards Board

Fiscal 2019 - The fiscal year ended September 30, 2019

Fiscal 2020 - The fiscal year ending September 30, 2020

Fiscal 2021 - The fiscal year ending September 30, 2021

Fiscal 2022 - The fiscal year ending September 30, 2022

Fiscal 2023 - The fiscal year ending September 30, 2023

Fiscal 2024 - The fiscal year ending September 30, 2024

***GAAP* -** U.S. generally accepted accounting principles

LIBOR - London Inter-bank Offered Rate

***LPG* -** Liquefied petroleum gas

***NOL* -** Net operating loss

***NPNS* -** Normal purchase and normal sale

ROU - Right-of-use

U.S. - United States of America

USD - U.S. dollar

VDP - Voluntary departure plans

***WHO* -** World Health Organization

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(unaudited)

(Thousands of dollars)

	March 31, 2020	September 30, 2019	March 31, 2019
ASSETS			
Current assets:			
Cash and cash equivalents	$ 219,777	$ 235,190	$ 222,440
Restricted cash	67,556	23,847	21,859
Accounts receivable (less allowances for doubtful accounts of $10,465, $10,032 and $10,101, respectively)	464,249	300,926	518,141
Inventories	55,317	65,731	71,519
Derivative instruments	30,690	24,160	20,005
Prepaid expenses and other current assets	37,781	24,105	39,867
Total current assets	875,370	673,959	893,831
Property, plant and equipment:			
Gross property, plant and equipment	1,848,045	1,799,198	1,814,665
Accumulated depreciation	(797,065)	(742,723)	(727,592)
Net property, plant and equipment	1,050,980	1,056,475	1,087,073
Goodwill	938,196	929,818	944,831
Intangible assets, net	200,680	200,327	208,358
Derivative instruments	36,561	41,268	19,005
Other assets	120,051	68,727	71,697
Total assets	$ 3,221,838	$ 2,970,574	$ 3,224,795
LIABILITIES AND EQUITY			
Current liabilities:			
Current maturities of long-term debt	$ 884	$ 146	$ 204
Short-term borrowings	185,491	210,899	9
Accounts payable	207,832	181,816	242,654
Employee compensation and benefits accrued	35,566	38,284	33,402
Derivative instruments	99,447	25,119	19,047
Other current liabilities	232,205	160,128	275,733
Total current liabilities	761,425	616,392	571,049
Long-term debt	730,364	719,349	739,833
Deferred income taxes	170,691	201,758	209,144
Derivative instruments	40,997	7,840	7,927
Customer tank and cylinder deposits	280,124	279,707	259,820
Other noncurrent liabilities	87,581	47,692	47,579
Total liabilities	2,071,182	1,872,738	1,835,352
Commitments and contingencies (Note 9)			
Equity:			
Member's equity	1,141,522	1,088,159	1,379,791
Noncontrolling interests	9,134	9,677	9,652
Total equity	1,150,656	1,097,836	1,389,443
Total liabilities and equity	$ 3,221,838	$ 2,970,574	$ 3,224,795

See accompanying notes to condensed consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF INCOME

(unaudited)
(Thousands of dollars)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Revenues	$ 703,446	$ 783,109	$ 1,354,814	$ 1,493,871
Costs and expenses:				
Cost of sales	519,481	473,181	901,495	1,019,149
Operating and administrative expenses	159,636	181,275	320,149	355,715
Operating and administrative expenses - related parties	1,975	3,383	4,400	5,628
Depreciation and amortization	30,379	30,586	61,599	61,973
Other operating income, net	(234)	(306)	(1,752)	(2,323)
	711,237	688,119	1,285,891	1,440,142
Operating (loss) income	(7,791)	94,990	68,923	53,729
Income from equity investees	56	76	59	58
Loss on extinguishments of debt	—	—	—	(6,124)
Other non-operating income, net	11,749	7,778	409	16,567
Interest expense	(7,742)	(6,121)	(15,334)	(11,512)
(Loss) income before income taxes	(3,728)	96,723	54,057	52,718
Income tax expense	(892)	(31,255)	(16,500)	(15,451)
Net (loss) income including noncontrolling interests	(4,620)	65,468	37,557	37,267
Deduct net income attributable to noncontrolling interests	(79)	(186)	(109)	(260)
Net (loss) income attributable to UGI International, LLC	$ (4,699)	$ 65,282	$ 37,448	$ 37,007

See accompanying notes to condensed consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(unaudited)
(Thousands of dollars)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Net (loss) income including noncontrolling interests	$ (4,620)	$ 65,468	$ 37,557	$ 37,267
Other comprehensive income (loss):				
Net gains (losses) on derivative instruments (net of tax of $(541), $765, $(978), and $662, respectively)	1,361	(568)	2,462	(896)
Reclassifications of net gains on derivative instruments (net of tax of $442, $292, $804, and $225, respectively)	(1,114)	(635)	(2,026)	(515)
Foreign currency adjustments (net of tax of $(7,151), $(7,737), $77, and $(4,944), respectively)	(32,736)	(26,826)	14,250	(42,480)
Benefit plans (net of tax of $(315), $(39), $(194), and $(68), respectively)	616	75	473	130
Other comprehensive (loss) income	(31,873)	(27,954)	15,159	(43,761)
Comprehensive (loss) income including noncontrolling interests	(36,493)	37,514	52,716	(6,494)
Deduct comprehensive income attributable to noncontrolling interests	(79)	(186)	(109)	(260)
Comprehensive (loss) income attributable to UGI International, LLC	$ (36,572)	$ 37,328	$ 52,607	$ (6,754)

See accompanying notes to condensed consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited)

(Thousands of dollars)

	Six Months Ended March 31, 2020	Six Months Ended March 31, 2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Net income including noncontrolling interests	$ 37,557	$ 37,267
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:		
Depreciation and amortization	61,599	61,973
Deferred income tax benefit, net	(42,372)	(39,657)
Changes in unrealized gains and losses on derivative instruments	144,853	113,194
Noncash operating and administrative expenses - related parties	—	5,628
Loss on extinguishments of debt	—	6,124
Other, net	742	(3,194)
Net change in:		
Accounts receivable	(166,808)	(148,041)
Inventories	11,179	35,109
Accounts payable	27,149	(3,062)
Derivative instruments collateral paid	(28,625)	(4,911)
Other current assets	(15,250)	1,656
Other current liabilities	60,652	68,126
Net cash provided by operating activities	90,676	130,212
CASH FLOWS FROM INVESTING ACTIVITIES		
Expenditures for property, plant and equipment	(41,935)	(49,913)
Acquisitions of businesses and assets, net of cash acquired	(379)	(23,495)
Other, net	3,168	3,270
Net cash used by investing activities	(39,146)	(70,138)
CASH FLOWS FROM FINANCING ACTIVITIES		
Decrease in short-term borrowings	(25,425)	(1,357)
Distributions paid	—	(53,750)
Issuances of long-term debt, net of issuance costs	—	728,928
Repayments of long-term debt and finance leases	(999)	(717,111)
Other	—	(3,162)
Net cash used by financing activities	(26,424)	(46,452)
Foreign exchange effect on cash, cash equivalents and restricted cash	3,190	(7,519)
Cash, cash equivalents and restricted cash increase	$ 28,296	$ 6,103
CASH, CASH EQUIVALENTS AND RESTRICTED CASH		
Cash, cash equivalents and restricted cash at end of period	$ 287,333	$ 244,299
Cash, cash equivalents and restricted cash at beginning of period	259,037	238,196
Cash, cash equivalents and restricted cash increase	$ 28,296	$ 6,103

See accompanying notes to condensed consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(unaudited)
(Thousands of dollars)

	Member's Equity	Noncontrolling Interests	Total
Balance at September 30, 2019	$ 1,088,159	$ 9,677	$ 1,097,836
Net income	37,448	109	37,557
Changes in AOCI balance	15,159	—	15,159
Other	756	(652)	104
Balance at March 31, 2020	$ 1,141,522	$ 9,134	$ 1,150,656

	Member's Equity	Noncontrolling Interests	Total
Balance at September 30, 2018	$ 1,436,296	$ 9,728	$ 1,446,024
Net income	37,007	260	37,267
Capital contribution - allocated expenses (Note 13)	3,999	—	3,999
Cash distributions	(53,750)	—	(53,750)
Changes in AOCI balance	(43,761)	—	(43,761)
Other	—	(336)	(336)
Balance at March 31, 2019	$ 1,379,791	$ 9,652	$ 1,389,443

See accompanying notes to condensed consolidated financial statements.

(Currency in thousands, except where indicated otherwise)

Note 1 — Nature of Operations

UGI International is a limited liability company domiciled in the Commonwealth of Pennsylvania in the U.S. UGI International is a wholly owned subsidiary of Enterprises, a Pennsylvania limited liability company, and is a second-tier wholly owned subsidiary of UGI. UGI is a U.S.-based holding company that, through subsidiaries and affiliates, distributes, stores, transports and markets energy products and related services principally in the U.S. and Europe.

UGI International, through its subsidiaries and affiliates, conducts (1) an 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 subsidiaries, UGI France, Flaga, AvantiGas, DVEP and UniverGas.

Note 2 — Summary of Significant Accounting Policies

The accompanying condensed consolidated financial statements are unaudited and have been prepared in accordance with GAAP. They include all adjustments that we consider necessary for a fair statement of the results for the interim periods presented. Such adjustments consisted only of normal recurring items unless otherwise disclosed. The September 30, 2019, Condensed Consolidated Balance Sheet was derived from audited financial statements but does not include all footnote disclosures from the annual financial statements.

These financial statements should be read in conjunction with the financial statements and related notes included in the Company's 2019 Annual Report. Due to the seasonal nature of our businesses, the results of operations for interim periods are not necessarily indicative of the results to be expected for a full year.

Restricted Cash. Restricted cash principally represents those cash balances in our commodity futures brokerage accounts that are restricted from withdrawal. The following table provides a reconciliation of the total cash, cash equivalents and restricted cash reported on the Condensed Consolidated Balance Sheets to the corresponding amounts reported on the Condensed Consolidated Statements of Cash Flows:

	Cash, Cash Equivalents and Restricted Cash			
	March 31, 2020	March 31, 2019	September 30, 2019	September 30, 2018
Cash and cash equivalents	$ 219,777	$ 222,440	$ 235,190	$ 237,539
Restricted cash	67,556	21,859	23,847	657
Cash, cash equivalents and restricted cash	$ 287,333	$ 244,299	$ 259,037	$ 238,196

Derivative Instruments. Derivative instruments are reported on the Condensed Consolidated Balance Sheets at their fair values, unless the 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 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. From time to time, we also enter into net investment hedges. Gains and losses on net investment hedges that relate to our foreign operations are included in the cumulative translation adjustment component in AOCI until such foreign net investment is sold or liquidated.

Cash flows from derivative instruments, other than certain cross-currency swaps and net investment hedges, if any, are included in cash flows from operating activities on the Condensed 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. Cash flows from net investment hedges, if any, are included in cash flows from investing activities on the Condensed Consolidated Statements of Cash Flows.

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 11.

Leases. Effective October 1, 2019, the Company adopted ASU No. 2016-02, "Leases," which, as amended, is included in ASC 842. This new accounting guidance supersedes previous lease accounting guidance in ASC 840 and requires entities that lease assets to recognize the assets and liabilities for the rights and obligations created by those leases on its balance sheet. The new guidance also requires additional disclosures about the amount, timing and uncertainty of cash flows from leases.

We adopted this new guidance using the modified retrospective transition method. Amounts and disclosures related to periods prior to October 1, 2019 have not been restated and continue to be reported in accordance with ASC 840. We elected to apply the following practical expedients in accordance with the guidance upon adoption:

- Short-term leases: We did not recognize short-term leases (term of 12 months or less) on the balance sheet;
- Easements: We did not re-evaluate existing land easements that were not previously accounted for as leases; and
- Other: We did not reassess the classification of expired or existing contracts or determine whether they are or contain a lease. We also did not reassess whether initial direct costs qualify for capitalization under ASC 842.

Upon adoption, we recorded ROU assets and lease liabilities of $51,342 related to our operating leases. Our accounting for finance leases remained substantially unchanged. There were no cumulative effect adjustments made to opening member's equity as of October 1, 2019. The adoption did not, and is not expected to, have a significant impact on our condensed consolidated statements of income or cash flows. See Note 5 for additional disclosures regarding our leases.

Other non-operating income, net. Included in “Other non-operating income, net” on the Condensed Consolidated Statements of Income are net gains and losses on forward foreign currency contracts used to reduce volatility in net income associated with our foreign operations, and non-service income (expense) associated with our pension and other postretirement plans.

Use of Estimates. 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.

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

Subsequent Events. Management has evaluated the impact of subsequent events through May 7, 2020, the date these condensed consolidated financial statements were issued and the effects, if any, of such evaluation have been reflected in the condensed consolidated financial statements and related disclosures.

Note 3 — Accounting Changes

New Accounting Standards Adopted in Fiscal 2020

Derivatives and Hedging. Effective October 1, 2019, the Company adopted 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. For cash flow and net investment hedges as of the adoption date, the guidance required a modified retrospective approach. The amended presentation and disclosure guidance was required prospectively. The adoption did not have a material impact on our consolidated financial statements.

Leases. Effective October 1, 2019, the Company adopted new accounting guidance for leases in accordance with ASC 842. See Notes 2 and 5 for a detailed description of the impact of the new guidance and related disclosures.

Accounting Standards Not Yet Adopted

Credit Losses. In June 2016, the FASB issued ASU 2016-13, “Measurement of Credit Losses on Financial Instruments.*”* This ASU, as subsequently amended, requires entities to estimate lifetime expected credit losses for financial instruments not measured at fair value through net income, including trade and other receivables, net investments in leases, financial receivables, debt securities, and other financial instruments, which may result in earlier recognition of credit losses. Further, the new current expected credit loss model may affect how entities estimate their allowance for losses related to receivables that are current with respect to their payment terms. ASU 2016-13 is effective for the Company for interim and annual periods beginning October 1, 2020 (Fiscal 2021). Early adoption is permitted. The Company is in the process of assessing the impact on its financial statements from the adoption of the new guidance.

(Currency in thousands, except where indicated otherwise)

Income Taxes. In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes." This ASU simplifies the accounting for income taxes by eliminating certain exceptions within the existing guidance for recognizing deferred taxes for equity method investments, performing intraperiod allocations and calculating income taxes in interim periods. Further, this ASU clarifies existing guidance related to, among other things, recognizing deferred taxes for goodwill and allocated taxes to members of a consolidated group. ASU 2019-12 is effective for the Company for interim and annual periods beginning October 1, 2021 (Fiscal 2022). Early adoption is permitted. 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.

Reference Rate Reform. In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting." This ASU provides entities temporary optional guidance to ease potential accounting burdens to transition away from LIBOR or other reference rates that are expected to be discontinued and replaced with alternative reference rates. This ASU applies to all entities that have contracts, hedging relationships and other transactions affected by reference rate reform. The provisions in this ASU, among other things, simplify contract modification accounting and allow hedging relationships affected by reference rate reform to continue. ASU 2020-04 is effective upon issuance and entities may elect to apply the amendments prospectively through December 31, 2022. 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 optional expedients will be elected.

Note 4 — Revenue from Contracts with Customers

The Company recognizes revenue when control of promised goods or services is transferred to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. See Note 4 in the Company's 2019 Annual Report for information on our revenues from contracts with customers.

Revenue Disaggregation

The following table presents our disaggregated revenues for the three and six months ended March 31, 2020 and 2019:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Revenues from contracts with customers:				
LPG:				
Retail	$ 482,067	$ 531,062	$ 945,250	$ 1,038,836
Wholesale	55,192	68,582	98,992	107,584
Energy Marketing	144,460	162,716	268,368	305,837
Other	17,311	12,635	29,660	25,060
Total revenues from contracts with customers	699,030	774,995	1,342,270	1,477,317
Other revenues (a)	4,416	8,114	12,544	16,554
Total revenues	$ 703,446	$ 783,109	$ 1,354,814	$ 1,493,871

(a) Primarily represents revenues from tank rentals that are not within the scope of ASC 606 and accounted for in accordance with other GAAP.

Contract Balances

The timing of revenue recognition may differ from the timing of invoicing to customers or cash receipts. Contract assets represent our right to consideration after the performance obligations have been satisfied when such right is conditioned on something other than the passage of time. Contract assets were not material for all periods presented. Substantially all of our receivables are unconditional rights to consideration and are included in "Accounts receivable" on the Condensed Consolidated Balance Sheets. Amounts billed are generally due within the following month.

Contract liabilities arise when payment from a customer is received before the performance obligations have been satisfied and represent the Company's obligations to transfer goods or services to a customer for which we have received consideration. The balances of contract liabilities were $6,573, $14,757 and $9,735 at March 31, 2020, September 30, 2019 and March 31, 2019, respectively, and are included in "Other current liabilities" on the Condensed Consolidated Balance Sheets. Revenues recognized for the six months ended March 31, 2020 and 2019, from the amounts included in contract liabilities at September 30, 2019 and October 1, 2018, were $14,757 and $8,822, respectively.

Remaining Performance Obligations

We have elected to use practical expedients as allowed in ASC 606 to exclude disclosures related to the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied as of the end of the reporting period because these contracts have an initial expected term of one year or less or we have a right to bill the customer in an amount that corresponds directly with the value of services provided to the customer to date.

Note 5 — Leases

Lessee

We lease various buildings and other facilities, real estate, vehicles, rail cars and other equipment, the majority of which are operating leases. We determine if a contract is or contains a lease by evaluating whether the contract explicitly or implicitly identifies an asset, whether we have the right to obtain substantially all of the economic benefits of the identified leased asset and to direct its use.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. We recognize ROU assets at the lease commencement date at the value of the lease liability adjusted for any prepayments, lease incentives received, and initial direct costs incurred. Lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. These payments are discounted using the discount rate implicit in the lease, when available. We apply an incremental borrowing rate, which is developed utilizing a credit notching approach based on information available at the lease commencement date, to substantially all of our leases as the implicit rate is often not available.

Lease expense is recognized on a straight-line basis over the expected lease term. Renewal and termination options are not included in the lease term unless we are reasonably certain that such options will be exercised. Leases with an original lease term of one year or less, including consideration of any renewal options assumed to be exercised, are not included in the Condensed Consolidated Balance Sheets.

Certain leasing arrangements require variable payments that are dependent on asset usage or are based on changes in index rates, such as the Consumer Price Index. The variable payments component of such leases cannot be determined at lease commencement and is not recognized in the measurement of ROU assets or lease liabilities, but is recognized in earnings in the period in which the obligation occurs.

(Currency in thousands, except where indicated otherwise)

ROU assets and lease liabilities recorded in the Condensed Consolidated Balance Sheet are as follows:

	March 31, 2020	Location on the Balance Sheet
ROU assets:		
Operating lease ROU assets	$ 44,978	Other assets
Finance lease ROU assets	2,679	Net property, plant and equipment
Total ROU assets	$ 47,657	
Lease liabilities:		
Operating lease liabilities - current	$ 12,861	Other current liabilities
Operating lease liabilities - noncurrent	32,417	Other noncurrent liabilities
Finance lease liabilities - current	884	Current maturities of long-term debt
Finance lease liabilities - noncurrent	1,811	Long-term debt
Total lease liabilities	$ 47,973	

The components of lease cost are as follows:

	Three Months Ended March 31, 2020	Six Months Ended March 31, 2020
Operating lease cost	$ 5,763	$ 9,725
Finance lease cost		
Amortization of ROU assets	348	617
Interest on lease liabilities	7	13
Total lease cost	$ 6,118	$ 10,355

Lease costs associated with variable lease components and short-term leases were not material for the three and six months ended March 31, 2020.

The following table presents the cash and non-cash activity related to lease liabilities included in the Condensed Consolidated Statement of Cash Flows occurring during the period:

	Six Months Ended March 31, 2020
Cash paid related to lease liabilities:	
Operating cash flows from operating leases	$ 9,704
Operating cash flows from finance leases	$ 13
Financing cash flows from finance leases	$ 594
Non-cash lease liability activities:	
ROU assets obtained in exchange for operating lease liabilities (including the impact upon adoption)	$ 51,468
ROU assets obtained in exchange for finance lease liabilities	$ 2,881

(Currency in thousands, except where indicated otherwise)

The following table presents the weighted-average remaining lease terms and weighted-average discount rates as of March 31, 2020:

Weighted-average remaining lease term	In years
Operating leases	6.4
Finance leases	3.7
Weighted-average discount rate	%
Operating leases	1.0%
Finance leases	0.8%

Expected annual lease payments based on maturities of operating and finance leases, as well as a reconciliation to the lease liabilities on the Condensed Consolidated Balance Sheet, as of March 31, 2020, were as follows:

	Remainder of Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024	After Fiscal 2024	Total Lease Payments	Imputed Interest	Lease Liabilities
Operating leases	$ 6,642	$ 11,247	$ 7,962	$ 6,165	$ 4,866	$ 8,996	$ 45,878	$ (600)	$ 45,278
Finance leases	$ 475	$ 821	$ 628	$ 421	$ 237	$ 154	$ 2,736	$ (41)	$ 2,695

At March 31, 2020, operating and finance leases that had not yet commenced were not material.

Disclosures related to periods prior to adoption of ASC 842

As discussed above, the Company adopted ASC 842 effective October 1, 2019, using a modified retrospective approach. As required, the following disclosure is provided for periods prior to adoption. The Company's future minimum payments under non-cancelable operating leases at September 30, 2019, which were accounted for under ASC 840, were as follows:

	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024	After Fiscal 2024
Minimum operating lease payments	$ 12,905	$ 10,014	$ 6,988	$ 5,700	$ 5,131	$ 6,487

Lessor

We enter into lessor arrangements for the purposes of storing LPG that grant customers the right to use small, medium and large storage tanks, which we classify as operating leases. These agreements contain renewal options for periods up to nine years and certain agreements contain a purchase option. Lease income is generally recognized on a straight-line basis over the lease term and included in "Revenues" on the Condensed Consolidated Statements of Income (see Note 4).

Note 6 — Defined Benefit Pension and Other Postretirement Plans

Certain Company employees 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.

(Currency in thousands, except where indicated otherwise)

The service cost component of our pension and other postretirement plans is reflected in “Operating and administrative expenses” on the Condensed Consolidated Statements of Income. The non-service cost components are reflected in “Other non-operating income, net” on the Condensed Consolidated Statements of Income. Net periodic pension and other postretirement benefit costs (benefits) include the following components:

	Pension Benefits		Other Postretirement Benefits	
Three Months Ended March 31,	2020	2019	2020	2019
Service cost	$ 624	$ 689	$ —	$ —
Interest cost	58	218	6	14
Expected return on assets	(95)	(159)	—	—
Curtailment gain	(1,051)	—	—	—
Amortization of:				
Prior service cost (benefit)	14	(1)	(24)	(24)
Actuarial loss (gain)	49	47	5	(2)
Net (benefit) cost	$ (401)	$ 794	$ (13)	$ (12)

	Pension Benefits		Other Postretirement Benefits	
Six Months Ended March 31,	2020	2019	2020	2019
Service cost	$ 1,251	$ 1,378	$ —	$ —
Interest cost	117	436	12	29
Expected return on assets	(191)	(318)	—	—
Curtailment gain	(1,051)	—	—	—
Amortization of:				
Prior service cost (benefit)	27	(3)	(47)	(48)
Actuarial loss (gain)	98	93	10	(3)
Net cost (benefit)	$ 251	$ 1,586	$ (25)	$ (22)

Note 7 — Inventories

Inventories comprise the following:

	March 31, 2020	September 30, 2019	March 31, 2019
LPG	$ 41,950	$ 45,591	$ 55,926
Natural gas	639	8,535	3,649
Other, principally materials & supplies	12,728	11,605	11,944
Total inventories	$ 55,317	$ 65,731	$ 71,519

(Currency in thousands, except where indicated otherwise)

Note 8 — Goodwill and Intangible Assets

Goodwill and intangible assets comprise the following:

	March 31, 2020	September 30, 2019	March 31, 2019
Goodwill	$ 938,196	$ 929,818	$ 944,831
Intangible assets:			
Customer relationships and other	$ 318,491	$ 299,404	$ 301,996
Trademarks and tradenames (a)	3,823	8,244	8,413
Accumulated amortization	(167,864)	(156,708)	(152,890)
Intangible assets, net (subject to amortization)	154,450	150,940	157,519
Trademarks and tradenames (not subject to amortization) (a)	46,230	49,387	50,839
Total intangible assets, net	$ 200,680	$ 200,327	$ 208,358

(a) Changes in balances since September 30, 2019 reflect UGI International management's decision to discontinue the use of certain tradenames. For more information on management's decision, see Note 14.

The change in goodwill since September 30, 2019 is primarily due to the effects of foreign currency translation. Amortization expense of intangible assets was $7,935 and $3,806 for the three months ended March 31, 2020 and 2019, respectively, and $12,061 and $7,621 for the six months ended March 31, 2020 and 2019, respectively. The estimated aggregate amortization expense of intangible assets for the remainder of Fiscal 2020 and for the next four fiscal years is as follows: remainder of Fiscal 2020 — $14,547; Fiscal 2021 — $20,571; Fiscal 2022 — $17,406; Fiscal 2023 — $16,286; Fiscal 2024 — $15,707.

Note 9 — Commitments and Contingencies

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 10 — 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.

	Asset (Liability)			
	Level 1	Level 2	Level 3	Total
March 31, 2020				
Assets:				
Commodity contracts	$ 16,116	$ 1,186	$ —	$ 17,302
Foreign currency contracts	$ —	$ 57,927	$ —	$ 57,927
Liabilities:				
Commodity contracts	$ (38,415)	$ (137,615)	$ —	$ (176,030)
Foreign currency contracts	$ —	$ (6,791)	$ —	$ (6,791)
Interest rate contracts	$ —	$ (2,709)	$ —	$ (2,709)
September 30, 2019				
Assets:				
Commodity contracts	$ 10,769	$ —	$ —	$ 10,769
Foreign currency contracts	$ —	$ 58,966	$ —	$ 58,966
Liabilities:				
Commodity contracts	$ (1,828)	$ (36,292)	$ —	$ (38,120)
Foreign currency contracts	$ —	$ (4,307)	$ —	$ (4,307)
Interest rate contracts	$ —	$ (3,319)	$ —	$ (3,319)
March 31, 2019				
Assets:				
Commodity contracts	$ 11,139	$ 5,681	$ —	$ 16,820
Foreign currency contracts	$ —	$ 29,762	$ —	$ 29,762
Liabilities:				
Commodity contracts	$ (434)	$ (26,048)	$ —	$ (26,482)
Foreign currency contracts	$ —	$ (4,876)	$ —	$ (4,876)
Interest rate contracts	$ —	$ (3,188)	$ —	$ (3,188)

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 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. We estimate the fair value of long-term debt by using current market rates and by discounting future cash flows using rates available for similar type debt (Level 2). The carrying amounts and estimated fair values of our long-term debt (including current maturities but excluding unamortized debt issuance costs) were as follows:

(Currency in thousands, except where indicated otherwise)

	March 31, 2020	September 30, 2019	March 31, 2019
Carrying amount	$ 738,793	$ 727,798	$ 749,099
Estimated fair value	$ 727,063	$ 751,993	$ 765,900

Financial instruments other than derivative financial instruments, such as short-term investments and trade accounts receivable, could expose us to concentrations of credit risk. We limit our credit risk from short-term investments 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 11.

Note 11 — 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 additional information on the accounting for our derivative instruments, see Note 2.

Commodity Price Risk

In order to manage market price risk associated with changes in prices for LPG, we use over-the-counter commodity derivative instruments, primarily price swap contracts, to reduce market risk associated with a portion of our forecasted LPG purchases. We also enter into natural gas and electricity futures and forward contracts, some of which qualify for NPNS under GAAP, to manage market price risk associated with fixed-price sales contracts for natural gas and electricity and purchase contracts for electricity.

Interest Rate Risk

Certain of our long-term debt agreements have interest rates that are generally indexed to short-term market interest rates. In order to fix the underlying short-term market interest rates, we may enter into pay-fixed, receive-variable interest rate swap agreements and designate such swaps as cash flow hedges.

Foreign Currency Exchange Rate Risk

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 to the euro and British pound sterling, we enter into forward foreign currency exchange contracts. We layer in these foreign currency exchange contracts over a multi-year period to eventually equal approximately 90% of anticipated UGI International local currency earnings before income taxes. Because these contracts are not designated as hedging instruments, realized and unrealized gains and losses on these contracts are recorded in “Other non-operating income, net” on the Condensed Consolidated Statements of Income.

In order to reduce exposure to foreign exchange rate volatility related to our foreign LPG operations, we previously 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. The last of these contracts expired in September 2019. We accounted for these foreign currency exchange contracts as cash flow hedges.

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 euro-denominated net investments. We account for these foreign currency exchange contracts as net investment hedges. We use the forward rate method for measuring ineffectiveness for these net investment hedges and all changes in the fair value of the forward foreign currency contracts are reported in the cumulative translation adjustment component in AOCI.

Certain euro-denominated long-term debt issued under the 2018 Credit Facilities Agreement and the 3.25% Senior Notes in October 2018 have been designated as net investment hedges of a portion of our euro-denominated net investments. We recognized pre-tax gains (losses) associated with these net investment hedges in the cumulative translation adjustment component in AOCI of $11,895 and $16,380 during the three months ended March 31, 2020 and 2019, respectively, and $(8,515) and $10,270 during the six months ended March 31, 2020 and 2019, respectively.

Quantitative Disclosures Related to Derivative Instruments

The following table summarizes by derivative type the gross notional amounts related to open derivative contracts at March 31, 2020, September 30, 2019 and March 31, 2019 and the final settlement date of the Company's open derivative transactions as of March 31, 2020, excluding those derivatives that qualified for the NPNS exception:

			Notional Amounts (in millions)		
Type	Units	Settlements Extending Through	March 31, 2020	September 30, 2019	March 31, 2019
Commodity Price Risk:					
LPG swaps	Gallons	March 2022	292.3	277.3	191.9
Natural gas forward and futures contracts	Dekatherms	April 2024	29.5	6.8	9.7
Electricity long forward and futures contracts	Kilowatt hours	January 2024	3,111.5	2,214.8	2,782.9
Interest Rate Risk:					
Interest rate swaps	Euro	October 2022	€ 300.0	€ 300.0	€ 300.0
Foreign Currency Exchange Rate Risk:					
Forward foreign exchange contracts	USD	September 2023	$ 460.1	$ 516.0	$ 299.1
Net investment hedge forward foreign exchange contracts	Euro	October 2024	€ 172.8	€ 172.8	€ 172.8

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. Additionally, our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. Restricted cash in brokerage accounts is reported in "Restricted cash" on the Condensed Consolidated Balance Sheets. 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 March 31, 2020.

(Currency in thousands, except where indicated otherwise)

Offsetting Derivative Assets and Liabilities

Derivative assets and liabilities are presented net by counterparty on our Condensed 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 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 derivative counterparties, if any, is reflected in the table below to offset derivative assets. Certain other accounts receivable and accounts payable balances recognized on the Condensed 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.

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:

	March 31, 2020	September 30, 2019	March 31, 2019
Derivative assets:			
Derivatives designated as hedging instruments:			
Foreign currency contracts	$ 27,166	$ 17,355	$ 7,072
Derivatives not designated as hedging instruments:			
Commodity contracts	17,302	10,769	16,820
Foreign currency contracts	30,761	41,611	22,690
	48,063	52,380	39,510
Total derivative assets - gross	75,229	69,735	46,582
Gross amounts offset in balance sheet	(7,978)	(4,307)	(7,572)
Total derivative assets - net	$ 67,251	$ 65,428	$ 39,010
Derivative liabilities:			
Derivatives designated as hedging instruments:			
Interest rate contracts	$ (2,709)	$ (3,319)	$ (3,188)
Derivatives not designated as hedging instruments:			
Commodity contracts	(176,030)	(38,120)	(26,482)
Foreign currency contracts	(6,791)	(4,307)	(4,876)
	(182,821)	(42,427)	(31,358)
Total derivative liabilities - gross	(185,530)	(45,746)	(34,546)
Gross amounts offset in balance sheet	7,978	4,307	7,572
Cash collateral pledged	37,108	8,480	—
Total derivative liabilities - net	$ (140,444)	$ (32,959)	$ (26,974)

(Currency in thousands, except where indicated otherwise)

Effects of Derivative Instruments

The following tables provide information on the effects of derivative instruments on the Condensed Consolidated Statements of Income and changes in AOCI for the three and six months ended March 31, 2020 and 2019:

Three Months Ended March 31,

Cash Flow Hedges:	Gain (Loss) Recognized in AOCI 2020	Gain (Loss) Recognized in AOCI 2019	Gain (Loss) Reclassified from AOCI into Income 2020	Gain (Loss) Reclassified from AOCI into Income 2019	Location of Gain (Loss) Reclassified from AOCI into Income
Foreign currency contracts	$ —	$ 187	$ —	$ 1,337	Cost of sales
Interest rate contracts	1,902	(1,520)	1,556	(410)	Interest expense
Total	$ 1,902	$ (1,333)	$ 1,556	$ 927	

Net Investment Hedges:	2020	2019
Foreign currency contracts	$ 13,270	$ 5,902

Derivatives Not Designated as Hedging Instruments:	Gain (Loss) Recognized in Income 2020	Gain (Loss) Recognized in Income 2019	Location of Gain (Loss) Recognized in Income
Commodity contracts	$(122,410)	$ (34,346)	Cost of sales
Foreign currency contracts	11,770	7,837	Other non-operating income, net
Total	$(110,640)	$ (26,509)	

Six Months Ended March 31,

Cash Flow Hedges:	Gain (Loss) Recognized in AOCI 2020	Gain (Loss) Recognized in AOCI 2019	Gain (Loss) Reclassified from AOCI into Income 2020	Gain (Loss) Reclassified from AOCI into Income 2019	Location of Gain (Loss) Reclassified from AOCI into Income
Foreign currency contracts	$ —	$ 1,185	$ —	$ 2,098	Cost of sales
Interest rate contracts	3,440	(2,667)	2,830	(1,045)	Interest expense
Cross-currency contracts	—	(76)	—	(313)	Interest expense
Total	$ 3,440	$ (1,558)	$ 2,830	$ 740	

Net Investment Hedges:	2020	2019
Foreign currency contracts	$ 9,811	$ 6,842

Derivatives Not Designated as Hedging Instruments:	Gain (Loss) Recognized in Income 2020	Gain (Loss) Recognized in Income 2019	Location of Gain (Loss) Recognized in Income
Commodity contracts	$(133,987)	$(130,653)	Cost of sales
Foreign currency contracts	438	16,716	Other non-operating income, net
Total	$(133,549)	$(113,937)	

We are also a party to a number of other contracts that have elements of a derivative instrument. However, 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. These contracts include, among others, binding purchase orders and contracts that provide for the purchase and delivery, or sale, of energy products.

(Currency in thousands, except where indicated otherwise)

Note 12 — Accumulated Other Comprehensive Income

The tables below present changes in AOCI, which amounts are included in "Member's equity" on the Condensed Consolidated Balance Sheets, during the three and six months ended March 31, 2020 and 2019:

For three months ended March 31, 2020:	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - December 31, 2019	$ (4,119)	$ (2,186)	$ (118,925)	$ (125,230)
Other comprehensive income (loss) before reclassification adjustments (after-tax)	—	1,361	(32,736)	(31,375)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	931	(1,556)	—	(625)
Reclassification adjustments tax (benefit) expense	(315)	442	—	127
Reclassification adjustments (after-tax)	616	(1,114)	—	(498)
Other comprehensive income (loss)	616	247	(32,736)	(31,873)
AOCI - March 31, 2020	$ (3,503)	$ (1,939)	$ (151,661)	$ (157,103)

For three months ended March 31, 2019:	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - December 31, 2018	$ (2,292)	$ (879)	$ (99,389)	$ (102,560)
Other comprehensive loss before reclassification adjustments (after-tax)	—	(568)	(26,826)	(27,394)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	114	(927)	—	(813)
Reclassification adjustments tax (benefit) expense	(39)	292	—	253
Reclassification adjustments (after-tax)	75	(635)	—	(560)
Other comprehensive income (loss)	75	(1,203)	(26,826)	(27,954)
AOCI - March 31, 2019	$ (2,217)	$ (2,082)	$ (126,215)	$ (130,514)

(Currency in thousands, except where indicated otherwise)

For six months ended March 31, 2020:	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - September 30, 2019	$ (3,976)	$ (2,375)	$ (165,911)	$ (172,262)
Other comprehensive income before reclassification adjustments (after-tax)	—	2,462	14,250	16,712
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	667	(2,830)	—	(2,163)
Reclassification adjustments tax (benefit) expense	(194)	804	—	610
Reclassification adjustments (after-tax)	473	(2,026)	—	(1,553)
Other comprehensive income	473	436	14,250	15,159
AOCI - March 31, 2020	$ (3,503)	$ (1,939)	$ (151,661)	$ (157,103)

For six months ended March 31, 2019:	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - September 30, 2018	$ (2,347)	$ (671)	$ (83,735)	$ (86,753)
Other comprehensive loss before reclassification adjustments (after-tax)	—	(896)	(42,480)	(43,376)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	198	(740)	—	(542)
Reclassification adjustments tax (benefit) expense	(68)	225	—	157
Reclassification adjustments (after-tax)	130	(515)	—	(385)
Other comprehensive income (loss)	130	(1,411)	(42,480)	(43,761)
AOCI - March 31, 2019	$ (2,217)	$ (2,082)	$ (126,215)	$ (130,514)

For additional information on amounts reclassified from AOCI relating to derivative instruments, see Note 11.

Note 13 — 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, beginning October 1, 2019, the Company is billed for its allocated share of UGI indirect corporate expenses. Prior to October 1, 2019, Enterprises, as the parent company of UGI International, was billed for these 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 the Company during the three and six months ended March 31, 2020, and billed to Enterprises on behalf of the Company during the three and six months ended March 31, 2019, have been included in "Operating and administrative expenses - related parties" on the Condensed Consolidated Statements of Income. For periods prior to October 1, 2019, the amount of such allocated expenses billed to Enterprises, net of any income tax benefit, is reflected as "Capital contribution - allocated expenses" on the Condensed Consolidated Statements of Changes in Equity.

Note 14 — Business Integration and Transformation Initiatives

During Fiscal 2016, Fiscal 2017 and Fiscal 2018, UGI France initiated several VDPs pursuant to which employees were incentivized to voluntarily terminate employment or were 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. Expenses recorded under the VDPs are included in "Operating and administrative expenses" on the Condensed Consolidated Statements of Income, principally in the years the VDPs were initiated.

(Currency in thousands, except where indicated otherwise)

The following tables reflect changes in the accrued amounts for the six months ended March 31, 2020 and 2019 associated with the VDPs:

Balance at September 30, 2019	$	10,414
Costs incurred and charged to expense		441
Amounts paid or settled		(7,525)
Foreign currency translation		139
Balance at March 31, 2020	$	3,469

Balance at September 30, 2018	$	19,441
Amounts paid or settled		(5,652)
Foreign currency translation		(599)
Balance at March 31, 2019	$	13,190

During the fourth quarter of Fiscal 2019, we began executing a multi-year business transformation initiative. This initiative is designed to improve long-term operational performance by, among other things, reducing costs and improving efficiency in the areas of sales and marketing, supply and logistics, operations, purchasing, and administration. In addition, this business transformation initiative also focuses on enhancing the customer experience through, among other things, enhanced sales and marketing initiatives and an improved digital customer experience. In connection with these initiatives, during the three and six months ended March 31, 2020, we recognized $6,712 and $12,180, respectively, of expenses principally comprising consulting, advisory, employee-related costs and the discontinuance of certain tradenames (described below). These expenses are reflected in "Operating and administrative expenses" on the Condensed Consolidated Statements of Income.

In March 2020, UGI International management approved a plan to discontinue the use of certain definite and indefinite-lived tradenames in connection with initiatives to improve the long-term operational performance of the Company. As a result, in March 2020 the Company recorded a non-cash, pre-tax impairment charge in the amount of $5,742, which is included in business transformation costs for the three and six months ended March 31, 2020, described in the paragraph above. Also in March 2020, the Company decided to discontinue the use, over time, of an indefinite-lived tradename having a carrying value of $3,751 at March 31, 2020. This remaining carrying value will be amortized over a period of 10 years.

Note 15 — Impact of Global Pandemic

In March 2020, the WHO declared a global pandemic attributable to the outbreak and continued spread of COVID-19 that has had a significant impact throughout the global economy. In connection with the mitigation and containment procedures recommended by the WHO and imposed by federal, state, and local governmental authorities, including shelter-in-place orders, quarantines and similar restrictions, the Company implemented a variety of procedures to protect its employees, third-party business partners, and customers. The Company continues to provide essential products and services to its customers in a safe and reliable manner, and will continue to do so in compliance with mandated restrictions presented by each of the markets it serves. However, the Company continues to evaluate and react to the potential effects of a prolonged disruption and the related impacts on its results of operations. These items may include, but are not limited to: the financial condition of its customers; decreased availability and demand for its products and services; realization of accounts receivable; impairment considerations related to certain current assets, long-lived assets and goodwill; and delays related to current and future projects. While its operational and financial performance may be significantly impacted by COVID-19, the Company cannot predict the duration or magnitude of the outbreak and its effects on its business, financial position, results of operations, liquidity or cash flows at this time.

On March 27, 2020, the CARES Act was enacted in response to the COVID-19 pandemic. Among other things, the CARES Act includes provisions which modify the NOL limitation and carryback rules including a five-year carryback for NOLs arising in taxable years beginning in 2018, 2019, and 2020, and the temporary removal of the 80 percent limitation on NOL utilization for taxable years beginning before January 1, 2021. The Company's annual effective income tax rate for Fiscal 2020 reflects anticipated tax benefits resulting from the carryback of an NOL for Fiscal 2020 pursuant to the provisions of the CARES Act.

The Company has not yet filed its U.S. income tax returns for Fiscal 2019 or 2020, and continues to evaluate other U.S. tax positions or strategies that could affect current-year or prior-year U.S. taxable income or loss. Accordingly, the impacts from the CARES Act on the Company's income tax provisions and taxes payable or refundable are subject to change.

Recent Developments

In March 2020, the WHO declared a global pandemic attributable to the outbreak and continued spread of COVID-19 that has had a significant impact throughout the global economy. In connection with the mitigation and containment procedures recommended by the WHO and imposed by federal, state, and local governmental authorities, including shelter-in-place orders, quarantines and similar restrictions, we implemented a variety of procedures to protect our employees, third-party business partners, and customers worldwide. Although our results for the Fiscal 2020 began to reflect the impacts of COVID-19, we continue to provide essential products and services to our customers in a safe and reliable manner and will continue to do so in compliance with mandated restrictions presented by each of the markets we serve. However, we continue to evaluate and react to the potential effects of a prolonged disruption and the related impacts on our results of operations. These items may include, but are not limited to: the financial condition of our customers; decreased availability and demand for our products and services; realization of accounts receivable; impairment considerations related to certain current assets, long-lived assets and goodwill; and delays related to current and future projects. We also remain focused on managing our financial condition and liquidity throughout this global crisis.

On March 27, 2020, the CARES Act was enacted in response to the COVID-19 pandemic. Among other things, the CARES Act includes provisions which modify the NOL limitation and carryback rules including a five-year carryback for NOLs arising in taxable years beginning in 2018, 2019, and 2020, and the temporary removal of the 80 percent limitation on NOL utilization for taxable years beginning before January 1, 2021. For additional information related to the CARES Act and its impact on our results of operations, see "Interest Expense and Income Taxes" below.

While our operational and financial performance may be significantly impacted by COVID-19, we cannot predict the duration or magnitude of the pandemic and its effects on our business, financial position, results of operations, liquidity or cash flows at this time.

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, 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 changes in 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 to the most directly comparable financial measures calculated and presented in accordance with GAAP for the periods presented.

	Three Months Ended March 31,		Six Months Ended March 31,	
(Millions of dollars)	2020	2019	2020	2019
Adjusted total margin:				
Revenues	$ 703.4	$ 783.1	$ 1,354.8	$ 1,493.9
Cost of sales (a)	(519.5)	(473.2)	(901.5)	(1,019.2)
French energy certificates (a)	—	(16.2)	—	(26.2)
Total margin	183.9	293.7	453.3	448.5
Net losses on commodity derivative instruments not associated with current-period transactions	117.9	28.6	131.5	125.9
Adjusted total margin	$ 301.8	$ 322.3	$ 584.8	$ 574.4
Adjusted operating income:				
Operating (loss) income	$ (7.8)	$ 95.0	$ 68.9	$ 53.7
Net losses on commodity derivative instruments not associated with current-period transactions	117.9	28.6	131.5	125.9
Business transformation expenses	6.7	—	12.2	—
Adjusted operating income	$ 116.8	$ 123.6	$ 212.6	$ 179.6
Adjusted income before income taxes:				
(Loss) income before income taxes	$ (3.7)	$ 96.7	$ 54.1	$ 52.7
Net losses on commodity derivative instruments not associated with current-period transactions	117.9	28.6	131.5	125.9
Unrealized (gains) losses on foreign currency derivative instruments	(2.4)	(4.6)	13.3	(12.7)
Loss on extinguishments of debt	—	—	—	6.1
Business transformation expenses	6.7	—	12.2	—
Adjusted income before income taxes	$ 118.5	$ 120.7	$ 211.1	$ 172.0
Adjusted net income attributable to UGI International:				
Net (loss) income attributable to UGI International, LLC	$ (4.7)	$ 65.3	$ 37.4	$ 37.0
Net losses on commodity derivative instruments not associated with current-period transactions	80.2	23.0	92.5	90.3
Unrealized (gains) losses on foreign currency derivative instruments	(1.8)	(3.2)	9.5	(9.0)
Loss on extinguishments of debt	—	—	—	4.2
Business transformation expenses	4.4	—	8.2	—
Adjusted net income attributable to UGI International	$ 78.1	$ 85.1	$ 147.6	$ 122.5

(a) Total margin represents revenues less cost of sales and, for the three and six months ended March 31, 2019, French energy certificate costs of $16.2 million and $26.2 million, respectively. For financial statement purposes, French energy certificate costs in the three and six months ended March 31, 2019 are included in "Operating and administrative expenses" on the Condensed Consolidated Statements of Income. In the three and six months ended March 31, 2020, French energy certificates costs are included in "Cost of sales" on the Condensed Consolidated Statements of Income.

Executive Overview

The following analyses compare our results of operations for the 2020 three-month period with the 2019 three-month period and the 2020 six-month period with the 2019 six-month period.

Because many of our customers use LPG and natural gas for heating purposes, our results are significantly influenced by temperatures particularly during the heating-season months of October through March. As a result, our operating results, excluding the effects of gains and losses on commodity derivative instruments not associated with current-period transactions as further discussed below, are significantly higher in our first and second fiscal quarters.

Because the Company does not designate its commodity and certain foreign currency derivative instruments as hedges under GAAP, volatility in net income (loss) attributable to UGI International as determined in accordance with GAAP can occur as a result of gains and losses on commodity and certain foreign currency derivative instruments not associated with current-period transactions. These gains and losses result principally from recording changes in unrealized gains and losses on unsettled commodity and certain foreign currency derivative instruments that economically hedge anticipated future purchases or sales of energy commodities, or in the case of certain foreign currency derivatives, reduce volatility in anticipated future earnings associated with our foreign operations. In order to adjust for the impacts of these changes in unrealized gains and losses and other significant discrete items that can affect the comparison of period-over-period results, we present the non-GAAP measures, adjusted total margin, adjusted operating income, adjusted income before income taxes and adjusted net income attributable to UGI International, in order to assist in the evaluation of UGI International's overall performance. For further information on these non-GAAP measures and reconciliations to the most closely associated GAAP measures, see "Non-GAAP Financial Measures" below.

Three Months Ended March 31, 2020 and 2019

Net loss attributable to UGI International as determined in accordance with GAAP was $4.7 million in the 2020 three-month period compared to $65.3 million in the 2019 three-month period. Our GAAP results reflect after-tax losses on commodity derivative instruments not associated with current-period transactions of $80.2 million and $23.0 million in the 2020 and 2019 three-month periods, respectively. Our GAAP results also reflect after-tax unrealized gains on certain foreign currency derivative instruments of $1.8 million and $3.2 million in the 2020 and 2019 three-month periods, respectively. UGI International's GAAP results for the 2020 three-month period also includes $4.4 million of after-tax expenses related to business transformation initiatives.

Adjusted net income attributable to UGI International was $78.1 million in the 2020 three-month period compared to $85.1 million in the 2019 three-month period. This decrease in the 2020 three-month period reflects lower adjusted total margin partially offset by lower operating and administrative expenses and increased realized gains on foreign currency exchange contracts entered into in order to reduce volatility in net income resulting from the translation effects of changes in foreign currency exchange rates.

Temperatures based upon heating degree days in the 2020 three-month period were 12.9% warmer than normal and 5.8% warmer compared to temperatures in the prior-year period. Total retail gallons sold during the 2020 three-month period were 10.9% lower principally reflecting the effects of the warmer weather on heating-related bulk sales and cylinder volumes, and the termination of a low-margin autogas contract in Italy.

During the 2020 and 2019 three-month periods, the average unweighted euro-to-dollar translation rates were approximately $1.10 and $1.14, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.28 and $1.30, respectively.

Six Months Ended March 31, 2020 and 2019

Net income attributable to UGI International as determined in accordance with GAAP was $37.4 million in the 2020 six-month period compared to $37.0 million in the prior-year period. Our GAAP results reflect after-tax losses on commodity derivative instruments not associated with current-period transactions of $92.5 million and $90.3 million in the 2020 and 2019 six-month periods, respectively. Our GAAP results also reflect after-tax unrealized (losses) gains on certain foreign currency derivative instruments of $(9.5) million and $9.0 million in the 2020 and 2019 six-month periods, respectively. The 2020 six-month period GAAP results also include $8.2 million of after-tax expenses related to business transformation initiatives, and the 2019 six-month period GAAP results reflect a $4.2 million after-tax loss on extinguishments of debt.

Our adjusted net income attributable to UGI International was $147.6 million in the 2020 six-month period compared to $122.5 million in the prior-year period. This increase in the 2020 six-month period principally reflects lower operating and administrative expenses and higher adjusted total margin.

Temperatures based upon heating degree days in the 2020 six-month period were 11.8% warmer than normal and 4.5% warmer compared to temperatures in the prior-year period. Total LPG retail gallons sold during the 2020 six-month period were 3.9% lower principally reflecting the termination of a low-margin autogas contract in Italy and the effects of the warmer weather on heating-related bulk sales and cylinder volumes.

During the 2020 and 2019 six-month periods, the average unweighted euro-to-dollar translation rates were approximately $1.10 and $1.14, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.28 and $1.29, respectively.

Analysis of Results of Operations

The following tables and analyses compare UGI International's results of operations for the 2020 three-month period with the 2019 three-month period and the 2020 six-month period with the 2019 six-month period.

2020 three-month period compared with the 2019 three-month period

For the three months ended March 31,		2020		2019		Decrease	
(Dollars in millions)							
Revenues	$	703.4	$	783.1	$	(79.7)	(10.2)%
Total margin (a)	$	183.9	$	293.7	$	(109.8)	(37.4)%
Operating and administrative expenses (a)	$	161.6	$	168.5	$	(6.9)	(4.1)%
Operating (loss) income	$	(7.8)	$	95.0	$	(102.8)	(108.2)%
(Loss) income before income taxes	$	(3.7)	$	96.7	$	(100.4)	(103.8)%
Net (loss) income attributable to UGI International	$	(4.7)	$	65.3	$	(70.0)	(107.2)%
Non-GAAP financial measures (b):							
Adjusted total margin	$	301.8	$	322.3	$	(20.5)	(6.4)%
Adjusted operating income	$	116.8	$	123.6	$	(6.8)	(5.5)%
Adjusted income before income taxes	$	118.5	$	120.7	$	(2.2)	(1.8)%
Adjusted net income attributable to UGI International	$	78.1	$	85.1	$	(7.0)	(8.2)%
LPG retail gallons sold (millions)		230.4		258.7	$	(28.3)	(10.9)%
Degree days – % (warmer) than normal (c)		(12.9)%		(7.5)%		—	—

(a) Total margin represents revenues less cost of sales and, for the three months ended March 31, 2019, French energy certificate costs of $16.2 million. For financial statement purposes, French energy certificate costs in the three months ended March 31, 2019 are included in "Operating and administrative expenses" on the Condensed Consolidated Statement of Income (but are excluded from operating and administrative expenses presented in the table above). In the three months ended March 31, 2020, French energy certificates costs are included in "Cost of sales" on the Condensed Consolidated Statement of Income. Total margin for the three months ended March 31, 2020 and 2019 includes net pre-tax losses of $117.9 million and $28.6 million, respectively, on commodity derivative instruments not associated with current-period transactions.

(b) 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.

(c) Deviation from average heating degree days for the 15-year period 2002-2016 at locations in our service territories.

Average temperatures during the 2020 three-month period were 12.9% warmer than normal and 5.8% warmer than the prior-year period. Total LPG retail gallons sold during the 2020 three-month period were 10.9% lower principally reflecting the effects of the warmer weather on heating-related bulk sales and cylinder volumes, and the termination of a low-margin autogas contract in Italy. During the 2020 three-month period, average wholesale prices for propane and butane in northwest Europe were approximately 21% and 3% lower, respectively, compared with the prior-year period.

UGI International base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. Differences in these translation rates affect the comparison of line item amounts presented in the table above. The functional currency of a significant portion of our results is the euro and, to a much lesser extent, the British pound sterling. During the 2020 and 2019 three-month periods, the average unweighted euro-to-dollar translation rates were approximately $1.10 and $1.14, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.28 and $1.30, respectively.

Revenues decreased by $79.7 million during the 2020 three-month period compared to the prior year. The decrease in revenues principally reflects the effects of the lower total retail and wholesale LPG volumes, lower average LPG selling prices, the translation effects of the weaker euro (approximately $22 million) and, to a much lesser extent, lower energy marketing revenues. Cost of sales in the 2020 and 2019 three-month periods include net losses of $117.9 million and $28.6 million on commodity derivative instruments not associated with current-period transactions, respectively. Excluding the effects of these net losses, cost of sales decreased $59.2 million during the 2020 three-month period principally reflecting the effects of the lower total retail and wholesale volumes, lower average LPG product costs, the translation effects of the weaker euro (approximately $13 million) and, to a much lesser extent, lower energy marketing costs.

Total margin (which includes the effects of the previously mentioned net losses on commodity derivative instruments not associated with current-period transactions) decreased $109.8 million. Adjusted total margin decreased $20.5 million during the three months ended March 31, 2020 reflecting the previously mentioned decrease in total retail volumes and the translation effects of the weaker euro (approximately $9 million) compared to the prior-year period. The effects of these factors were partially offset by higher average LPG unit margins including margin management efforts and, to a much lesser extent, higher margins from energy marketing.

Operating (loss) income determined in accordance with GAAP (which includes the effects of the previously mentioned net losses on commodity derivative instruments not associated with current-period transactions and, in the 2020 three-month period, business transformation expenses) decreased $102.8 million in the 2020 three-month period compared to the prior year. The $6.8 million decrease in adjusted operating income principally reflects the decrease in adjusted total margin partially offset by lower operating and administrative expenses ($13.6 million, excluding $6.7 million of business transformation expenses in the current year). The decrease in operating and administrative expenses reflects the translation effects of the weaker euro (approximately $5 million), decreased distribution costs attributable to the reduced LPG volumes, and lower outside services costs.

(Loss) income before income taxes determined in accordance with GAAP (which includes the effects of the previously mentioned losses on commodity derivative instruments not associated with current-period transactions; gains on certain foreign currency contracts; and business transformation expenses in the 2020 three-month period) was $(3.7) million for the 2020 three-month period, a $100.4 million decrease compared to the prior-year period. Adjusted income before income taxes in the 2020 three-month period decreased slightly compared to the prior-year period largely reflecting the decrease in adjusted operating income and higher interest expense, partially offset by higher pre-tax realized gains on foreign currency exchange contracts entered into in order to reduce volatility in net income resulting from the translation effects of changes in foreign currency exchange rates.

Interest Expense and Income Taxes

Interest expense in the 2020 three-month period was $7.7 million compared to $6.1 million in the prior year. The increase in interest expense principally reflects the effects higher average short-term borrowings.

The increase in the effective tax rate for the three months ended March 31, 2020 reflects higher U.S. taxes on foreign source income compared to the prior-year period partially offset by the release of tax reserves due to the lapse of statutes of limitation. This increase in the effective tax rate was obscured by the small pre-tax loss in the 2020 three-month period and the impacts of discrete tax items.

2020 six-month period compared with the 2019 six-month period

For the six months ended March 31,	2020	2019	Increase (Decrease)	
(Dollars in millions)				
Revenues	$ 1,354.8	$ 1,493.9	$ (139.1)	(9.3)%
Total margin (a)	$ 453.3	$ 448.5	$ 4.8	1.1 %
Operating and administrative expenses (a)	$ 324.5	$ 335.1	$ (10.6)	(3.2)%
Operating income	$ 68.9	$ 53.7	$ 15.2	28.3 %
Income before income taxes	$ 54.1	$ 52.7	$ 1.4	2.7 %
Net income attributable to UGI International	$ 37.4	$ 37.0	$ 0.4	1.1 %
Non-GAAP financial measures (b):				
Adjusted total margin	$ 584.8	$ 574.4	$ 10.4	1.8 %
Adjusted operating income	$ 212.6	$ 179.6	$ 33.0	18.4 %
Adjusted income before income taxes	$ 211.1	$ 172.0	$ 39.1	22.7 %
Adjusted net income attributable to UGI International	$ 147.6	$ 122.5	$ 25.1	20.5 %
LPG retail gallons sold (millions)	476.9	496.3	(19.4)	(3.9)%
Degree days – % (warmer) than normal (c)	(11.8)%	(7.6)%	—	—

(a) Total margin represents revenues less cost of sales and, for the six months ended March 31, 2019, French energy certificate costs of $26.2 million. For financial statement purposes, French energy certificate costs in the six months ended March 31, 2019 are included in "Operating and administrative expenses" on the Condensed Consolidated Statement of Income (but are excluded from operating and administrative expenses presented in the table above). In the six months ended March 31, 2020, French energy certificates costs are included in "Cost of sales" on the Condensed Consolidated Statement of Income. Total margin for the six months ended March 31, 2020 and 2019 includes net pre-tax losses of $131.5 million and $125.9 million, respectively, on commodity derivative instruments not associated with current-period transactions.

(b) 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.

(c) Deviation from average heating degree days for the 15-year period 2002-2016 at locations in our service territories.

Average temperatures during the 2020 six-month period were 11.8% warmer than normal and 4.5% warmer than the prior-year period. Total LPG retail gallons sold during the 2020 six-month period were 3.9% lower principally reflecting the termination of a low-margin autogas contract in Italy and the effects of the warmer weather on heating-related bulk sales and cylinder volumes partially offset by strong bulk volumes associated with crop drying. During the 2020 six-month period, average wholesale prices for propane in northwest Europe were approximately 18% lower than the prior-year period while average wholesale butane prices in northwest Europe were slightly lower compared to the prior year.

UGI International base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. Differences in these translation rates affect the comparison of line item amounts presented in the table above. 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 the 2020 and 2019 six-month periods, the average unweighted euro-to-dollar translation rates were approximately $1.10 and $1.14, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.28 and $1.29, respectively.

Revenues decreased $139.1 million during the 2020 six-month period principally reflecting the effects of lower average LPG selling prices, lower total LPG retail and wholesale volumes, the translation effects of the weaker euro (approximately $40 million) and, to a much lesser extent, lower energy marketing revenues. Cost of sales in the 2020 and 2019 six-month periods include net losses of $131.5 million and $125.9 million on commodity derivative instruments not associated with current-period transactions, respectively. Excluding the effects of these net losses, cost of sales decreased $149.5 million during the 2020 six-month period principally reflecting the effects of lower average LPG product costs, lower total retail and wholesale volumes, the translation effects of the weaker euro (approximately $23 million) and, to a much lesser extent, lower energy marketing costs.

Total margin (which includes the effects of the previously mentioned net losses on commodity derivative instruments not associated with current-period transactions) increased $4.8 million. Adjusted total margin increased $10.4 million largely attributable to higher average LPG unit margins, including the effects of margin management efforts and lower LPG product costs, and higher margins from energy marketing. The effects of these increases were partially offset by the translation effects of the weaker euro (approximately $17 million) compared to the prior-year period and the previously mentioned effects of the warmer weather on heating-related bulk sales and cylinder volumes.

Operating income determined in accordance with GAAP (which includes the effects of the previously mentioned net losses on commodity derivative instruments not associated with current-period transactions and, in the 2020 six-month period, business transformation expenses) was $68.9 million, an increase of $15.2 million compared to the prior-year period. The $33.0 million increase in adjusted operating income principally reflects lower operating and administrative expenses ($22.8 million, excluding $12.2 million of business transformation expenses in the current year). The decrease in operating and administrative expenses is largely attributable to the translation effects of the weaker euro (approximately $9 million) compared to the prior-year period and lower maintenance and outside services costs, partially offset by higher uncollectible accounts expense.

Income before income taxes determined in accordance with GAAP (which includes the effects of the previously mentioned losses on commodity derivative instruments not associated with current-period transactions; gains and losses on certain foreign currency contracts; business transformation expenses in the 2020 six-month period; and a loss on extinguishments of debt in the 2019 six-month period) was $54.1 million for the 2020 six-month period, an increase of $1.4 million compared with the prior-year period. Adjusted income before income taxes in the 2020 six-month period was $39.1 million higher than the prior-year period principally reflecting the $33.0 million increase in adjusted operating income and higher pre-tax realized gains on foreign currency exchange contracts entered into in order to reduce volatility in net income resulting from the translation effects of changes in foreign currency exchange rates partially offset by higher interest expense.

Interest Expense and Income Taxes

Interest expense in the 2020 six-month period was $15.3 million compared to $11.5 million in the prior year. The increase in interest expense principally reflects the effects higher average short-term borrowings.

The slight increase in the effective tax rate for the six months ended March 31, 2020 is largely attributable to higher U.S. taxes on foreign source income partially offset by the impacts of discrete tax items including the release of a valuation allowance reserve and reserves related to the lapse of statutes of limitation.

Liquidity and Capital Resources

The Company expects to have sufficient liquidity to continue to support long-term commitments and ongoing operations despite potential uncertainties associated with the global pandemic attributable to the outbreak and continued spread of COVID-19. The Company was in compliance with all debt covenants as of March 31, 2020. The Company's liquidity has also been positively influenced by continued low commodity prices experienced during the six months ended March 31, 2020, partially offset by increased margin calls associated with derivative instruments, and anticipates lower working capital requirements that typically occurs in the second half of the Company's fiscal year. In addition, the Company does not have any near-term senior note or term loan maturities. The COVID-19 global pandemic is a rapidly evolving situation and the Company cannot predict the ultimate impact it will have on its liquidity, debt covenants, financial condition or the timing of capital expenditures.

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 revolving credit facility. 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. Issuances of debt in the capital markets and additional credit facilities may not, however, be available to us on acceptable terms.

The primary sources of our cash and cash equivalents have been cash flows generated from operations and cash contributions made by UGI principally to fund acquisitions of businesses. However, there can be no assurance that UGI 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. Our cash and cash equivalents totaled $219.8 million at March 31, 2020, compared with $235.2 million at September 30, 2019. A substantial portion of this cash is located outside of the United States.

Long-term debt and credit facility

UGI International's debt outstanding at March 31, 2020 totaled $916.7 million (including current maturities of long-term debt of $0.9 million and short-term borrowings of $185.5 million). UGI International's debt outstanding at September 30, 2019, totaled $930.4 million (including current maturities of long-term debt of $0.1 million and short-term borrowings of $210.9 million). Total long-term debt outstanding at March 31, 2020, including current maturities, comprises $386.1 million of 3.25% Senior Notes, a $330.9 million variable-rate term loan, and $21.7 million of other long-term debt, and is net of $7.5 million of unamortized debt issuance costs.

At March 31, 2020, there were $180 million (€163.2 million) of borrowings outstanding under the 2018 Credit Facilities Agreement multicurrency revolving facility. The average daily and peak short-term borrowings outstanding under the 2018 Credit Facilities Agreement multicurrency revolving facility during the six months ended March 31, 2020 were $194.9 million and $210.0 million, respectively. There were no such borrowings during the six months ended March 31, 2019. At March 31, 2020, the Company's available borrowing capacity under the 2018 Credit Facilities Agreement multicurrency revolving facility was €136.8 million ($150.9 million). We expect to use a substantial portion of the dividends paid by our operating subsidiaries in Fiscal 2020 to pay down a portion of outstanding borrowings under the 2018 Credit Facilities Agreement multicurrency revolving facility.

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, revolving credit facility borrowings, and distributions paid to Enterprises.

Operating Activities:

Cash flow provided by operating activities was $90.7 million in the 2020 six-month period compared to $130.2 million in the 2019 six-month period. Cash flow from operating activities before changes in operating working capital was $202.4 million in the 2020 six-month period compared to $181.3 million in the prior-year six-month period. The higher 2020 six-month period cash flow from operating activities before changes in operating working capital principally reflects the higher operating results in the 2020 six-month period. Changes in operating working capital used operating cash flow of $111.7 million in the 2020 six-month period compared to $51.1 million of operating cash flow used in the 2019 six-month period. The higher net cash required to fund changes in operating working capital during the 2020 six-month period reflects, among other things, greater cash needed to fund net changes in operating working capital (principally comprising changes in accounts receivable), and significantly higher commodity derivative instrument collateral deposits paid due to the significant decline in LPG commodity prices.

Investing Activities:

Cash flow used by investing activities was $39.1 million in the 2020 six-month period compared to $70.1 million in the 2019 six-month period. Cash capital expenditures for property, plant and equipment totaled $41.9 million in the 2020 six-month period compared with $49.9 million in the 2019 six-month period. Acquisitions in the prior year include several smaller retail LPG businesses in Europe.

Financing Activities:

Cash flow used by financing activities was $26.4 million in the 2020 six-month period compared to $46.5 million in the 2019 six-month period. Cash flow used by financing activities in the 2020 six-month period primarily reflects net repayments of short-term borrowings of $25.4 million. Cash flows from financing activities in the prior-year period reflect significant UGI International refinance transactions during the month of October 2018. On October 25, 2018, UGI International borrowed €300 million under a variable-rate term loan facility. Also on October 25, 2018, UGI International issued in an underwritten private placement €350 million principal amount of the 3.25% Senior Notes. The net proceeds from these borrowings plus cash on hand were used principally to repay €540 million outstanding principal of UGI France's variable-rate term loan; €45.8 million of outstanding principal of Flaga's variable-rate term loan; and $49.9 million of outstanding principal of Flaga's U.S. dollar variable-rate term loan, plus accrued and unpaid interest.

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 on a timely basis, 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. Our natural gas and electricity marketing businesses also use natural gas and electricity futures and forward contracts to economically hedge market risk associated with fixed-price sales and purchase contracts.

Interest Rate Risk

We have both fixed-rate and variable-rate debt. Changes in interest rates impact the cash flows of variable-rate debt but generally do not impact their fair value. Conversely, changes in interest rates impact the fair value of fixed-rate debt but do not impact their cash flows. Our variable-rate debt agreements have interest rates that are generally indexed to short-term market interest rates. UGI International has entered into pay-fixed, receive-variable interest rate swaps that generally fix the underlying euribor interest rate on such borrowings for a significant portion of their tenor. We have designated such interest rate swaps as cash flow hedges.

At March 31, 2020, combined borrowings outstanding under variable-rate debt agreements, excluding UGI International's effectively fixed-rate debt, totaled $185.5 million.

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. Gains or losses on these net investment hedges remain in AOCI until such foreign operations are sold or liquidated. With respect to our substantial net investments in foreign (non U.S. based) operations, a 10% decline in the value of the foreign currencies versus the U.S. dollar would reduce their aggregate net book value at March 31, 2020, by approximately $105 million, which amount would be reflected in other comprehensive income. We have designated our euro-denominated loan borrowings as net investment hedges.

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. We layer in these foreign currency exchange contracts over a multi-year period to eventually equal approximately 90% of anticipated UGI International local currency earnings before income taxes.

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. At March 31, 2020, the Company had pledged net cash collateral of $37.1

million. Additionally, our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. At March 31, 2020, restricted cash in brokerage accounts was $67.6 million. 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 March 31, 2020.

The following table summarizes the fair values of unsettled market risk sensitive derivative instrument assets (liabilities) held at March 31, 2020 and changes in fair values due to market risks.

	Asset (Liability)	
(Millions of dollars)	Fair Value	Change in Fair Value
March 31, 2020		
Commodity price risk (1)	$ (158.7)	$ (29.3)
Interest rate risk (2)	$ (2.7)	$ (0.3)
Foreign currency exchange rate risk (3)	$ 51.1	$ (43.6)

(1) Change in fair value represents a 10% adverse change in the market prices of LPG, natural gas and electricity.
(2) Change in fair value represents a 50 basis point adverse change in prevailing market rates.
(3) Change in fair value represents a 10% adverse change in the value of the Euro and the British pound sterling versus the U.S. dollar.