UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q

(Mark One)

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

For the quarterly period ended **September 30, 2021**

OR

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

For the transition period from _______________ to _______________.

COMMISSION FILE NUMBER: 000-19271

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IDEXX LABORATORIES, INC.

(Exact name of registrant as specified in its charter)

Delaware			**01-0393723**
(State or other jurisdiction of incorporation or organization)			*(IRS Employer Identification No.)*
One IDEXX Drive	**Westbrook**	**Maine**	**04092**
(Address of principal executive offices)			*(ZIP Code)*

207-556-0300

(Registrant's telephone number, including area code)

Securities Registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.10 par value per share	IDXX	NASDAQ Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date. The number of shares outstanding of the registrant's Common Stock, $0.10 par value per share, was 84,793,608, on October 27, 2021.

GLOSSARY OF TERMS AND SELECTED ABBREVIATIONS

In order to aid the reader, we have included certain terms and abbreviations used throughout this Quarterly Report on Form 10-Q below:

Term/ Abbreviation	Definition
AOCI	Accumulated other comprehensive income or loss
CAG	Companion Animal Group, a reporting segment that provides veterinarians diagnostic products and services and information management solutions that enhance the health and well-being of pets.
Credit Facility	Our $1 billion unsecured revolving credit facility, also referred to as line of credit.
Clinical visits	The reason for the visit involves an interaction between a clinician and a pet.
FASB	U.S. Financial Accounting Standards Board
LPD	Livestock, Poultry and Dairy, a reporting segment that provides diagnostic products and services for livestock and poultry health and to ensure the quality and safety of milk and improve producer efficiency.
OPTI Medical	OPTI Medical Systems, Inc., a wholly-owned subsidiary of IDEXX Laboratories Inc., located in Roswell, Georgia. This business provides point-of-care and laboratory diagnostics (including electrolyte and blood gas analyzers and related consumable products) for the human medical diagnostics market, as well as COVID-19 testing products and services. The Roswell facility also manufactures electrolytes slides (instrument consumables) to run Catalyst One®, Catalyst Dx®, and blood gas analyzers and consumables for the veterinary market; also referred to as OPTI.
Organic revenue growth	A non-GAAP financial measure and represents the percentage change in revenue, as compared to the same period for the prior year, net of the effect of changes in foreign currency exchange rates, certain business acquisitions and divestitures. Organic revenue growth should be considered in addition to, and not as a replacement for or as a superior measure to, revenue growth reported in accordance with U.S. GAAP, and may not be comparable to similarly titled measures reported by other companies.
PCR	Polymerase chain reaction, a technique used to amplify small segments of DNA
R&D	Research and Development
Reported revenue growth	Represents the percentage change in revenue reported in accordance with U.S. GAAP, as compared to the same period in the prior year.
SaaS	Software-as-a-service
SEC	U.S. Securities and Exchange Commission
Senior Note Agreements	Note purchase agreements for the private placement of senior notes, referred to as senior notes or long-term debt.
U.S. GAAP	Accounting principles generally accepted in the United States of America
Water	Water, a reporting segment that provides water microbiology testing products.

IDEXX LABORATORIES, INC.
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PART I— FINANCIAL INFORMATION

Item 1. Financial Statements.

IDEXX LABORATORIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except per share amounts)
(Unaudited)

	September 30, 2021	December 31, 2020
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 145,203	$ 383,928
Accounts receivable, net	376,760	331,429
Inventories	258,484	209,873
Other current assets	157,590	137,508
Total current assets	938,037	1,062,738
Long-Term Assets:		
Property and equipment, net	573,385	555,167
Operating lease right-of-use assets	106,962	91,171
Goodwill	355,240	243,347
Intangible assets, net	94,976	52,543
Other long-term assets	317,144	289,595
Total long-term assets	1,447,707	1,231,823
TOTAL ASSETS	$ 2,385,744	$ 2,294,561
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 86,684	$ 74,558
Accrued liabilities	431,047	415,648
Current portion of long-term debt	74,990	49,988
Current portion of deferred revenue	41,128	42,567
Total current liabilities	633,849	582,761
Long-Term Liabilities:		
Deferred income tax liabilities	15,306	11,707
Long-term debt, net of current portion	778,025	858,492
Long-term deferred revenue, net of current portion	40,391	46,163
Long-term operating lease liabilities	89,720	77,039
Other long-term liabilities	72,993	85,604
Total long-term liabilities	996,435	1,079,005
Total liabilities	1,630,284	1,661,766
Commitments and Contingencies (Note 16)		
Stockholders' Equity:		
Common stock, $0.10 par value: Authorized: 120,000 shares; Issued: 106,806 shares in 2021 and 106,457 shares in 2020; Outstanding: 84,880 shares in 2021 and 85,449 shares in 2020	10,681	10,646
Additional paid-in capital	1,358,813	1,294,849
Deferred stock units: Outstanding: 90 units in 2021 and 87 units in 2020	5,669	4,503
Retained earnings	2,757,669	2,175,595
Accumulated other comprehensive loss	(52,057)	(53,615)
Treasury stock, at cost: 21,926 shares in 2021 and 21,008 shares in 2020	(3,326,021)	(2,799,890)
Total IDEXX Laboratories, Inc. stockholders' equity	754,754	632,088
Noncontrolling interest	706	707
Total stockholders' equity	755,460	632,795
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,385,744	$ 2,294,561

The accompanying notes are an integral part of these condensed consolidated financial statements.

IDEXX LABORATORIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2021	2020	2021	2020
Revenue:				
Product revenue	$ 471,787	$ 422,283	$ 1,406,850	$ 1,153,114
Service revenue	338,634	299,506	1,007,420	832,603
Total revenue	810,421	721,789	2,414,270	1,985,717
Cost of Revenue:				
Cost of product revenue	166,748	146,804	483,850	396,282
Cost of service revenue	170,752	152,379	497,409	427,897
Total cost of revenue	337,500	299,183	981,259	824,179
Gross profit	472,921	422,606	1,433,011	1,161,538
Expenses:				
Sales and marketing	124,434	108,202	358,277	318,526
General and administrative	82,098	105,031	226,194	231,111
Research and development	40,427	37,517	115,703	102,472
Income from operations	225,962	171,856	732,837	509,429
Interest expense	(7,134)	(8,110)	(22,331)	(25,297)
Interest income	122	208	265	417
Income before provision for income taxes	218,950	163,954	710,771	484,549
Provision for income taxes	43,772	17,633	128,698	77,376
Net income	175,178	146,321	582,073	407,173
Less: Net (loss) income attributable to noncontrolling interest	(57)	102	(1)	187
Net income attributable to IDEXX Laboratories, Inc. stockholders	$ 175,235	$ 146,219	$ 582,074	$ 406,986
Earnings per Share:				
Basic	$ 2.06	$ 1.71	$ 6.82	$ 4.77
Diluted	$ 2.03	$ 1.69	$ 6.71	$ 4.70
Weighted Average Shares Outstanding:				
Basic	85,123	85,314	85,325	85,293
Diluted	86,511	86,690	86,712	86,635

The accompanying notes are an integral part of these condensed consolidated financial statements.

IDEXX LABORATORIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2021	2020	2021	2020
Net income	$ 175,178	$ 146,321	$ 582,073	$ 407,173
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(12,967)	7,329	(20,213)	(7,871)
Unrealized gain (loss) on Euro-denominated notes, net of tax expense (benefit) of $498 and $1,335 in 2021 and $(890) and $(1,092) in 2020	1,581	(2,824)	4,235	(3,466)
Unrealized gain (loss) on investments, net of tax expense (benefit) of $0 and $48 in 2021 and $52 and $(129) in 2020	(1)	166	153	(408)
Unrealized gain (loss) on derivative instruments:				
Unrealized gain (loss) on foreign currency exchange contracts, net of tax expense (benefit) of $940 and $1,595 in 2021 and $(1,408) and $(161) in 2020	4,109	(6,161)	7,300	(623)
Unrealized gain (loss) on cross currency swaps, net of tax expense (benefit) of $744 and $1,438 in 2021 and $(933) and $(347) in 2020	2,359	(3,941)	4,561	(1,339)
Reclassification adjustment for loss (gain) included in net income, net of tax benefit (expense) of $330 and $1,206 in 2021 and $53 and $(526) in 2020	1,253	538	5,522	(2,036)
Unrealized gain (loss) on derivative instruments	7,721	(9,564)	17,383	(3,998)
Other comprehensive gain (loss), net of tax	(3,666)	(4,893)	1,558	(15,743)
Comprehensive income	171,512	141,428	583,631	391,430
Less: Comprehensive income (loss) attributable to noncontrolling interest	(57)	102	(1)	187
Comprehensive income attributable to IDEXX Laboratories, Inc.	$ 171,569	$ 141,326	$ 583,632	$ 391,243

The accompanying notes are an integral part of these condensed consolidated financial statements.

IDEXX LABORATORIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except per share amounts)
(Unaudited)

	Common Stock								
	Number of Shares	$0.10 Par Value	Additional Paid-in Capital	Deferred Stock Units	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Treasury Stock	Noncontrolling Interest	Total Stockholders' Equity
Balance December 31, 2020	**106,457**	**$ 10,646**	**$ 1,294,849**	**$ 4,503**	**$ 2,175,595**	**$ (53,615)**	**$ (2,799,890)**	**$ 707**	**$ 632,795**
Net income	—	—	—	—	204,257	—	—	32	204,289
Other comprehensive loss, net	—	—	—	—	—	(5,921)	—	—	(5,921)
Repurchases of common stock, net	—	—	—	—	—	—	(154,033)	—	(154,033)
Common stock issued under stock plans, including excess tax benefit	219	22	17,408	—	—	—	—	—	17,430
Share-based compensation cost	—	—	8,829	46	—	—	—	—	8,875
Balance March 31, 2021	**106,676**	**$ 10,668**	**$ 1,321,086**	**$ 4,549**	**$ 2,379,852**	**$ (59,536)**	**$ (2,953,923)**	**$ 739**	**$ 703,435**
Net income	—	—	—	—	202,582	—	—	24	202,606
Other comprehensive income (loss), net	—	—	—	—	—	11,145	—	—	11,145
Repurchases of common stock	—	—	—	—	—	—	(188,378)	—	(188,378)
Common stock issued under stock plans, including excess tax benefit	72	7	9,771	—	—	—	—	—	9,778
Deferred stock units activity	—	—	(1,035)	1,035	—	—	—	—	—
Share-based compensation cost	—	—	9,591	46	—	—	—	—	9,637
Balance June 30, 2021	**106,748**	**$ 10,675**	**$ 1,339,413**	**$ 5,630**	**$ 2,582,434**	**$ (48,391)**	**$ (3,142,301)**	**$ 763**	**$ 748,223**
Net income	—	—	—	—	175,235	—	—	(57)	175,178
Other comprehensive income (loss), net	—	—	—	—	—	(3,666)	—	—	(3,666)
Repurchases of common stock	—	—	—	—	—	—	(183,720)	—	(183,720)
Common stock issued under stock plans, including excess tax benefit	58	6	9,921	(12)	—	—	—	—	9,915
Share-based compensation cost	—	—	9,479	51	—	—	—	—	9,530
Balance September 30, 2021	**106,806**	**$ 10,681**	**$ 1,358,813**	**$ 5,669**	**$ 2,757,669**	**$ (52,057)**	**$ (3,326,021)**	**$ 706**	**$ 755,460**

	Common Stock								
	Number of Shares	**$0.10 Par Value**	**Additional Paid-in Capital**	**Deferred Stock Units**	**Retained Earnings**	**Accumulated Other Comprehensive (Loss) Income**	**Treasury Stock**	**Noncontrolling Interest**	**Total Stockholders' Equity**
Balance December 31, 2019	**105,711**	**$ 10,571**	**$ 1,213,517**	**$ 4,462**	**$ 1,595,648**	**$ (46,182)**	**$ (2,600,543)**	**$ 352**	**$ 177,825**
Cumulative effect of accounting changes	—	—	—	—	(1,829)	—	—	—	(1,829)
Net income	—	—	—	—	111,827	—	—	29	111,856
Other comprehensive loss, net	—	—	—	—	—	(9,064)	—	—	(9,064)
Repurchases of common stock	—	—	—	—	—	—	(187,767)	—	(187,767)
Common stock issued under stock plans, including excess tax benefit	203	20	9,730	—	—	—	—	—	9,750
Share-based compensation cost	—	—	7,238	46	—	—	—	—	7,284
Balance March 31, 2020	**105,914**	**$ 10,591**	**$ 1,230,485**	**$ 4,508**	**$ 1,705,646**	**$ (55,246)**	**$ (2,788,310)**	**$ 381**	**$ 108,055**
Net income	—	—	—	—	148,940	—	—	56	148,996
Other comprehensive loss, net	—	—	—	—	—	(1,786)	—	—	(1,786)
Issuance of common stock	—	—	—	—	—	—	258	—	258
Common stock issued under stock plans, including excess tax benefit	117	12	10,068	—	—	—	—	—	10,080
Deferred stock units activity	—	—	(894)	894	—	—	—	—	—
Share-based compensation cost	—	—	7,797	—	—	—	—	—	7,797
Balance June 30, 2020	**106,031**	**$ 10,603**	**$ 1,247,456**	**$ 5,402**	**$ 1,854,586**	**$ (57,032)**	**$ (2,788,052)**	**$ 437**	**$ 273,400**
Net income (loss)	—	—	—	—	146,219	—	—	102	146,321
Other comprehensive loss, net	—	—	—	—	—	(4,893)	—	—	(4,893)
Repurchases of common stock, net	—	—	—	—	—	—	(360)	—	(360)
Common stock issued under stock plans, including excess tax benefit	251	25	18,706	(12)	—	—	—	—	18,719
Share-based compensation cost	—	—	7,907	21	—	—	—	—	7,928
Balance September 30, 2020	**106,282**	**$ 10,628**	**$ 1,274,069**	**$ 5,411**	**$ 2,000,805**	**$ (61,925)**	**$ (2,788,412)**	**$ 539**	**$ 441,115**

The accompanying notes are an integral part of these condensed consolidated financial statements.

IDEXX LABORATORIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	For the Nine Months Ended September 30, 2021	For the Nine Months Ended September 30, 2020
Cash Flows from Operating Activities:		
Net income	$ 582,073	$ 407,173
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	76,901	71,437
Impairment charge	5,148	1,993
Provision for credit losses	1,719	5,235
Deferred income taxes	4,049	(3,363)
Share-based compensation expense	28,042	23,008
Other	2,402	488
Changes in assets and liabilities:		
Accounts receivable	(49,050)	(72,409)
Inventories	(46,891)	(25,091)
Other assets and liabilities	(51,961)	30,579
Accounts payable	637	512
Deferred revenue	(7,487)	(10,433)
Net cash provided by operating activities	545,582	429,129
Cash Flows from Investing Activities:		
Purchases of property and equipment	(87,761)	(92,768)
Acquisition of intangible assets and equity investments	—	(918)
Acquisitions of a business, net of cash acquired	(161,166)	—
Net cash used by investing activities	(248,927)	(93,686)
Cash Flows from Financing Activities:		
Repayments on revolving credit facilities, net	—	(289,625)
Issuance of senior debt	—	200,000
Payment of senior debt	(50,000)	—
Debt issuance costs	—	(4,995)
Payments of acquisition-related contingent considerations and holdbacks	(1,500)	(1,580)
Repurchases of common stock, net	(502,021)	(182,815)
Proceeds from exercises of stock options and employee stock purchase plans	37,428	39,230
Shares withheld for statutory tax withholding payments on restricted stock	(15,501)	(9,029)
Net cash used by financing activities	(531,594)	(248,814)
Net effect of changes in exchange rates on cash	(3,786)	(1,368)
Net (decrease) increase in cash and cash equivalents	(238,725)	85,261
Cash and cash equivalents at beginning of period	383,928	90,326
Cash and cash equivalents at end of period	$ 145,203	$ 175,587
Supplemental Cash Flow Information:		
Cash paid for income taxes	$ 96,103	$ 79,909
Unpaid property and equipment, reflected in accounts payable and accrued liabilities	$ 14,734	$ 7,708

The accompanying notes are an integral part of these condensed consolidated financial statements.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1. BASIS OF PRESENTATION AND PRINCIPLES OF CONSOLIDATION

The accompanying unaudited condensed consolidated financial statements of IDEXX Laboratories, Inc. and its subsidiaries have been prepared in accordance with U.S. GAAP for interim financial information and with the requirements of Regulation S-X, Rule 10-01 for financial statements required to be filed as a part of this Quarterly Report on Form 10-Q. Unless the context requires otherwise, references in this Quarterly Report on Form 10-Q to "IDEXX," the "Company," "we," "our," or "us" refer to IDEXX Laboratories, Inc. and its subsidiaries.

The accompanying unaudited condensed consolidated financial statements include the accounts of IDEXX Laboratories, Inc. and our wholly-owned and majority-owned subsidiaries. We do not have any variable interest entities for which we are the primary beneficiary. All intercompany transactions and balances have been eliminated in consolidation.

The accompanying unaudited condensed consolidated financial statements reflect, in the opinion of our management, all adjustments necessary for a fair statement of our financial position and results of operations. All such adjustments are of a recurring nature. The consolidated balance sheet data at December 31, 2020, was derived from audited financial statements, but does not include all disclosures required by U.S. GAAP. The results of operations for the three and nine months ended September 30, 2021, are not necessarily indicative of the results to be expected for the full year or any future period. These unaudited condensed consolidated financial statements should be read in conjunction with this Quarterly Report on Form 10-Q for the quarter ended September 30, 2021, and our Annual Report on Form 10-K for the year ended December 31, 2020, (the "2020 Annual Report") filed with the SEC.

The preparation of our condensed consolidated financial statements requires us to make estimates, judgments, and assumptions that may affect the reported amounts of assets, liabilities, equity, revenues, and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis we evaluate our estimates, judgments, and methodologies. We base our estimates on historical experience and on various other assumptions that we believe are reasonable, the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity, and the amount of revenues and expenses.

We have included certain terms and abbreviations used throughout this Quarterly Report on Form 10-Q in the "Glossary of Terms and Selected Abbreviations."

NOTE 2. ACCOUNTING POLICIES

Significant Accounting Policies

The significant accounting policies used in preparation of these unaudited condensed consolidated financial statements as of and for the three and nine months ended September 30, 2021, are consistent with those discussed in Note 2. Summary of Significant Accounting Policies to the consolidated financial statements in our 2020 Annual Report, except as noted below.

New Accounting Pronouncements Adopted

Effective January 1, 2021, we adopted ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes." The new guidance is intended to simplify the accounting for income taxes by removing certain exceptions and by updating accounting requirements around goodwill recognized for tax purposes and the allocation of current and deferred tax expense among legal entities, among other minor changes. The adoption of ASU 2019-12 did not have a material impact on our consolidated financial statements.

In July 2021, the FASB issued ASU 2021-05, "Leases (Topic 842); Lessors - Certain Leases with Variable Lease Payments." ASU 2021-05 requires a lessor to classify a lease with variable payments that do not depend on an index or rate as an operating lease if another lease classification (i.e., sales-type or direct financing) would result in recognition of a day-one loss. We have elected to adopt this standard as of the third quarter of 2021, on a prospective basis. The adoption of ASU 2021-05 did not have an impact on our consolidated financial statements.

New Accounting Pronouncements Not Yet Adopted

In March 2020, the FASB issued ASU 2020-04, "Facilitation of the Effects of Reference Rate Reform on Financial Reporting." ASU 2020-04 is intended to provide optional expedients and exceptions to the U.S. GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens related to the discontinuation of the London Interbank Offered Rate ("LIBOR") or by another reference rate expected to be discontinued. The relief offered by this guidance, if adopted, is available to companies for the period March 12, 2020 through December 31, 2022. We do not expect the discontinuation of LIBOR to have a material impact on our consolidated financial statements.

NOTE 3. REVENUE RECOGNITION

Our revenue is recognized when, or as, performance obligations under the terms of a contract are satisfied, which occurs when control of the promised products or services is transferred to a customer. We exclude sales, use, value-added, and other taxes we collect on behalf of third parties from revenue. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring products or services to a customer. To accurately present the consideration received in exchange for promised products or services, we apply the five-step model outlined below:

1. Identification of a contract or agreement with a customer
2. Identification of our performance obligations in the contract or agreement
3. Determination of the transaction price
4. Allocation of the transaction price to the performance obligations
5. Recognition of revenue when, or as, we satisfy a performance obligation

We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. The timing of revenue recognition, billings, and cash collections results in accounts receivable, contract assets and lease receivables as a result of revenue recognized in advance of billings (included within other assets), and contract liabilities or deferred revenue as a result of receiving consideration in advance of revenue recognition within our unaudited condensed consolidated balance sheet. Our payment terms generally range from 30 to 60 days, with exceptions for certain individual customers and geographies. Below is a listing of our major categories of revenue for our products and services:

Diagnostic Products and Accessories. Diagnostic products and accessories revenues, including IDEXX VetLab® consumables and accessories, rapid assay, LPD, Water, and OPTI testing products, are predominantly recognized and invoiced at the time of shipment, which is when the customer obtains control of the product based on legal title transfer and we have the right to payment. We also provide customers with certain consumables that are recognized upon utilization by the customer, which is when we have the right to payment and the risks and rewards of ownership transfer. Shipping costs reimbursed by the customer are included in revenue and cost of sales. As a practical expedient, we do not account for shipping activities as a separate performance obligation.

Reference Laboratory Diagnostic and Consulting Services. Reference laboratory and consulting services revenues are recognized and invoiced when the services are performed.

Instruments, Software and Systems. CAG Diagnostics capital instruments, veterinary software and diagnostic imaging systems revenues are recognized and invoiced when the customer obtains control of the products based on legal title transfer and we have the right to payment, which generally occurs at the time of installation and customer acceptance. Our instruments, software, and systems are often included in one of our significant customer programs, as further described below. For veterinary software systems that include multiple performance obligations, such as perpetual software licenses and computer hardware, we allocate revenue to each performance obligation based on estimates of the price that we would charge the customer for each promised product or service if it were sold on a standalone basis.

Lease Revenue. Revenues from instrument rental agreements and reagent rental programs are recognized either as operating leases on a ratable basis over the term of the agreement or as sales-type leases at the time of installation and customer acceptance. Customers typically pay for the right to use instruments under rental agreements in equal monthly amounts over the term of the rental agreement. Our reagent rental programs provide our customers the right to use our instruments upon entering into agreements to purchase specified amounts of consumables, which are considered embedded leases. For some agreements, the customers are provided with the right to purchase the instrument at the end of the lease term. Lease revenues from these agreements are presented in product revenue on our unaudited condensed consolidated income statement. Lease revenue was approximately $6.3 million and $15.8 million for the three and nine months ended September 30, 2021, respectively, as compared to $4.5 million and $12.2 million for the three and nine months ended September 30, 2020, respectively, including both operating leases and sales-type leases under ASC 842, *Leases,* for leases entered into after January 1, 2019, and ASC 840, *Leases,* for leases entered into prior to 2019. See below for revenue recognition under our reagent rental programs.

Extended Warranties and Post-Contract Support. CAG Diagnostics capital instruments and diagnostic imaging systems extended warranties typically provide customers with continued coverage for a period of one to five years beyond the first-year standard warranty. Customers can either pay in full for the extended warranty at the time of instrument or system purchase or can be billed on a quarterly basis over the term of the contract. We recognize revenue associated with extended warranties over time on a ratable basis using a time elapsed measure of performance over the contract term, which approximates the expected timing in which applicable services are performed.

Veterinary software post-contract support provides customers with access to technical support when and as needed through access to call centers and online customer assistance. Post-contract support contracts typically have a term of 12 months and customers are billed for post-contract support in equal quarterly amounts over the term. We recognize revenue for post-contract support services over time on a ratable basis using a time elapsed measure of performance over the contract term, which approximates the expected timing in which applicable services are performed.

On December 31, 2020, our deferred revenue related to extended warranties and post-contract support was $35.1 million, of which approximately $2.8 million and $20.8 million was recognized during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of new agreements, our deferred revenue related to extended warranties and post-contract support was $31.0 million at September 30, 2021. We do not disclose information about remaining performance obligations that are part of contracts with an original expected duration of one year or less and do not adjust for the effect of the financing components when the period between customer payment and revenue recognition is one year or less. Deferred revenue related to extended warranties and post-contract support with an original duration of more than one year was $17.1 million at September 30, 2021, of which approximately 14%, 43%, 25%, 11%, and 7% are expected to be recognized during the remainder of 2021, the full years 2022, 2023, 2024, and thereafter, respectively. Additionally, we have determined these agreements do not include a significant financing component.

SaaS Subscriptions. We offer a variety of veterinary software and diagnostic imaging SaaS subscriptions including IDEXX Neo®, Animana®, Pet Health Network® Pro, Petly® Plans, Web PACS, rVetLink®, Smart Flow™, Cornerstone®, ezyVet®, and VetRadar®. We recognize revenue for our SaaS subscriptions over time on a ratable basis over the contract term, beginning on the date our service is made available to the customer. Our subscription contracts vary in term from monthly to two years. Customers typically pay for our subscription contracts in equal monthly amounts over the term of the agreement. Deferred revenue related to our SaaS subscriptions is not material.

Contracts with Multiple Performance Obligations. We enter into contracts where customers purchase a combination of IDEXX products and services. Determining whether products and services are considered distinct performance obligations that should be accounted for separately requires significant judgment. We determine the transaction price for a contract based on the consideration we expect to receive in exchange for the transferred goods or services. To the extent the transaction price includes variable consideration, such as volume rebates or expected price adjustments, we apply judgment in constraining the estimated variable consideration due to factors that may cause reversal of revenue recognized. We evaluate constraints based on our historical and projected experience with similar customer contracts.

We allocate revenue to each performance obligation in proportion to the relative standalone selling prices and recognize revenue when transfer of the related goods or services has occurred for each obligation. We utilize the observable standalone selling price when available, which represents the price charged for the performance obligation when sold separately. When standalone selling prices for our products or services are not directly observable, we determine the standalone selling prices using relevant information available and apply suitable estimation methods including, but not limited to, the cost plus a margin approach. We recognize revenue as each performance obligation is satisfied, either at a point in time or over time, as described in the revenue categories above. We do not disclose information about remaining performance obligations that are part of contracts with an original expected duration of one year or less.

The following customer programs represent our most significant customer contracts which contain multiple performance obligations:

Customer Commitment Programs. We offer customer incentives upon entering into multi-year agreements to purchase annual minimum amounts of products and services.

Up-Front Customer Loyalty Programs. Our up-front loyalty programs provide customers with incentives in the form of cash payments or IDEXX Points upon entering into multi-year agreements to purchase annual minimum amounts of future products or services. If a customer breaches its agreement, they are required to refund all or a portion of the up-front cash or IDEXX Points, or make other repayments, remedial actions, or both. Up-front incentives to customers in the form of cash or IDEXX Points are not made in exchange for distinct goods or services and are capitalized as customer acquisition costs within other current and long-term assets, which are subsequently recognized as a reduction to revenue over the term of the customer agreement. If these up-front incentives are subsequently utilized to purchase instruments, we allocate total consideration, including future committed purchases less up-front incentives and estimates of expected price adjustments, based on relative standalone selling prices to identified performance obligations and recognize instrument revenue and cost at the time of installation and customer acceptance. To the extent invoiced instrument revenue exceeds recognized instrument revenue, we record deferred revenue as a contract liability, which is subsequently recognized upon the purchase of future products and services. We have determined these agreements do not include a significant financing component. Differences between estimated and actual customer purchases may impact the amount and timing of revenue recognition.

On December 31, 2020, our capitalized customer acquisition costs were $148.1 million, of which approximately $10.7 million and $33.3 million was recognized as a reduction of revenue during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of new up-front customer loyalty payments, net of subsequent recognition, our capitalized customer acquisition costs were $157.1 million at September 30, 2021. We monitor customer purchases over the term of their agreement to assess the realizability of our capitalized customer acquisition costs and review estimates of variable consideration. Impairments, revenue adjustments that relate to performance obligations satisfied in prior periods, and contract modifications during the three and nine months ended September 30, 2021, were not material.

Volume Commitment Programs. Our volume commitment programs, such as our IDEXX 360 program, provide customers with a free or discounted instrument or system upon entering into multi-year agreements to purchase annual minimum amounts of products and services. We allocate total consideration, including future committed purchases and expected price adjustments, based on relative standalone selling prices to identified performance obligations and recognize instrument revenue and cost at the time of installation and customer acceptance in advance of billing the customer, which is also when the customer obtains control of the instrument based on legal title transfer. Our right to future consideration related to instrument revenue is recorded as a contract asset within other current and long-term assets. The contract asset is transferred to accounts receivable when customers are billed for future products and services over the term of the contract. We have determined these agreements do not include a significant financing component. Differences between estimated and actual customer purchases may impact the amount and timing of revenue recognition.

On December 31, 2020, our volume commitment contract assets were $115.5 million, of which approximately $6.5 million and $20.1 million was reclassified to accounts receivable when customers were billed for related products and services during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of new placements under volume commitment programs, net of subsequent amounts reclassified to accounts receivable, and allowances established for credit losses, our contract assets were $146.1 million at September 30, 2021. We monitor customer purchases over the term of their agreement to assess the realizability of our contract assets and review estimates of variable consideration. Impairments, revenue adjustments that relate to performance obligations satisfied in prior periods, and contract modifications during the three and nine months ended September 30, 2021, were not material.

For our up-front customer loyalty and volume commitment programs, we estimate future revenues related to multi-year agreements to be approximately $2.7 billion, of which approximately 6%, 25%, 23%, 19%, and 27% are expected to be recognized during the remainder of 2021, the full years 2022, 2023, 2024, and thereafter, respectively. These future revenues relate to performance obligations not yet satisfied, for which customers have committed to purchase goods and services, net of the expected revenue reductions from customer acquisition costs and expected price adjustments, and as a result, are lower than stated contractual commitments by our customers.

Instrument Rebate Programs. Our instrument rebate programs require an instrument purchase and provide customers the opportunity to earn future rebates based on the volume of products and services they purchase over the term of the program. We account for the customer's right to earn rebates on future purchases as a separate performance obligation and determine the standalone selling price based on an estimate of rebates the customer will earn over the term of the program. Total consideration allocated to identified performance obligations is limited to goods and services that the customer is presently obligated to purchase and does not include estimates of future purchases that are optional. We allocate total consideration to identified performance obligations, including the customer's right to earn rebates on future purchases, which is deferred and recognized upon the purchase of future products and services, offsetting future rebates as they are earned.

On December 31, 2020, our deferred revenue related to instrument rebate programs was $39.3 million, of which approximately $3.5 million and $11.0 million was recognized when customers purchased eligible products and services and earned rebates during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of new instrument purchases under rebate programs, net of subsequent recognition, our deferred revenue was $33.9 million at September 30, 2021, of which approximately 10%, 34%, 23%, 15%, and 18% are expected to be recognized during the remainder of 2021, the full years 2022, 2023, 2024, and thereafter, respectively.

Reagent Rental Programs. Our reagent rental programs provide our customers the right to use our instruments upon entering into multi-year agreements to purchase annual minimum amounts of consumables. These types of agreements include an embedded lease for the right to use our instrument, and we determine the amount of lease revenue allocated to the instrument based on relative standalone selling prices. We evaluate the terms of these embedded leases to determine classification as either a sales-type lease or an operating lease.

Sales-type Reagent Rental Programs. Our reagent rental programs that effectively transfer control of instruments to our customers are classified as sales-type leases, and we recognize instrument revenue and cost in advance of billing the customer, at the time of installation and customer acceptance. Our right to future consideration related to instrument revenue is recorded as a lease receivable within other current and long-term assets, and is transferred to accounts receivable when customers are billed for future products and services over the term of the contract. On December 31, 2020, our lease receivable assets were $11.1 million, of which approximately $0.5 million and $1.6 million was reclassified to accounts receivable when customers were billed for related products and services during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of new placements under sales-type reagent rental programs, net of subsequent amounts reclassified to accounts receivable, and allowances established for credit losses, our lease receivable assets were $14.3 million at September 30, 2021. The impacts of discounting and unearned income at September 30, 2021, were not material. Profit and loss recognized at the commencement date and interest income during the three and nine months ended September 30, 2021, were not material. We monitor customer purchases over the term of their agreement to assess the realizability of our lease receivable assets. Impairments during the three and nine months ended September 30, 2021 were not material.

Operating-type Reagent Rental Programs. Our reagent rental programs that do not effectively transfer control of instruments to our customers are classified as operating leases, and we recognize instrument revenue and costs ratably over the term of the agreement. The cost of the instrument is capitalized within property and equipment. During the three and nine months ended September 30, 2021, we transferred instruments of $2.8 million and $8.6 million, respectively, as compared to $2.6 million and $6.6 million for the three and nine months ended September 30, 2020, from inventory to property and equipment. We had impairments of $1.3 million and $5.1 million for the three and nine months ended September 30, 2021, respectively, associated with a write-down of rental assets in certain regions.

We estimate future revenue to be recognized related to our reagent rental programs of approximately $39.1 million, of which approximately 9%, 31%, 25%, 18%, and 17% are expected to be recognized during the remainder of 2021, the full years 2022, 2023, 2024, and thereafter, respectively. These future revenues relate to performance obligations not yet satisfied for which customers have committed to future purchases, net of any expected price adjustments, and as a result, may be lower than stated contractual commitments by our customers.

Other Customer Incentive Programs. Certain agreements with customers include discounts or rebates on the sale of products and services applied retrospectively, such as volume rebates achieved by purchasing a specified purchase threshold of goods and services. We account for these discounts as variable consideration and estimate the likelihood of a customer meeting the threshold in order to determine the transaction price using the most predictive approach. We typically use the most-likely-amount method for incentives that are offered to individual customers and the expected-value method for programs that are offered to a broad group of customers. Revenue adjustments that relate to performance obligations satisfied in prior periods during the three and nine months ended September 30, 2021, were not material. Refund obligations related to customer incentive programs are recorded in accrued liabilities for the actual issuance of incentives, incentives earned but not yet issued and estimates of incentives to be earned in the future.

Program Combinations. At times, we combine elements of our significant customer programs within a single customer contract. We separate each significant program element and include the contract assets, customer acquisition costs, deferred revenues and estimated future revenues within the most relevant program disclosures above. Each customer contract is presented as a net contract asset or net contract liability on our unaudited condensed consolidated balance sheet.

IDEXX Points. IDEXX Points may be applied to trade receivables due to us, converted to cash, or applied against the purchase price of IDEXX products and services. We consider IDEXX Points equivalent to cash. IDEXX Points that have not yet been used by customers are included in accrued liabilities until utilized or expired. Breakage is not material because customers can apply IDEXX Points to trade receivables at any time.

Accounts Receivable. We recognize revenue when it is probable that we will collect substantially all of the consideration to which we will be entitled, based on the customer's intent and ability to pay the promised consideration. We apply judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer. We have no significant customers that accounted for greater than 10% of our consolidated revenues, and we have no concentration of credit risk as of September 30, 2021.

Disaggregated Revenues. We present disaggregated revenue for our CAG segment based on major product and service categories. Our Water segment is comprised of a single major product category. Although our LPD segment does not meet the quantitative thresholds to be reported as a separate segment, we believe it is important to disaggregate these revenues as a major product and service category within our Other reportable segment given its distinct markets, and therefore we have elected to report LPD as a reportable segment.

The following table presents disaggregated revenue by major product and service categories:

(in thousands)	For the Three Months Ended September 30, 2021	For the Three Months Ended September 30, 2020	For the Nine Months Ended September 30, 2021	For the Nine Months Ended September 30, 2020
CAG segment revenue:				
CAG Diagnostics recurring revenue:	$ 638,358	$ 567,416	$ 1,916,938	$ 1,565,595
IDEXX VetLab consumables	*252,714*	*218,605*	*755,158*	*603,379*
Rapid assay products	*76,974*	*70,593*	*230,472*	*192,681*
Reference laboratory diagnostic and consulting services	*282,301*	*254,223*	*851,757*	*703,300*
CAG Diagnostics services and accessories	*26,369*	*23,995*	*79,551*	*66,235*
CAG Diagnostics capital - instruments	39,401	29,336	105,645	72,040
Veterinary software, services and diagnostic imaging systems	54,736	41,265	148,274	118,478
CAG segment revenue	732,495	638,017	2,170,857	1,756,113
Water segment revenue	38,143	33,272	109,374	95,537
LPD segment revenue	29,126	36,971	101,920	103,369
Other segment revenue	10,657	13,529	32,119	30,698
Total revenue	$ 810,421	$ 721,789	$ 2,414,270	$ 1,985,717

Revenue by principal geographic area, based on customers' domiciles, was as follows:

(in thousands)	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2021	2020	2021	2020
United States	$ 514,343	$ 454,836	$ 1,502,219	$ 1,257,617
Europe, the Middle East and Africa	167,956	147,193	510,759	400,928
Asia Pacific Region	78,239	77,401	246,645	212,663
Canada	32,813	28,710	105,608	78,314
Latin America	17,070	13,649	49,039	36,195
Total revenue	$ 810,421	$ 721,789	$ 2,414,270	$ 1,985,717

Costs to Obtain a Contract. We capitalize sales commissions and the related fringe benefits earned by our sales force when considered incremental and recoverable costs of obtaining a contract. Our contracts include performance obligations related to various goods and services, some of which are satisfied at a point in time and others over time. Commission costs related to performance obligations satisfied at a point in time are expensed at the time of sale, which is when revenue is recognized. Commission costs related to long-term service contracts and performance obligations satisfied over time, including extended warranties and SaaS subscriptions, are deferred and recognized on a systematic basis that is consistent with the transfer of the goods or services to which the asset relates. We apply judgment in estimating the amortization period, which ranges from 3 to 7 years, by taking into consideration our customer contract terms, history of renewals, expected length of customer relationship, as well as the useful life of the underlying technology and products. Amortization expense is included in sales and marketing expenses in the accompanying unaudited condensed consolidated statements of income. Deferred commission costs are periodically reviewed for impairment.

On December 31, 2020, our deferred commission costs, included within other assets, were $17.5 million, of which approximately $1.3 million and $4.3 million of commission expense was recognized during the three and nine months ended September 30, 2021, respectively. Furthermore, as a result of commissions related to new extended warranties and SaaS subscriptions, net of subsequent recognition, our deferred commission costs were $19.0 million at September 30, 2021. Impairments of deferred commission costs, during the three and nine months ended September 30, 2021, were not material.

NOTE 4. ACQUISITIONS

We believe that our acquisitions of businesses and other assets enhance our existing businesses by either expanding our geographic range and customer base or expanding our existing product lines. From time to time we may acquire small reference labs or radiology practices that we account for as either asset purchases or business combinations.

During the third quarter of 2021, we acquired the assets of a teleradiology business for approximately $5.4 million, including a contingent payment of $0.3 million. This acquisition expands our current teleradiology capability. The acquired assets primarily consist of a customer relationship intangible of approximately $1.7 million, with a weighted average life of 10 years, and approximately $3.7 million in goodwill. The purchase price allocation is subject to revision as additional information becomes available regarding tax-related matters and contingencies. Goodwill related to this acquisition is expected to be deductible for tax purposes. Pro forma information has not been presented for this acquisition because such information is not material to the financial statements. The results of operations have been included in our CAG segment since the acquisition date. The acquisition expenses were not material.

During the second quarter of 2021, we acquired the assets of the ezyVet cloud-based veterinary software businesses and the shares of ezyVet US, Inc., as well as the VetRadar business assets, for approximately $157.2 million, including an estimated contingent payment of $5 million. The acquired assets include the ezyVet cloud-native practice management system software and the VetRadar cloud-based workflow management software. The acquisition expands our cloud-based software offerings to support our customers with technology solutions that raise the standards of care for patients, improve practice efficiency, and enable more effective communication with pet owners. The fair value of assets acquired were as follows: approximately $32.0 million in customer-related intangible with a weighted average life of 10 years, approximately $8.4 million in technology-related intangibles with a weighted average life of 6 years, approximately $2.4 million in trademarks with a weighted average life of 14 years, approximately $1.8 million in non-compete agreements with a weighted average life of 5 years, approximately $109.4 million in goodwill, representing synergies within our broader CAG portfolio, and approximately $3.2 million in net tangible assets. Goodwill has been allocated based upon the fair value of projected earnings as of the date of the acquisition. The goodwill was allocated as follows: approximately $23.4 million to IDEXX VetLab®, approximately $27.0 million to Reference Laboratory, approximately $11.1 million to Rapid Assay, and approximately $47.9 million to Veterinary Software Services. Goodwill related to this acquisition is expected to be deductible for tax purposes. Pro forma information has not been presented for this acquisition because such information is not material to the financial statements. The results of operations have been included in our CAG segment since the acquisition date. The acquisition expenses were approximately $2.1 million.

During the first quarter of 2021, we acquired the shares of a reference laboratory located in Switzerland for approximately $5.5 million in cash, including holdback and contingent payments of approximately $1.1 million. This acquisition expands our international reference laboratory presence and was accounted for as a business combination. The fair value of the assets acquired consists of approximately $4.3 million in intangible assets, primarily for customer relationships, which will be amortized over 9 years, approximately $1.8 million for goodwill, representing synergies within our broader CAG portfolio, and approximately $0.6 million of liabilities, including deferred taxes associated with the acquired intangible assets. Goodwill related to this acquisition is not deductible for tax purposes. Pro forma information has not been presented for this acquisition because such information is not material to the financial statements. The results of operations have been included in our CAG segment since the acquisition date. The acquisition expenses were not material.

NOTE 5. SHARE-BASED COMPENSATION

The fair value of options, restricted stock units, deferred stock units, and employee stock purchase rights awarded during the three and nine months ended September 30, 2021, totaled $1.8 million and $50.1 million, respectively, as compared to $1.3 million and $39.9 million for the three and nine months ended September 30, 2020, respectively. The total unrecognized compensation expense, net of estimated forfeitures, for unvested share-based compensation awards outstanding at September 30, 2021, was $72.6 million, which will be recognized over a weighted average period of approximately 1.6 years. During the three and nine months ended September 30, 2021, we recognized expenses of $9.5 million and $28.0 million, respectively, as compared to $7.9 million and $23.0 million for the three and nine months ended September 30, 2020, respectively, related to share-based compensation.

We determine the assumptions used in the valuation of option awards as of the date of grant. Differences in the expected stock price volatility, expected term, or risk-free interest rate may necessitate distinct valuation assumptions at each grant date. As such, we may use different assumptions for options granted throughout the year. Option awards are granted with an exercise price equal to or greater than the closing market price of our common stock at the date of grant. We have never paid any cash dividends on our common stock, and we have no intention to pay such a dividend at this time; therefore, we assume that no dividends will be paid over the expected terms of option awards.

The weighted averages of the valuation assumptions used to determine the fair value of each option award on the date of grant and the weighted average estimated fair values were as follows:

	For the Nine Months Ended September 30,	
	2021	2020
Share price at grant	$ 527.49	$ 290.15
Share price at exercise	$ 531.24	$ 290.15
Expected stock price volatility	30 %	27 %
Expected term, in years	6.2	6.0
Risk-free interest rate	0.7 %	1.4 %
Weighted average fair value of options granted	$ 169.13	$ 84.60

NOTE 6. CREDIT LOSSES

We are exposed to credit losses primarily through our sales of products and services to our customers. We maintain allowances for credit losses for potentially uncollectible receivables. We base our estimates on a detailed analysis of specific customer situations and a percentage of our accounts receivable by aging category. Historical credit loss experience provides the basis for the estimation of expected credit losses. Adjustments to historical loss information are made for differences in current economic conditions.

Additional allowances may be required if either the financial condition of our customers were to deteriorate, or a strengthening U.S. dollar impacts the ability of foreign customers to make payments to us on their U.S. dollar-denominated purchases. We monitor our ongoing credit exposure through active review of counterparty balances against contract terms and due dates. Our activities include timely account reconciliations, dispute resolution and payment confirmations. We may employ collection agencies and legal counsel to pursue recovery of defaulted receivables.

Account balances are charged off against the allowance when we believe it is probable the receivable will not be recovered. We may require collateralized asset support or a prepayment to mitigate credit risk. We do not have any off-balance sheet credit exposure related to our customers.

Accounts Receivable

The allowance for credit losses associated with accounts receivable was $6.5 million and $6.8 million at September 30, 2021 and December 31, 2020, respectively. Accounts receivable reflected on the balance sheet is net of this reserve. Based on an aging analysis, at September 30, 2021, approximately 91% of our accounts receivable had not yet reached the invoice due date and approximately 9% was considered past due, of which substantially all was less than 60 days past due. At December 31, 2020, approximately 88% of our accounts receivable had not yet reached the invoice due date and approximately 12% was considered past due, of which approximately 1.5% was greater than 60 days past due.

Contract assets and lease receivables

The allowance for credit losses associated with the contract assets and lease receivables was $4.3 million and $3.7 million at September 30, 2021 and December 31, 2020, respectively. The assets reflected on the balance sheet are net of these reserves. Historically, we have experienced low credit loss rates on our customer commitment programs and lease receivables. We apply judgment in determining the customer’s ability and intention to pay, which is based on a variety of factors including the customer’s historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

NOTE 7. INVENTORIES

Inventories are stated at the lower of cost (first-in, first-out) or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The components of inventories were as follows:

(in thousands)	September 30, 2021	December 31, 2020
Raw materials	$ 59,609	$ 45,986
Work-in-process	24,617	20,374
Finished goods	174,258	143,513
Inventories	$ 258,484	$ 209,873

NOTE 8. LEASES

Maturities of operating lease liabilities were as follows:

(in thousands, except lease term and discount rate)	September 30, 2021
2021 (remainder of year)	$ 4,586
2022	24,124
2023	20,195
2024	15,581
2025	12,049
Thereafter	48,987
Total lease payments	125,522
Less imputed interest	(15,364)
Total	$ 110,158

Total minimum future lease payments for leases that have not commenced as of September 30, 2021, are immaterial.

Supplemental cash flow information for leases was as follows:

(in thousands)	For the Nine Months Ended September 30, 2021	For the Nine Months Ended September 30, 2020
Cash paid for amounts included in the measurement of operating leases liabilities	$ 17,232	$ 14,619
Right-of-use assets obtained in exchange for operating lease obligations, net of early lease terminations [a]	$ 33,052	$ 17,064

(a) Additions for the nine months ended September 30, 2021, include $7.9 million of right-of-use assets obtained with the acquisition of ezyVet.

NOTE 9. OTHER CURRENT AND LONG-TERM ASSETS

Other current assets consisted of the following:

(in thousands)	September 30, 2021	December 31, 2020
Customer acquisition costs	$ 48,164	$ 43,751
Prepaid expenses	37,462	34,556
Contract assets, net	31,446	23,837
Taxes receivable	16,823	19,476
Deferred sales commissions	6,302	5,738
Other assets	17,393	10,150
Other current assets	$ 157,590	$ 137,508

Other long-term assets consisted of the following:

(in thousands)	September 30, 2021	December 31, 2020
Customer acquisition costs	$ 108,947	$ 104,369
Contract assets, net	114,668	91,681
Deferred income taxes	24,861	31,549
Deferred sales commissions	12,695	11,719
Investment in long-term product supply arrangements	9,790	12,065
Taxes receivable	2,450	6,329
Other assets	43,733	31,883
Other long-term assets	$ 317,144	$ 289,595

NOTE 10. ACCRUED LIABILITIES

Accrued liabilities consisted of the following:

(in thousands)	September 30, 2021	December 31, 2020
Accrued employee compensation and related expenses	161,579	167,649
Accrued expenses	$ 124,465	$ 112,526
Accrued customer incentives and refund obligations	81,029	75,064
Accrued taxes	43,536	42,676
Current lease liabilities	20,438	17,733
Accrued liabilities	$ 431,047	$ 415,648

Other long-term liabilities consisted of the following:

(in thousands)	September 30, 2021	December 31, 2020
Accrued taxes	$ 58,727	$ 60,313
Other accrued long-term expenses	14,266	25,291
Other long-term liabilities	$ 72,993	$ 85,604

NOTE 11. DEBT

Senior Notes

The following describes all of our currently outstanding unsecured senior notes issued and sold in private placements (collectively, the "Senior Notes") as of September 30, 2021:

(Principal Amount in thousands)

Issue Date	Due Date	Series		Principal Amount	Coupon Rate	Senior Note Agreement
12/11/2013	12/11/2023	2023 Series A Notes	$	75,000	3.94 %	NY Life 2013 Note Agreement
12/11/2013	12/11/2025	2025 Series B Notes	$	75,000	4.04 %	NY Life 2013 Note Agreement
9/4/2014	9/4/2026	2026 Senior Notes	$	75,000	3.72 %	NY Life 2014 Note Agreement
7/21/2014	7/21/2024	2024 Series B Notes	$	75,000	3.76 %	Prudential 2015 Amended Agreement
6/18/2015	6/18/2025	2025 Series C Notes	€	88,857	1.785 %	Prudential 2015 Amended Agreement
2/12/2015	2/12/2022	2022 Series A Notes	$	75,000	3.25 %	MetLife 2014 Note Agreement
2/12/2015	2/12/2027	2027 Series B Notes	$	75,000	3.72 %	MetLife 2014 Note Agreement
3/14/2019	03/14/2029	2029 Series C Notes	$	100,000	4.19 %	MetLife 2014 Note Agreement
4/2/2020	04/02/2030	MetLife 2030 Series D Notes	$	125,000	2.50 %	MetLife 2014 Note Agreement
4/14/2020	04/14/2030	Prudential 2030 Series D Notes	$	75,000	2.50 %	Prudential 2015 Amended Agreement

On July 21, 2021, we paid off our $50.0 million 2021 Series A Notes with cash provided by operations. The aggregate principal amount of our 2022 Series A Notes for $75.0 million will become due and payable on February 12, 2022.

NOTE 12. REPURCHASES OF COMMON STOCK

We primarily acquire shares by repurchases in the open market. However, we also acquire shares that are surrendered by employees in payment for the minimum required statutory withholding taxes due on the vesting of restricted stock units and the settlement of deferred stock units, otherwise referred to herein as employee surrenders. We issue shares of treasury stock upon the vesting of certain restricted stock units and upon the exercise of certain stock options. The number of shares of treasury stock issued during the three and nine months ended September 30, 2021 and 2020 was not material.

The following is a summary of our open market common stock repurchases, reported on a trade date basis, and shares acquired through employee surrender:

(in thousands, except per share amounts)	For the Three Months Ended September 30,				For the Nine Months Ended September 30,			
	2021		2020		2021		2020	
Shares repurchased in the open market		274		—		892		721
Shares acquired through employee surrender for statutory tax withholding [(1)]		1		1		29		31
Total shares repurchased		275		1		921		752
Cost of shares repurchased in the open market	$	183,315	$	—	$	510,937	$	179,623
Cost of shares for employee surrenders		515		360		15,501		9,029
Total cost of shares	$	183,830	$	360	$	526,438	$	188,652
Average cost per share - open market repurchases	$	668.33	$	—	$	572.10	$	249.20
Average cost per share - employee surrenders	$	688.35	$	393.12	$	547.90	$	292.03
Average cost per share - total	$	668.38	$	393.12	$	571.36	$	250.96

(1) For the quarters ended September 30, 2021 and 2020, the number of shares acquired though employee surrender for statutory tax withholding were below rounding thresholds.

NOTE 13. INCOME TAXES

Our effective income tax rate was 20.0% for the three months ended September 30, 2021, as compared to 10.8% for the three months ended September 30, 2020, and 18.1% for the nine months ended September 30, 2021, as compared to 16.0% for the nine months ended September 30, 2020. The increase in our effective tax rate for the three months ended September 30, 2021, as compared to the same period in the prior year, was primarily driven by a decrease in the tax benefits from share-based compensation and the resolution of uncertain tax positions. The increase in our effective tax rate for the nine months ended September 30, 2021, as compared to the same period in the prior year, was primarily driven by a decrease in the tax benefits from share-based compensation and the resolution of uncertain tax positions.

The effective tax rate for the three and nine months ended September 30, 2021, differed from the U.S. statutory tax rate of 21% primarily due to tax benefits from share-based compensation.

NOTE 14. ACCUMULATED OTHER COMPREHENSIVE INCOME

The changes in AOCI, net of tax, consisted of the following:

	For the Nine Months Ended September 30, 2021					
		Unrealized Gain (Loss) on Cash Flow Hedges, Net of Tax	Unrealized (Loss) Gain on Net Investment Hedges, Net of Tax			
(in thousands)	Unrealized Gain (Loss) on Investments, Net of Tax	Foreign Currency Exchange Contracts	Euro-Denominated Notes	Cross Currency Swaps	Cumulative Translation Adjustment	Total
Balance as of December 31, 2020	$ (272)	$ (9,934)	$ (5,982)	$ (2,159)	$ (35,268)	$ (53,615)
Other comprehensive income (loss) before reclassifications	153	7,300	4,235	4,561	(20,213)	(3,964)
Loss reclassified from accumulated other comprehensive income	—	5,522	—	—	—	5,522
Balance as of September 30, 2021	$ (119)	$ 2,888	$ (1,747)	$ 2,402	$ (55,481)	$ (52,057)

	For the Nine Months Ended September 30, 2020					
		Unrealized Gain (Loss) on Cash Flow Hedges, Net of Tax	Unrealized Gain (Loss) on Net Investment Hedges, Net of Tax			
(in thousands)	Unrealized (Loss) Gain on Investments, Net of Tax	Foreign Currency Exchange Contracts	Euro-Denominated Notes	Cross Currency Swaps	Cumulative Translation Adjustment	Total
Balance as of December 31, 2019	$ 110	$ (736)	$ 1,396	$ 3,467	$ (50,419)	$ (46,182)
Other comprehensive (loss) income before reclassifications	(408)	(623)	(3,466)	(1,339)	(7,871)	(13,707)
Gain reclassified from accumulated other comprehensive income	—	(2,036)	—	—	—	(2,036)
Balance as of September 30, 2020	$ (298)	$ (3,395)	$ (2,070)	$ 2,128	$ (58,290)	$ (61,925)

The following tables present components and amounts reclassified out of AOCI to net income:

(in thousands)	Affected Line Item in the Statements of Income	Amounts Reclassified from AOCI For the Three Months Ended September 30,	
		2021	2020
Gain (loss) on derivative instruments classified as cash flow hedges included in net income:			
Foreign currency exchange contracts	Cost of revenue	$ (1,583)	$ (591)
	Tax expense (benefit)	(330)	(53)
	Gain (loss), net of tax	$ (1,253)	$ (538)

(in thousands)	Affected Line Item in the Statements of Income	Amounts Reclassified from AOCI For the Nine Months Ended September 30,	
		2021	2020
Gain (loss) on derivative instruments classified as cash flow hedges included in net income:			
Foreign currency exchange contracts	Cost of revenue	$ (6,728)	$ 2,562
	Tax expense (benefit)	(1,206)	526
	Gain (loss), net of tax	$ (5,522)	$ 2,036

NOTE 15. EARNINGS PER SHARE

Basic earnings per share is computed by dividing net income attributable to our stockholders by the weighted average number of shares of common stock and vested deferred stock units outstanding during the year. The computation of diluted earnings per share is similar to the computation of basic earnings per share, except that the denominator is increased for the assumed exercise of dilutive options and assumed issuance of unvested restricted stock units and unvested deferred stock units using the treasury stock method unless the effect is anti-dilutive. The treasury stock method assumes that proceeds, including cash received from the exercise of employee stock options and the total unrecognized compensation expense for unvested share-based compensation awards, would be used to purchase our common stock at the average market price during the period. Vested deferred stock units outstanding are included in shares outstanding for basic and diluted earnings per share because the associated shares of our common stock are issuable for no cash consideration, the number of shares of our common stock to be issued is fixed, and issuance is not contingent. See Note 5 to the consolidated financial statements in our 2020 Annual Report for additional information regarding deferred stock units.

The following is a reconciliation of weighted average shares outstanding for basic and diluted earnings per share:

(in thousands)	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2021	2020	2021	2020
Shares outstanding for basic earnings per share	85,123	85,314	85,325	85,293
Shares outstanding for diluted earnings per share:				
Shares outstanding for basic earnings per share	85,123	85,314	85,325	85,293
Dilutive effect of share-based payment awards	1,388	1,376	1,387	1,342
	86,511	86,690	86,712	86,635

Certain awards and options to acquire shares have been excluded from the calculation of shares outstanding for diluted earnings per share because they were anti-dilutive. The following table presents information concerning those anti-dilutive awards and options:

(in thousands)	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2021	2020	2021	2020
Weighted average number of shares underlying anti-dilutive awards	—	1	0	—
Weighted average number of shares underlying anti-dilutive options	129	10	114	236

NOTE 16. COMMITMENTS, CONTINGENCIES AND GUARANTEES

Commitments

See "Note 8. Leases", for more information regarding our lease commitments.

Contingencies and Guarantees

We are subject to claims that may arise in the ordinary course of business, including with respect to actual and threatened litigation and other matters. We accrue for loss contingencies when it is probable that future expenditures will be made, and such expenditures can be reasonably estimated. However, the results of legal actions cannot be predicted with certainty, and therefore our actual losses with respect to these contingencies could be higher and lower than our accruals. Except for the litigation matter described below, at September 30, 2021, our accruals with respect to actual and threatened litigation were not material.

We are a defendant in an ongoing litigation matter involving an alleged breach of contract for underpayment of royalty payments made from 2004 through 2017 under an expired patent license agreement. The plaintiff has asserted a claim of approximately $50 million, inclusive of interest through June 30, 2020, alleging that the incorrect royalty provision was applied to certain licensed products and services throughout the agreement term and that royalties were also due on non-licensed diagnostic services that were provided concurrently with licensed services. The trial court previously ruled in favor of the plaintiff in this matter and we are appealing the judgment and continue to vigorously defend ourselves against the plaintiff's allegations. While we believe the claim is without merit, litigation is inherently unpredictable and there can be no assurance that we will prevail in this matter. During the third quarter of 2020, we established an accrual of $27.5 million related to this ongoing matter, which represents the amount of a possible loss that we have determined to be probable and estimable. We have not made any adjustments to this accrual since it was established. The actual cost of resolving this matter may be higher or lower than the amount we have accrued.

From time to time, we have received notices alleging that our products infringe third party proprietary rights, although we are not aware of any pending litigation with respect to such claims. Patent litigation frequently is complex and expensive, and the outcome of patent litigation can be difficult to predict. There can be no assurance that we will prevail in any infringement proceedings that may be commenced against us. If we lose any such litigation, we may be stopped from selling certain products and/or we may be required to pay damages as a result of the litigation.

We have had no significant changes to our contingencies and guarantees discussed in Note 16 to the consolidated financial statements in our 2020 Annual Report.

NOTE 17. SEGMENT REPORTING

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker (“CODM”), or decision-making group, in deciding how to allocate resources and in assessing performance. Our CODM is our Chief Executive Officer. Our reportable segments include diagnostic and information technology-based products and services for the veterinary market, which we refer to as the Companion Animal Group (“CAG”), water quality products (“Water”) and diagnostic products and services for livestock and poultry health and to ensure the quality and safety of milk and improve producer efficiency, which we refer to as Livestock, Poultry and Dairy (“LPD”). Although our LPD segment does not meet the quantitative thresholds to be reported as a separate segment, we believe it is important to disaggregate these revenues as a major product and service category within our Other reportable segment given its distinct markets, and therefore we have elected to report LPD as a reportable segment. Our Other operating segment combines and presents products and services for the human medical diagnostics (“OPTI Medical”) market with our out-licensing arrangements. Assets are not allocated to segments for internal reporting purposes.

The following is a summary of segment performance:

(in thousands)	For the Three Months Ended September 30,				
	CAG	Water	LPD	Other	Consolidated Total
2021					
Revenue	$ 732,495	$ 38,143	$ 29,126	$ 10,657	$ 810,421
Income from operations	$ 201,947	$ 17,599	$ 3,600	$ 2,816	$ 225,962
Interest expense, net					(7,012)
Income before provision for income taxes					218,950
Provision for income taxes					43,772
Net income					175,178
Less: Net loss attributable to noncontrolling interest					(57)
Net income attributable to IDEXX Laboratories, Inc. stockholders					$ 175,235
2020					
Revenue	$ 638,017	$ 33,272	$ 36,971	$ 13,529	$ 721,789
Income from operations	$ 139,434	$ 15,243	$ 10,505	$ 6,674	$ 171,856
Interest expense, net					(7,902)
Income before provision for income taxes					163,954
Provision for income taxes					17,633
Net income					146,321
Less: Net income attributable to noncontrolling interest					102
Net income attributable to IDEXX Laboratories, Inc. stockholders					$ 146,219

(in thousands)	For the Nine Months Ended September 30,				
	CAG	Water	LPD	Other	Consolidated Total
2021					
Revenue	$ 2,170,857	$ 109,374	$ 101,920	$ 32,119	$ 2,414,270
Income from operations	$ 649,892	$ 49,599	$ 24,276	$ 9,070	$ 732,837
Interest expense, net					(22,066)
Income before provision for income taxes					710,771
Provision for income taxes					128,698
Net income					582,073
Less: Net loss attributable to noncontrolling interest					(1)
Net income attributable to IDEXX Laboratories, Inc. stockholders					$ 582,074
2020					
Revenue	$ 1,756,113	$ 95,537	$ 103,369	$ 30,698	$ 1,985,717
Income from operations	$ 426,062	$ 43,383	$ 28,417	$ 11,567	$ 509,429
Interest expense, net					(24,880)
Income before provision for income taxes					484,549
Provision for income taxes					77,376
Net income					407,173
Less: Net income attributable to noncontrolling interest					187
Net income attributable to IDEXX Laboratories, Inc. stockholders					$ 406,986

See “Note 3. Revenue Recognition” for a summary of disaggregated revenue by reportable segment and by major product and service category for the three and nine months ended September 30, 2021 and 2020.

NOTE 18. FAIR VALUE MEASUREMENTS

U.S. GAAP defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. U.S. GAAP requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value.

We have certain financial assets and liabilities that are measured at fair value on a recurring basis, certain nonfinancial assets and liabilities that may be measured at fair value on a non-recurring basis and certain financial assets and liabilities that are not measured at fair value in our unaudited condensed consolidated balance sheets but for which we disclose the fair value. The fair value disclosures of these assets and liabilities are based on a three-level hierarchy, which is defined as follows:

Level 1	Quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date.
Level 2	Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
Level 3	Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. We did not have any transfers in or out of Level 3 of the fair value hierarchy during the three and nine months ended September 30, 2021.

Our cross currency swap contracts are measured at fair value on a recurring basis in our accompanying unaudited condensed consolidated balance sheets. We measure the fair value of our cross currency swap contracts classified as derivative instruments using prevailing market conditions as of the close of business on each balance sheet date. The product of this calculation is then adjusted for counterparty risk.

Our foreign currency exchange contracts are measured at fair value on a recurring basis in our accompanying unaudited condensed consolidated balance sheets. We measure the fair value of our foreign currency exchange contracts classified as derivative instruments using an income approach, based on prevailing market forward rates less the contract rate multiplied by the notional amount. The product of this calculation is then adjusted for counterparty risk.

The amounts outstanding under our unsecured revolving credit facility ("Credit Facility" or "line of credit") and senior notes ("long-term debt") are measured at carrying value in our unaudited condensed consolidated balance sheets though we disclose the fair value of these financial instruments. We determine the fair value of the amount outstanding under our Credit Facility and long-term debt using an income approach, utilizing a discounted cash flow analysis based on current market interest rates for debt issues with similar remaining years to maturity, adjusted for applicable credit risk. Our Credit Facility and long-term debt are valued using Level 2 inputs. The estimated fair value of our Credit Facility approximates its carrying value. The estimated fair value and carrying value of our long-term debt were $928.2 million and $853.6 million, respectively, as of September 30, 2021, and $1.0 billion and $909.1 million, respectively, as of December 31, 2020.

The following tables set forth our assets and liabilities that were measured at fair value on a recurring basis by level within the fair value hierarchy:

(in thousands)

As of September 30, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance at September 30, 2021
Assets				
Money market funds [1]	$ 76	$ —	$ —	$ 76
Equity mutual funds [2]	$ 913	$ —	$ —	$ 913
Cross currency swaps [3]	$ —	$ 3,158	$ —	$ 3,158
Foreign currency exchange contracts [3]	$ —	$ 5,075	$ —	$ 5,075
Liabilities				
Foreign currency exchange contracts [3]	$ —	$ 1,698	$ —	$ 1,698
Deferred compensation [4]	$ 913	$ —	$ —	$ 913
Contingent payments - acquisitions	$ —	$ —	$ 5,230	$ 5,230

(in thousands)

As of December 31, 2020		Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)		Balance at December 31, 2020
Assets								
Money market funds [1]	$	76	$	—	$	—	$	76
Equity mutual funds [2]	$	1,145	$	—	$	—	$	1,145
Foreign currency exchange contracts [3]	$	—	$	125	$	—	$	125
Liabilities								
Cross currency swaps [3]	$	—	$	2,841	$	—	$	2,841
Foreign currency exchange contracts [3]	$	—	$	12,373	$	—	$	12,373
Deferred compensation [4]	$	1,145	$	—	$	—	$	1,145

(1) Money market funds with an original maturity of less than ninety days are included within cash and cash equivalents. The remaining balance of cash and cash equivalents as of September 30, 2021 and December 31, 2020, consisted of demand deposits.
(2) Equity mutual funds relate to a deferred compensation plan that was assumed as part of a previous business combination. This amount is included within other long-term assets. See footnote (4) below for a discussion of the related deferred compensation liability.
(3) Cross currency swaps and foreign currency exchange contracts are included within other current assets, other long-term assets, accrued liabilities, or other long-term liabilities depending on the gain (loss) position and anticipated settlement date.
(4) A deferred compensation plan assumed as part of a previous business combination is included within accrued liabilities and other long-term liabilities. The fair value of our deferred compensation plan is indexed to the performance of the underlying equity mutual funds discussed in footnote (2) above.

The estimated fair value of certain financial instruments, including cash and cash equivalents, accounts receivable and accounts payable, approximate carrying value due to their short maturity.

Contingent Consideration

We have classified our liability for contingent consideration related to acquisitions within Level 3 of the fair value hierarchy because the fair value is determined using significant unobservable inputs, which includes the achievements of future revenues. The contingent consideration is included within other short-term liabilities.

We record changes in the estimated fair value of contingent consideration in the condensed consolidated statements of income. Changes in contingent consideration liabilities are measured at fair value on a recurring basis using unobservable inputs (Level 3) and during the nine months ended September 30, 2021, are as follows:

(in thousands)		Fair Value
Contingent consideration as of December 31, 2020	$	—
Contingent consideration recorded from acquisitions (Note 4)		5,230
Change in estimated fair value		—
Contingent consideration as of September 30, 2021	$	5,230

NOTE 19. HEDGING INSTRUMENTS

Disclosure within this note is presented to provide transparency about how and why we use derivative and non-derivative instruments (collectively “hedging instruments”), how the instruments and related hedged items are accounted for, and how the instruments and related hedged items affect our financial position, results of operations and cash flows.

We are exposed to certain risks related to our ongoing business operations. The primary risk that we currently manage by using hedging instruments is foreign currency exchange risk. We may also enter into interest rate swaps to minimize the impact of interest rate fluctuations associated with borrowings under our variable-rate Credit Facility.

Our subsidiaries enter into foreign currency exchange contracts to manage the exchange risk associated with their forecasted intercompany inventory purchases and sales for the next year. From time to time, we may also enter into other foreign currency exchange contracts, cross currency swaps or foreign-denominated debt issuances to minimize the impact of foreign currency fluctuations associated with specific balance sheet exposures, including net investments in certain foreign subsidiaries.

The primary purpose of our foreign currency hedging activities is to protect against the volatility associated with foreign currency transactions, including transactions denominated in the euro, British pound, Japanese yen, Canadian dollar, and Australian dollar. We also utilize natural hedges to mitigate our transaction and commitment exposures. Our corporate policy prescribes the range of allowable hedging activity. We enter into foreign currency exchange contracts with well-capitalized multinational financial institutions, and we do not hold or engage in transactions involving derivative instruments for purposes other than risk management. Our accounting policies for these contracts are based on the designation of such instruments as hedging transactions.

We recognize all hedging instruments on the balance sheet at fair value at the balance sheet date. Instruments that do not qualify for hedge accounting treatment must be recorded at fair value through earnings. To qualify for hedge accounting treatment, cash flow and net investment hedges must be highly effective in offsetting changes to expected future cash flows or fair value on hedged transactions. If the instrument qualifies for hedge accounting, changes in the fair value of the hedging instrument from the effective portion of the hedge are deferred in AOCI, net of tax, and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. We immediately record in earnings the extent to which a hedging instrument is not effective in achieving offsetting changes in fair value. We de-designate hedging instruments from hedge accounting when the likelihood of the hedged transaction occurring becomes less than probable. For de-designated instruments, the gain or loss from the time of de-designation through maturity of the instrument is recognized in earnings. Any gain or loss in AOCI at the time of de-designation is reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. See “Note 14. Accumulated Other Comprehensive Income” for further information regarding the effect of hedging instruments on our unaudited condensed consolidated statements of income for the three and nine months ended September 30, 2021 and 2020.

We enter into master netting arrangements with the counterparties to our derivative transactions which permit certain outstanding receivables and payables to be offset in the event of default. Our derivative contracts do not require either party to post cash collateral. We elect to present our derivative assets and liabilities in the unaudited condensed consolidated balance sheets on a gross basis. All cash flows related to our foreign currency exchange contracts are classified as operating cash flows, which is consistent with the cash flow treatment of the underlying items being hedged.

Cash Flow Hedges

We have designated our foreign currency exchange contracts as cash flow hedges as these derivative instruments mitigate the exposure to variability in the cash flows of forecasted transactions attributable to foreign currency exchange. Unless noted otherwise, we have also designated our derivative instruments as qualifying for hedge accounting treatment.

We did not de-designate any instruments from hedge accounting treatment during either the three and nine months ended September 30, 2021 or 2020. At September 30, 2021, the estimated amount of net gains, net of tax, which are expected to be reclassified out of AOCI and into earnings within the next 12 months, is $2.0 million if exchange rates do not fluctuate from the levels at September 30, 2021.

We target to hedge approximately 85% of the estimated exposure from intercompany product purchases and sales denominated in the euro, British pound, Canadian dollar, Japanese yen, and Australian dollar. We have additional unhedged foreign currency exposures related to foreign services and emerging markets where it is not practical to hedge. We primarily utilize foreign currency exchange contracts with durations of less than 24 months. Quarterly, we enter into contracts to hedge incremental portions of anticipated foreign currency transactions for the current and following year. As a result, our risk with respect to foreign currency exchange rate fluctuations and the notional value of foreign currency exchange contracts may vary throughout the year. The U.S. dollar is the currency purchased or sold in all of our foreign currency exchange contracts. The notional amount of foreign currency exchange contracts to hedge forecasted intercompany inventory purchases and sales totaled $223.8 million and $202.7 million at September 30, 2021 and December 31, 2020, respectively.

The following tables present the effect of cash flow hedge accounting on our unaudited condensed consolidated statements of income and comprehensive income, and provide information regarding the location and amounts of pretax gains or losses of derivatives:

(in thousands)		Three Months Ended September 30,	
		2021	2020
Financial statement line items in which effects of cash flow hedges are recorded	Cost of revenue	$ 337,500	$ 299,183
Foreign exchange contracts			
Amount of (loss) gain reclassified from accumulated other comprehensive income into income		$ (1,583)	$ (591)

(in thousands)		Nine Months Ended September 30,	
		2021	2020
Financial statement line items in which effects of cash flow hedges are recorded	Cost of revenue	$ 981,259	$ 824,179
Foreign exchange contracts			
Amount of (loss) gain reclassified from accumulated other comprehensive income into income		$ (6,728)	$ 2,562

Net Investment Hedges, Euro-Denominated Notes

In June 2015, we issued and sold through a private placement an aggregate principal amount of €88.9 million in euro-denominated 1.785% Series C Senior Notes due June 18, 2025. We have designated these euro-denominated notes as a hedge of our euro net investment in certain foreign subsidiaries to reduce the volatility in stockholders' equity caused by changes in foreign currency exchange rates in the euro relative to the U.S. dollar. As a result of this designation, gains and losses from the change in translated U.S. dollar value of these euro-denominated notes are recorded in AOCI rather than to earnings. We recorded gains of $1.6 million and gains of $4.2 million, net of tax, within AOCI as a result of this net investment hedge for the three and nine months ended September 30, 2021, respectively, and losses of $2.8 million and $3.5 million for the three and nine months ended September 30, 2020, respectively. The related cumulative unrealized loss recorded at September 30, 2021, will not be reclassified in earnings until the complete or substantially complete liquidation of the net investment in the hedged foreign operations or a portion of the hedge no longer qualifies for hedge accounting treatment. See Note 13 to the consolidated financial statements included in our 2020 Annual Report for further information regarding the issuance of these euro-denominated notes.

Net Investment Hedges, Cross Currency Swaps

We have entered into several cross currency swap contracts as a hedge of our net investment in foreign operations to offset foreign currency translation gains and losses on the net investment. These cross currency swaps have maturity dates beginning on June 30, 2023, through June 18, 2025. At maturity of the cross currency swap contracts, we will deliver the notional amount of €90.0 million and will receive approximately $104.5 million from the counterparties on June 30, 2023, and we will deliver the notional amount of €15 million and will receive approximately $17.5 million from the counterparties on June 18, 2025. The change in fair value of the cross currency swap contracts are recorded in AOCI and will be reclassified to earnings when the foreign subsidiaries are sold or substantially liquidated. During the three and nine months ended September 30, 2021, we recorded gains of $2.4 million and gains of $4.6 million, respectively, net of tax, within AOCI as a result of these net investment hedges, and losses of $3.9 million and $1.3 million during the three and nine months ended September 30, 2020, respectively. We will receive quarterly interest payments from the counterparties based on a fixed interest rate until maturity of the cross currency swaps. This interest rate component is excluded from the assessment of hedge effectiveness and, thus is recognized as a reduction to interest expense over the life of the hedge instrument. We recognized approximately $0.7 million and $2.1 million related to the excluded component as a reduction of interest expense for the three and nine months ended September 30, 2021, respectively, and $0.7 million and $2.0 million for the three and nine months ended September 30, 2020, respectively.

Fair Values of Hedging Instruments Designated as Hedges in Consolidated Balance Sheets

The fair values of hedging instruments and their respective classification on our unaudited condensed consolidated balance sheets and amounts subject to offset under master netting arrangements consisted of the following derivative instruments, unless otherwise noted:

(in thousands)		Hedging Assets	
		September 30, 2021	December 31, 2020
Derivatives and non-derivatives designated as hedging instruments	**Balance Sheet Classification**		
Foreign currency exchange contracts	Other current assets	$ 3,996	$ 125
Cross currency swaps	Other long-term assets	3,158	—
Foreign currency exchange contracts	Other long-term assets	1,079	—
Total derivative instruments presented as hedge instruments on the balance sheet		8,233	125
Gross amounts subject to master netting arrangements not offset on the balance sheet		(1,630)	(125)
Net amount		$ 6,603	$ —

(in thousands)		Hedging Liabilities	
		September 30, 2021	December 31, 2020
Derivatives and non-derivatives designated as hedging instruments	**Balance Sheet Classification**		
Foreign currency exchange contracts	Accrued liabilities	$ 1,686	$ 12,373
Cross currency swaps	Other long-term liabilities	—	2,841
Foreign currency exchange contracts	Other long-term liabilities	12	—
Total derivative instruments presented as cash flow hedges on the balance sheet		1,698	15,214
Non-derivative foreign currency denominated debt designated as net investment hedge on the balance sheet [(1)]	Long-term debt	103,555	109,125
Total hedging instruments presented on the balance sheet		105,253	124,339
Gross amounts subject to master netting arrangements not offset on the balance sheet		(1,630)	(125)
Net amount		$ 103,623	$ 124,214

(1) Amounts represent reported carrying amounts of our foreign currency denominated debt. See “Note 18. Fair Value Measurements” for information regarding the fair value of our long-term debt.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This Quarterly Report on Form 10-Q contains statements which, to the extent they are not statements of historical fact, constitute "forward-looking statements." Such forward-looking statements about our business and expectations within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), include statements relating to, among other things, the impact of the COVID-19 pandemic; our expectations regarding supply chain and logistics disruptions; future revenue growth rates; revenue recognition timing and amounts; business trends, earnings and other measures of financial performance; the effect of economic downturns on our business performance; projected impact of foreign currency exchange rates; demand for our products; realizability of assets; future cash flow and uses of cash; future repurchases of common stock; future levels of indebtedness and capital spending, the working capital and liquidity outlook; the adoption and projected impact of new accounting standards; critical accounting estimates; deductibility of goodwill; future commercial and operational efforts; competition; and intercompany and corporate structure-related activities. Forward-looking statements can be identified by the use of words such as "expects," "may," "anticipates," "intends," "would," "will," "plans," "believes," "estimates," "should," "project," and similar words and expressions. These forward-looking statements are intended to provide our current expectations or forecasts of future events; are based on current estimates, projections, beliefs, and assumptions; and are not guarantees of future performance. Actual events or results may differ materially from those described in the forward-looking statements. These forward-looking statements involve a number of risks and uncertainties, including, among other things, the adverse impact, and the duration, of the effects of the ongoing COVID-19 pandemic on our business, results of operations, liquidity, financial condition, and stock price, supply chain and logistics delays and disruptions, as well as the other matters described under the headings "Business," "Risk Factors," "Legal Proceedings," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Quantitative and Qualitative Disclosure About Market Risk" in our 2020 Annual Report and in the corresponding sections of this Quarterly Report on Form 10-Q and our Quarterly Reports of Form 10-Q for the quarters ended March 31, 2021, and June 30, 2021, as well as those described from time to time in our other periodic reports filed with the SEC.

Any forward-looking statements represent our estimates only as of the day this Quarterly Report on Form 10-Q was filed with the SEC and should not be relied upon as representing our estimates as of any subsequent date. From time to time, oral or written forward-looking statements may also be included in other materials released to the public. While we may elect to update forward-looking statements at some point in the future, we specifically disclaim any obligation to do so, even if our estimates or expectations change.

You should read the following discussion and analysis in conjunction with our 2020 Annual Report that includes additional information about us, our results of operations, our financial position, and our cash flows, and with our unaudited condensed consolidated financial statements and related notes included in Part I. Item 1. Financial Statements of this Quarterly Report on Form 10-Q.

Our fiscal quarter ended on September 30. Unless otherwise stated, the analysis and discussion of our financial condition and results of operations below, including references to growth and organic growth and increases and decreases, are being compared to the equivalent prior-year periods.

Business Overview

We develop, manufacture, and distribute products and provide services primarily for the companion animal veterinary, livestock, poultry and dairy, and water testing markets. We also design, manufacture, and distribute point of care and laboratory diagnostics for the human medical diagnostics market. Our primary products and services are:

- Point-of-care veterinary diagnostic products, comprising instruments, consumables, and rapid assay test kits;
- Veterinary reference laboratory diagnostic and consulting services;
- Practice management and diagnostic imaging systems and services used by veterinarians;
- Health monitoring, biological materials testing, laboratory diagnostic instruments and services used by the biomedical research community;
- Diagnostic, health-monitoring products for livestock, poultry, and dairy;
- Products that test water for certain microbiological contaminants; and
- Point-of-care electrolytes, blood gas analyzers, and SARS-CoV-2 RT-PCR (COVID-19 test) used in the human medical diagnostics market.

Operating Segments. We operate primarily through three business segments: diagnostic and information technology-based products and services for the veterinary market, which we refer to as the Companion Animal Group ("CAG"), water quality products ("Water") and diagnostic products and services for livestock and poultry health and to ensure the quality and safety of milk and improve producer efficiency, which we refer to as Livestock, Poultry and Dairy ("LPD"). Our Other operating segment combines and presents products for the human medical diagnostics market ("OPTI Medical") with our out-licensing arrangements because they do not meet the quantitative or qualitative thresholds for reportable segments.

CAG develops, designs, manufactures, and distributes products and software, and performs services for veterinarians and the biomedical analytics market, primarily related to diagnostics and information management. Water develops, designs, manufactures, and distributes a range of products used in the detection of various microbiological parameters in water. LPD develops, designs, manufactures, and distributes diagnostic tests and related software and performs services that are used to manage the health status of livestock and poultry, to improve bovine reproductive efficiency, and to ensure the quality and safety of milk. OPTI Medical develops, designs, manufactures, and distributes point-of-care and laboratory diagnostics (including electrolyte and blood gas analyzers, COVID-19 PCR test, and related consumable products) for the human medical diagnostics market.

Effects of Certain Factors and Trends on Results of Operations

CAG Market Trends. Positive global trends in companion animal healthcare continue to support strong growth for CAG diagnostic products and services across regions. U.S. same-store clinical visit growth at veterinary practices was 2% in the third quarter. These clinical visit gains are compared to strong prior year period clinical visit growth of 7%, which included benefits from pent-up demand from delayed veterinary visits during the COVID-19 pandemic.

Other Market Trends. We anticipate reduced LPD revenues on a year-over-year comparison to continue during future quarters, as we compare to high prior-year demand for our African Swine Fever testing in China. We also expect that revenues from our China LPD business may decline for the remainder of the year from lower pork prices, the relaxation of local African Swine Fever disease management programs, and changing government requirements related to live animal imports and livestock infectious disease programs.

Supply Chain and Logistics Challenges. We believe that building and maintaining a well-managed and disciplined infrastructure have helped minimize impacts of the COVID-19 pandemic-related supply chain constraints, including product and component availability issues, logistics challenges, including extended shipping periods and delays, and inflationary pressures that are currently occurring worldwide. Our proactive approach to managing front-line operational processes, including forward planning with a focus on working closely with our suppliers and logistics partners, has enabled us to maintain continued high levels of product and service availability, and customer service. Although we expect the current supply chain and logistics challenges to continue in 2022, we believe we are well positioned to enable sustained high growth in our businesses going forward, and to effectively manage the impacts of potentially relatively higher costs in certain areas to support these growth plans. However, there can be no assurance as to the duration or severity of the supply chain and logistics challenges or the effectiveness of our mitigating activities.

Currency and Other Items

Currency Impact. See "Part I. Item 3. Quantitative and Qualitative Disclosures about Market Risk" included in this Quarterly Report on Form 10-Q for additional information regarding the impact of foreign currency exchange rates.

Other Items. See "Part I. Item 1. Business - Patents and Licenses" and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our 2020 Annual Report for additional information regarding distributor purchasing and inventories, economic conditions, and patent expiration.

Critical Accounting Estimates and Assumptions

The discussion and analysis of our financial condition and results of operations is based upon our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on various assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The critical accounting policies and the significant judgments and estimates used in the preparation of our unaudited condensed consolidated financial statements for the three and nine months ended September 30, 2021, are consistent with those discussed in our 2020 Annual Report in the section under the heading "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Estimates and Assumptions."

Recent Accounting Pronouncements

For more information regarding the impact that recent accounting standards and amendments will have on our consolidated financial statements as described in Note 2 to the unaudited condensed consolidated financial statements in Part I. Item 1. Financial Statements of this Quarterly Report on Form 10-Q.

Non-GAAP Financial Measures

The following revenue analysis and discussion focuses on organic revenue growth, and references in this analysis and discussion to "revenue," "revenues" or "revenue growth" are references to "organic revenue growth." Organic revenue growth is a non-GAAP financial measure and represents the percentage change in revenue during the three and nine months ended September 30, 2021, as compared to the same periods for the prior year, net of the effect of changes in foreign currency exchange rates, certain business acquisitions, and divestitures. Organic revenue growth should be considered in addition to, and not as a replacement for, or as a superior measure to, revenue growth reported in accordance with U.S. GAAP, and may not be comparable to similarly titled measures reported by other companies. Management believes that reporting organic revenue growth provides useful information to investors by facilitating easier comparisons of our revenue performance with prior and future periods and to the performance of our peers.

We exclude from organic revenue growth the effect of changes in foreign currency exchange rates because changes in foreign currency exchange rates are not under management's control, are subject to volatility, and can obscure underlying business trends. We calculate the impact on revenue resulting from changes in foreign currency exchange rates by applying the difference between the weighted average exchange rates during the current year period and the comparable prior-year period to foreign currency denominated revenues for the prior-year period.

We also exclude from organic revenue growth the effect of certain business acquisitions and divestitures because the nature, size and number of these transactions can vary dramatically from period to period, and because they either require or generate cash as an inherent consequence of the transaction, and therefore can also obscure underlying business and operating trends. We exclude only acquisitions that are considered to be a business from organic revenue growth. In a business combination, if substantially all the fair value of the assets acquired is concentrated in a single asset or group of similar assets, we do not consider these assets to be a business and include these acquisitions in organic revenue growth. A typical acquisition that we do not consider a business is a customer list asset acquisition, which does not have all elements necessary to operate a business, such as employees or infrastructure. We believe the efforts required to convert and retain these acquired customers are similar in nature to our existing customer base and therefore are included in organic revenue growth. The percentage change in revenue resulting from acquisitions represents revenues during the current year period, limited to the initial 12 months from the date of the acquisition, that are directly attributable to business acquisitions.

We also use Adjusted EBITDA, gross debt, net debt, gross debt to Adjusted EBITDA ratio and net debt to Adjusted EBITDA ratio, in this Quarterly Report on Form 10-Q, all of which are non-GAAP financial measures that should be considered in addition to, and not as a replacement for, financial measures presented according to U.S. GAAP. Management believes that reporting these non-GAAP financial measures provides supplemental analysis to help investors further evaluate our business performance and available borrowing capacity under our Credit Facility.

Results of Operations

Three Months Ended September 30, 2021, Compared to Three Months Ended September 30, 2020

Total Company. The following table presents total Company revenue by operating segment:

Net Revenue *(dollars in thousands)*	For the Three Months Ended September 30, 2021	2020	Dollar Change	Reported Revenue Growth (1)	Percentage Change from Currency	Percentage Change from Acquisitions	Organic Revenue Growth (1)
CAG	**$ 732,495**	**$ 638,017**	**$ 94,478**	**14.8 %**	**0.9 %**	**1.2 %**	**12.7 %**
United States	*484,903*	*428,105*	*56,798*	*13.3 %*	*—*	*1.7 %*	*11.5 %*
International	*247,592*	*209,912*	*37,680*	*18.0 %*	*2.8 %*	*0.2 %*	*14.9 %*
Water	**38,143**	**33,272**	**4,871**	**14.6 %**	**1.9 %**	**—**	**12.7 %**
United States	*19,216*	*16,634*	*2,582*	*15.5 %*	*—*	*—*	*15.5 %*
International	*18,927*	*16,638*	*2,289*	*13.8 %*	*3.8 %*	*—*	*10.0 %*
LPD	**29,126**	**36,971**	**(7,845)**	**(21.2 %)**	**1.3 %**	**—**	**(22.5 %)**
United States	*4,177*	*3,784*	*393*	*10.4 %*	*—*	*—*	*10.4 %*
International	*24,949*	*33,187*	*(8,238)*	*(24.8 %)*	*1.4 %*	*—*	*(26.2 %)*
Other	**10,657**	**13,529**	**(2,872)**	**(21.2 %)**	**(0.1 %)**	**—**	**(21.1 %)**
Total Company	**$ 810,421**	**$ 721,789**	**$ 88,632**	**12.3 %**	**1.0 %**	**1.1 %**	**10.2 %**
United States	*514,343*	*454,836*	*59,507*	*13.1 %*	*—*	*1.6 %*	*11.4 %*
International	*296,078*	*266,953*	*29,125*	*10.9 %*	*2.6 %*	*0.1 %*	*8.2 %*

(1) Reported revenue growth and organic revenue growth may not recalculate due to rounding.

Total Company Revenue. The increase in both U.S. and international organic revenues was driven by strong volume gains in CAG Diagnostics recurring revenue, reflecting continued high demand for companion animal diagnostics globally. Our CAG Diagnostics instrument revenue reflects high placement volume this quarter, reflecting higher premium instrument placements globally, including higher placements of our new instrument, ProCyte One®, compared to lower placements in the third quarter of 2020 which was impacted by pandemic constraints. The higher revenue in our Water business was the result of a recovery in demand for testing volumes, including non-compliance testing that has been constrained since the beginning of the pandemic, as well as from comparisons to disruptions in certain compliance testing during the third quarter of the prior year. In our LPD business, revenues decreased primarily as a result of lower swine testing in China. Other revenues reflect lower demand for human OPTI COVID-19 PCR testing products and services, which has occurred as vaccination rates increased. The impact of currency movements increased total revenue by 1.0%, while acquisitions increased revenue by 1.1%.

The following table presents total Company results of operations:

Total Company - Results of Operations *(dollars in thousands)*	**For the Three Months Ended September 30,** 2021	Percent of Revenue	2020	Percent of Revenue	**Change** Amount	Percentage
Revenues	$ 810,421		$ 721,789		$ 88,632	12.3 %
Cost of revenue	337,500		299,183		38,317	12.8 %
Gross profit	472,921	58.4 %	422,606	58.5 %	50,315	11.9 %
Operating Expenses:						
Sales and marketing	124,434	15.4 %	108,202	15.0 %	16,232	15.0 %
General and administrative	82,098	10.1 %	105,031	14.6 %	(22,933)	(21.8 %)
Research and development	40,427	5.0 %	37,517	5.2 %	2,910	7.8 %
Total operating expenses	246,959	30.5 %	250,750	34.7 %	(3,791)	(1.5 %)
Income from operations	$ 225,962	27.9 %	$ 171,856	23.8 %	$ 54,106	31.5 %

Gross Profit. Gross profit increased due to higher sales volumes despite a slight 10 basis point decrease in the gross profit margin. The net decrease in the gross profit margin was driven by several factors including the mix impact from higher CAG Diagnostics instrument revenue and lower LPD swine and OPTI COVID-19 PCR test revenues. Laboratory gross margins were also impacted by investments in our reference laboratory business to support high growth and customer service levels, as compared to tightly controlled prior year cost levels in response to the onset of the COVID-19 pandemic. These impacts were partially offset by high CAG diagnostic recurring revenue growth and moderate net price increases, as well as strong growth in veterinary software and services. The impact from foreign currency movements increased the gross profit margin by less than 10 basis points, including the impact of higher hedge losses as compared to the prior year.

Operating Expenses. Sales and marketing expense increased primarily due to higher personnel-related costs, including investments in our global commercial capability, as well as travel costs. General and administrative expense decreased as compared to the third quarter of 2020 due to an accrual related to an ongoing litigation matter and a charitable donation in the prior year. These decreases to general and administrative expenses were partially offset by higher personnel-related costs and costs associated with acquisitions. Research and development expense increased primarily due to higher project and personnel-related costs. The overall change in currency exchange rates resulted in an increase in operating expenses by approximately 1%.

Companion Animal Group

The following table presents revenue by product and service category for CAG:

Net Revenue *(dollars in thousands)*	**For the Three Months Ended September 30, 2021**	**2020**	**Dollar Change**	**Reported Revenue Growth (1)**	**Percentage Change from Currency**	**Percentage Change from Acquisitions**	**Organic Revenue Growth (1)**
CAG Diagnostics recurring revenue:	$ 638,358	$ 567,416	$ 70,942	12.5 %	0.9 %	0.1 %	11.5 %
IDEXX VetLab consumables	*252,714*	*218,605*	*34,109*	*15.6 %*	*1.2 %*	—	*14.4 %*
Rapid assay products	*76,974*	*70,593*	*6,381*	*9.0 %*	*0.4 %*	—	*8.6 %*
Reference laboratory diagnostic and consulting services	*282,301*	*254,223*	*28,078*	*11.0 %*	*0.8 %*	*0.2 %*	*10.0 %*
CAG diagnostics services and accessories	*26,369*	*23,995*	*2,374*	*9.9 %*	*0.8 %*	—	*9.1 %*
CAG Diagnostics capital - instruments	39,401	29,336	10,065	34.3 %	1.3 %	—	33.0 %
Veterinary software, services and diagnostic imaging systems	54,736	41,265	13,471	32.6 %	0.5 %	17.4 %	14.7 %
Net CAG revenue	$ 732,495	$ 638,017	$ 94,478	14.8 %	0.9 %	1.2 %	12.7 %

(1) Reported revenue growth and organic revenue growth may not recalculate due to rounding

CAG Diagnostics Recurring Revenue. The increase was driven by strong market demand for companion animal diagnostics globally across modalities. To a lesser extent, the increase in CAG Diagnostics recurring revenue was due to higher realized prices. The same period in the prior year had significant revenue growth as we experienced an increase in market demand for companion animal diagnostic, supported in part by the pent-up demand as social distancing procedures and guidelines were eased, as well as higher clinical visits related to new patients. The impact of currency movements increased revenues by 0.9%.

The increase in IDEXX VetLab® consumables revenue was primarily due to higher sales volumes for our Catalyst® consumables and, to a lesser extent, ProCyte consumables. These increases were supported by expansion of our global premium instrument installed base, high customer retention levels and an increase in testing utilization across regions.

The increase in rapid assay revenue resulted primarily from higher clinic testing levels, primarily from SNAP® 4Dx Plus and Fecal SNAPs, as well as high customer retention levels and higher realized prices. Results reflected strong growth in all major regions.

The increase in reference laboratory diagnostic and consulting services revenue was primarily due to higher testing volumes, as well as higher average unit sales prices.

The increase in CAG Diagnostics services and accessories revenue was primarily a result of the increase in our active installed base of instruments.

CAG Diagnostics Capital – Instrument Revenue. The increase in instrument revenue was due to higher premium instrument placements globally, including placements of our new instrument, ProCyte One®, compared to lower overall placements in the third quarter of 2020, as a result of the global pandemic, due to restrictions on our sales professionals' access to clinics and certain customers' deferral of new instrument purchases.

Veterinary Software, Services and Diagnostic Imaging Systems Revenue. Acquisitions increased revenue 17.4% as compared to the third quarter in 2020. Excluding the impact of acquisitions, the increase in veterinary software and services revenue was primarily due to increases in our active installed base, higher veterinary software system placements, and higher realized prices on these service offerings. The increase in our diagnostic imaging systems revenues was primarily due to higher imaging system placements, specifically our ImageVue DR 30 platform, as compared to the third quarter of 2020 during which diagnostic imaging placements were lower due to restrictions on our sales professionals' access to clinics and certain customers deferring purchase decisions as a result of the COVID-19 pandemic.

The following table presents the CAG segment results of operations:

Results of Operations *(dollars in thousands)*	For the Three Months Ended September 30, **2021**	**Percent of Revenue**	**2020**	**Percent of Revenue**	Change **Amount**	**Percentage**
Revenues	$ 732,495		$ 638,017		$ 94,478	14.8 %
Cost of revenues	308,624		269,720		38,904	14.4 %
Gross profit	423,871	57.9 %	368,297	57.7 %	55,574	15.1 %
Operating Expenses:						
Sales and marketing	113,855	15.5 %	98,995	15.5 %	14,860	15.0 %
General and administrative	72,597	9.9 %	97,258	15.2 %	(24,661)	(25.4 %)
Research and development	35,472	4.8 %	32,610	5.1 %	2,862	8.8 %
Total operating expenses	221,924	30.3 %	228,863	35.9 %	(6,939)	(3.0 %)
Income from operations	$ 201,947	27.6 %	$ 139,434	21.9 %	$ 62,513	44.8 %

Gross Profit. Gross profit increased primarily due to higher sales volume. The modest 20 basis point increase in the gross profit margin was primarily due to the high CAG diagnostic recurring revenue growth and the benefits of net price gains. These favorable factors were partially offset by the impact from product mix with higher CAG Diagnostics instrument revenue, as well as higher freight and distribution costs. Overall costs were higher in comparison to the tightly controlled prior year costs, including investments in our reference laboratory business to support high growth and customer service levels. The impact from foreign currency movements increased the gross profit margin by less than 10 basis points, including the impact of higher hedge losses as compared to the prior year.

Operating Expenses. Sales and marketing expense increased primarily due to higher personnel-related costs, including investments in our global commercial capability, as well as travel costs. General and administrative expense decreased when compared to the third quarter of 2020 due to an accrual related to an ongoing litigation matter and a charitable donation in the prior year. These decreases to general and administrative expenses were partially offset by higher personnel-related costs and costs associated with acquisitions. Research and development expense increased primarily due to increased project and personnel-related costs. The overall change in currency exchange rates increased operating expenses by less than 1%.

Water

The following table presents the Water segment results of operations:

Results of Operations *(dollars in thousands)*	For the Three Months Ended September 30, 2021	Percent of Revenue	2020	Percent of Revenue	Change Amount	Percentage
Revenues	$ 38,143		$ 33,272		$ 4,871	14.6 %
Cost of revenue	11,449		10,208		1,241	12.2 %
Gross profit	26,694	70.0 %	23,064	69.3 %	3,630	15.7 %
Operating Expenses:						
Sales and marketing	4,560	12.0 %	3,470	10.4 %	1,090	31.4 %
General and administrative	3,491	9.2 %	3,329	10.0 %	162	4.9 %
Research and development	1,044	2.7 %	1,022	3.1 %	22	2.2 %
Total operating expenses	9,095	23.8 %	7,821	23.5 %	1,274	16.3 %
Income from operations	$ 17,599	46.1 %	$ 15,243	45.8 %	$ 2,356	15.5 %

Revenue. The increase in revenue was primarily a result of the continued improvement in overall testing volumes, including non-compliance testing volume that has been constrained during the COVID-19 pandemic, and to disruptions in the prior year in certain compliance testing areas due to social distancing policies. The increase in revenue is also due to the benefit of price increases in our Colilert test products and related accessories used in coliform and E. coli testing. The impact of currency movements increased revenue by approximately 1.9%.

Gross Profit. Gross profit increased due to higher sales volumes and a 70 basis point increase in the gross profit margin, which reflected a 20 basis point reduction due to foreign currency movements, including the impact of higher hedge losses in the current year compared to the prior year. The gross profit margin was increased by the net benefit of price increases and volume leverage, partially offset by higher freight and distribution costs.

Operating Expenses. Overall operating expenses were higher compared to the third quarter of 2020, during which travel restrictions and prudent expense management was implemented in response to the COVID-19 pandemic. Sales and marketing expense increased primarily due to higher personnel-related costs. The overall change in currency exchange rates resulted in an increase in operating expenses of approximately 1%.

Livestock, Poultry and Dairy

The following table presents the LPD segment results of operations:

Results of Operations *(dollars in thousands)*	For the Three Months Ended September 30, 2021	Percent of Revenue	2020	Percent of Revenue	Change Amount	Percentage
Revenues	$ 29,126		$ 36,971		$ (7,845)	(21.2 %)
Cost of revenue	12,278		14,203		(1,925)	(13.6 %)
Gross profit	16,848	57.8 %	22,768	61.6 %	(5,920)	(26.0 %)
Operating Expenses:						
Sales and marketing	5,324	18.3 %	5,245	14.2 %	79	1.5 %
General and administrative	4,596	15.8 %	4,299	11.6 %	297	6.9 %
Research and development	3,328	11.4 %	2,719	7.4 %	609	22.4 %
Total operating expenses	13,248	45.5 %	12,263	33.2 %	985	8.0 %
Income from operations	$ 3,600	12.4 %	$ 10,505	28.4 %	$ (6,905)	(65.7 %)

Revenue. The decrease in LPD revenues was primarily due to lower swine testing volumes in China as a result of changes in disease management approaches, low pork prices, and changes in government requirements related to live animal imports and livestock infectious disease programs, as compared to high prior-year demand for African Swine Fever testing. We anticipate these trends will continue to impact our revenues in China in upcoming quarters. The favorable impact of foreign currency movements increased revenues 1.3%.

Gross Profit. Gross profit decreased due to lower sales volumes and a 380 basis point decrease in the gross profit margin. The gross profit margin decreased as a result of higher distribution and freight charges and product mix, partially offset by favorable product costs. The impact of currency movements, including the impact of hedge losses in both the current and prior year, increased the gross margin by approximately 40 basis points.

Operating Expenses. Overall operating expenses were higher compared to the third quarter of 2020, during which travel restrictions and prudent expense management was implemented in response to the COVID-19 pandemic. Sales and marketing expense increased primarily due to higher marketing and promotional materials partially offset by lower personnel-related costs, including commissions. General and administrative expenses increased primarily due to higher bad debt expense. Research and development expense increased primarily due to higher personnel-related costs as we leveraged LPD personnel to support our human COVID-19 testing initiatives in the prior year, and higher project costs. The overall change in currency exchange rates resulted in an increase in operating expenses of approximately 2%.

Other

The following table presents the Other results of operations:

Results of Operations *(dollars in thousands)*	For the Three Months Ended September 30,				Change	
	2021	**Percent of Revenue**	**2020**	**Percent of Revenue**	**Amount**	**Percentage**
Revenues	$ 10,657		$ 13,529		$ (2,872)	(21.2 %)
Cost of revenue	5,149		5,052		97	1.9 %
Gross profit	5,508	51.7 %	8,477	62.7 %	(2,969)	(35.0 %)
Operating Expenses:						
Sales and marketing	695	6.5 %	492	3.6 %	203	41.3 %
General and administrative	1,414	13.3 %	145	1.1 %	1,269	875.2 %
Research and development	583	5.5 %	1,166	8.6 %	(583)	(50.0 %)
Total operating expenses	2,692	25.3 %	1,803	13.3 %	889	49.3 %
Income from operations	$ 2,816	26.4 %	$ 6,674	49.3 %	$ (3,858)	(57.8 %)

Revenue. The decrease in revenue was primarily due to lower demand for our OPTI COVID-19 PCR testing products and services and lower royalty revenue associated with intellectual property related to our former pharmaceutical product line, partially offset by higher OPTI Medical consumables revenue. We currently estimate that the future demand for our OPTI COVID-19 PCR testing products and services will continue to be lower than prior periods, although it is difficult to project given the uncertain nature of the COVID-19 pandemic. The impact of currency movements decreased revenue by 0.1%.

Gross Profit. The decrease in gross profit was primarily due to lower sales volumes of our OPTI COVID-19 PCR testing products and services, and an 1,100 basis point decrease in the gross profit margin, primarily due to unfavorable product mix from lower OPTI COVID-19 PCR testing and lower royalty revenue associated with our former pharmaceutical product line, as well as higher product costs, including costs associated with write-downs of excess COVID-19 testing inventory. These decreases were partially offset by product mix benefits from higher OPTI Medical consumables. The overall change in currency exchange rates had an immaterial impact on gross profit.

Operating Expenses. Sales and marketing expense increased primarily due to higher personnel-related costs. General and administrative expense increased primarily due to foreign exchange losses on settlements of foreign currency denominated transactions, as compared to gains in the prior year, for all operating segments, which are reported within our Other segment. Research and development expense decreased primarily due to lower project costs associated with the development of the OPTI COVID-19 PCR test.

Non-Operating Items

Interest Expense. Interest expense was $7.1 million for the three months ended September 30, 2021, as compared to $8.1 million for the same period in the prior year. The decrease in interest expense was primarily the result of lower average debt levels.

Provision for Income Taxes. Our effective income tax rate was 20.0% for the three months ended September 30, 2021, as compared to 10.8% for the three months ended September 30, 2020. The increase in our effective tax rate was primarily due to lower tax benefits from share-based compensation than the prior year and the resolution of uncertain tax positions.

Results of Operations

Nine Months Ended September 30, 2021, Compared to Nine Months Ended September 30, 2020

Total Company. The following table presents total Company revenue by operating segment:

Net Revenue *(dollars in thousands)*	**For the Nine Months Ended September 30, 2021**	**2020**	**Dollar Change**	**Reported Revenue Growth (1)**	**Percentage Change from Currency**	**Percentage Change from Acquisitions**	**Organic Revenue Growth (1)**
CAG	**$ 2,170,857**	**$ 1,756,113**	**$ 414,744**	**23.6 %**	**2.4 %**	**0.7 %**	**20.6 %**
United States	*1,415,565*	*1,188,493*	*227,072*	*19.1 %*	*—*	*0.9 %*	*18.3 %*
International	*755,292*	*567,620*	*187,672*	*33.1 %*	*7.6 %*	*0.3 %*	*25.1 %*
Water	**109,374**	**95,537**	**13,837**	**14.5 %**	**3.1 %**	—	**11.4 %**
United States	*53,531*	*47,510*	*6,021*	*12.7 %*	*—*	—	*12.7 %*
International	*55,843*	*48,027*	*7,816*	*16.3 %*	*6.1 %*	—	*10.2 %*
LPD	**101,920**	**103,369**	**(1,449)**	**(1.4 %)**	**4.0 %**	—	**(5.4 %)**
United States	*11,441*	*10,803*	*638*	*5.9 %*	*—*	—	*5.9 %*
International	*90,479*	*92,566*	*(2,087)*	*(2.3 %)*	*4.4 %*	—	*(6.6 %)*
Other	**32,119**	**30,698**	**1,421**	**4.6 %**	**2.0 %**	—	**2.7 %**
Total Company	**$ 2,414,270**	**$ 1,985,717**	**$ 428,553**	**21.6 %**	**2.5 %**	**0.6 %**	**18.5 %**
United States	*1,502,219*	*1,257,617*	*244,602*	*19.4 %*	*—*	*0.8 %*	*18.6 %*
International	*912,051*	*728,100*	*183,951*	*25.3 %*	*6.9 %*	*0.2 %*	*18.2 %*

(1) Reported revenue growth and organic revenue growth may not recalculate due to rounding.

Total Company Revenue. The increase in both U.S. and international organic revenues was driven by strong volume gains in CAG Diagnostics recurring revenue, reflecting continued high demand for companion animal diagnostics globally, supported by an increase in clinical visits and diagnostic utilization per clinical visit, as compared to 2020, which included the initial pandemic impacts. Our CAG Diagnostics instrument revenue reflects high placement volumes compared to the prior year, which was impacted by the global pandemic. The higher revenue in our Water business was primarily a result of the continued improvement in non-compliance testing that has been constrained since the beginning of the pandemic and disruptions in certain compliance testing during the prior year. The decline in our LPD business was primarily due to the lower demand for swine testing in China. The impact of currency movements increased total revenue by 2.5%.

The following table presents total Company results of operations:

Total Company - Results of Operations *(dollars in thousands)*	**For the Nine Months Ended September 30,** 2021	Percent of Revenue	2020	Percent of Revenue	**Change** Amount	Percentage
Revenues	$ 2,414,270		$ 1,985,717		$ 428,553	21.6 %
Cost of revenue	981,259		824,179		157,080	19.1 %
Gross profit	1,433,011	59.4 %	1,161,538	58.5 %	271,473	23.4 %
Operating Expenses:						
Sales and marketing	358,277	14.8 %	318,526	16.0 %	39,751	12.5 %
General and administrative	226,194	9.4 %	231,111	11.6 %	(4,917)	(2.1 %)
Research and development	115,703	4.8 %	102,472	5.2 %	13,231	12.9 %
Total operating expenses	700,174	29.0 %	652,109	32.8 %	48,065	7.4 %
Income from operations	$ 732,837	30.4 %	$ 509,429	25.7 %	$ 223,408	43.9 %

Gross Profit. Gross profit increased due to higher sales volumes, as well as a 90 basis point increase in the gross profit margin. The increase in the gross profit margin was primarily due to volume leverage in our CAG Diagnostics recurring revenue portfolio following the initial pandemic impacts in the first half of the prior year, price increases, and strong growth in veterinary software, services and diagnostic imaging recurring revenues. These increases were partially offset by product mix with higher CAG Diagnostics instrument revenue and higher freight and distribution costs. The impact from foreign currency movements did not have a material impact on gross profit.

Operating Expenses. Overall operating expenses were higher compared to 2020, during which cost containment efforts were implemented in response to the COVID-19 pandemic, including temporary reductions to compensation and benefits and travel costs. Sales and marketing expense increased primarily due to higher personnel-related costs, including investments in our global commercial capability, partially offset by lower travel costs. General and administrative expense decreased when compared to 2020, due to an accrual related to an ongoing litigation matter and a charitable donation in the third quarter of the prior year, as well as higher bad debt expense related to a reserve adjustment in the first quarter of the prior year. These decreases to general and administrative expenses were partially offset by higher personnel-related costs and costs related to our acquisitions. Research and development expense increased primarily due to higher project and personnel-related costs. The overall change in currency exchange rates increased operating expenses by approximately 2%.

Companion Animal Group

The following table presents revenue by product and service category for CAG:

Net Revenue *(dollars in thousands)*	For the Nine Months Ended September 30, 2021	2020	Dollar Change	Reported Revenue Growth (1)	Percentage Change from Currency	Percentage Change from Acquisitions	Organic Revenue Growth (1)
CAG Diagnostics recurring revenue:	$ 1,916,938	$ 1,565,595	$ 351,343	22.4 %	2.4 %	0.2 %	19.8 %
IDEXX VetLab consumables	*755,158*	*603,379*	*151,779*	*25.2 %*	*3.2 %*	—	*22.0 %*
Rapid assay products	*230,472*	*192,681*	*37,791*	*19.6 %*	*1.1 %*	—	*18.5 %*
Reference laboratory diagnostic and consulting services	*851,757*	*703,300*	*148,457*	*21.1 %*	*2.2 %*	*0.4 %*	*18.6 %*
CAG diagnostics services and accessories	*79,551*	*66,235*	*13,316*	*20.1 %*	*2.9 %*	—	*17.2 %*
CAG Diagnostics capital - instruments	105,645	72,040	33,605	46.6 %	3.6 %	—	43.1 %
Veterinary software, services and diagnostic imaging systems	148,274	118,478	29,796	25.1 %	0.9 %	*7.9 %*	16.4 %
Net CAG revenue	$ 2,170,857	$ 1,756,113	$ 414,744	23.6 %	2.4 %	0.7 %	20.6 %

(1) Reported revenue growth and organic revenue growth may not recalculate due to rounding

CAG Diagnostics Recurring Revenue. The increase was driven by strong market demand for companion animal diagnostics globally across modalities, including high levels of growth in testing volumes following the initial pandemic impacts, which constrained volumes beginning in mid-March 2020 through May 2020. This volume growth includes an increase in clinical visits and diagnostic utilization per clinical visit. The increase in CAG Diagnostics recurring revenue was primarily due to increased volumes in IDEXX VetLab consumables, reference laboratory diagnostic services, and rapid assay products and, to a lesser extent, higher realized prices. The impact of currency movements increased revenue 2.4%.

The increase in IDEXX VetLab consumables revenue was primarily due to higher sales volumes for our Catalyst consumables and, to a lesser extent, ProCyte consumables. These increases were supported by an increase in testing utilization across regions, high customer retention levels, and expansion of our global premium instrument installed base.

The increase in rapid assay revenue resulted primarily from higher clinic testing levels, primarily from SNAP® 4Dx Plus, as well as higher realized prices. Results reflected strong growth in all major regions.

The increase in reference laboratory diagnostic and consulting services revenue was primarily due to higher testing volumes globally, primarily in the U.S., as well as higher average unit sales prices. Acquisitions increased revenue by 0.4%.

The increase in CAG Diagnostics services and accessories revenue was primarily a result of the increase in our active installed base of instruments.

CAG Diagnostics Capital – Instrument Revenue. The increase in instrument revenue was primarily due to strong premium instrument placements globally, including our new ProCyte One analyzer, as compared to constrained placements in 2020, as a result of the global pandemic, due to restrictions on our sales professionals' access to clinics and certain customers' deferral of new instrument placements.

Veterinary Software, Services and Diagnostic Imaging Systems Revenue. Acquisitions increased revenue 7.9%. Excluding the impact of acquisitions, the increase in veterinary software and services revenue was primarily due to increases in our active installed base, higher veterinary software system placements, and higher realized prices on these service offerings. The increase in our diagnostic imaging systems revenues was primarily due to higher imaging systems placements, specifically our ImageVue DR 30 platform, as compared to 2020 when diagnostic imaging placements were lower due to restriction on our sales professionals' access to clinics and certain customers deferring purchase decisions as a result of the COVID-19 pandemic, partially offset by a decrease in diagnostic imaging instrument revenue impacted by a reduction in earlier generation instrument platform sales.

The following table presents the CAG segment results of operations:

Results of Operations *(dollars in thousands)*	**For the Nine Months Ended September 30, 2021**	**Percent of Revenue**	**2020**	**Percent of Revenue**	**Change Amount**	**Percentage**
Revenues	$ 2,170,857		$ 1,756,113		$ 414,744	23.6 %
Cost of revenue	893,326		744,006		149,320	20.1 %
Gross profit	1,277,531	58.8 %	1,012,107	57.6 %	265,424	26.2 %
Operating Expenses:						
Sales and marketing	327,297	15.1 %	291,093	16.6 %	36,204	12.4 %
General and administrative	199,635	9.2 %	206,394	11.8 %	(6,759)	(3.3) %
Research and development	100,707	4.6 %	88,558	5.0 %	12,149	13.7 %
Total operating expenses	627,639	28.9 %	586,045	33.4 %	41,594	7.1 %
Income from operations	$ 649,892	29.9 %	$ 426,062	24.3 %	$ 223,830	52.5 %

Gross Profit. Gross profit increased primarily due to higher sales volume, as well as a 120 basis point increase in the gross profit margin. The increase in the gross profit margin was primarily due to the benefit of volume leverage and price increases in our CAG Diagnostics recurring revenue portfolio, and strong growth in veterinary software, services and diagnostic imaging systems. These favorable factors were partially offset by product mix with higher CAG Diagnostics instrument revenue, higher freight and distribution costs, as well as an impairment of rental assets in certain regions in 2021. The impact from foreign currency movements had an immaterial impact on our gross profit.

Operating Expenses. Overall operating expenses were higher compared to 2020, during which cost containment efforts were implemented in response to the COVID-19 pandemic, including temporary reductions to compensation and benefits and travel costs. Sales and marketing expense increased primarily due to higher personnel-related costs, including investments in our global commercial capability, partially offset by lower travel costs. General and administrative expense decreased when compared to the third quarter of 2020 due to an accrual related to an ongoing litigation matter and a charitable donation in the prior year. These decreases to general and administrative expenses were partially offset by higher personnel-related costs and costs associated with acquisitions. Research and development expense increased primarily due to increased project and personnel-related costs. The overall change in currency exchange rates resulted in an increase in operating expenses by approximately 1%.

Water

The following table presents the Water segment results of operations:

Results of Operations *(dollars in thousands)*	For the Nine Months Ended September 30, **2021**	**Percent of Revenue**	**2020**	**Percent of Revenue**	Change **Amount**	**Percentage**
Revenues	$ 109,374		$ 95,537		$ 13,837	14.5 %
Cost of revenue	33,468		28,046		5,422	19.3 %
Gross profit	75,906	69.4 %	67,491	70.6 %	8,415	12.5 %
Operating Expenses:						
Sales and marketing	13,017	11.9 %	11,243	11.8 %	1,774	15.8 %
General and administrative	10,111	9.2 %	10,018	10.5 %	93	0.9 %
Research and development	3,179	2.9 %	2,847	3.0 %	332	11.7 %
Total operating expenses	26,307	24.1 %	24,108	25.2 %	2,199	9.1 %
Income from operations	$ 49,599	45.3 %	$ 43,383	45.4 %	$ 6,216	14.3 %

Revenue. The increase in our Water business was primarily a result of recovery in overall testing volumes, including continued improvement in non-compliance testing volume that has been constrained since the beginning of the COVID-19 pandemic and disruptions in certain compliance testing areas due to social distancing policies. The increase in revenue, to a lesser extent, was also due to the benefit of price increases in our Colilert test products and related accessories used in coliform and E. coli testing. The impact of currency movements also increased revenue by 3.1%.

Gross Profit. Gross profit increased due to higher sales volumes despite a 120 basis point decrease in the gross profit margin, which reflected a 90 basis point reduction due to foreign currency movements, including the impact of hedge losses in the current year compared to hedge gains in the prior year. The gross profit margin was further reduced by higher product, distribution, and freight costs, partially offset by the net benefit of price increases.

Operating Expenses. Overall operating expenses were higher compared to 2020, during which cost containment efforts were implemented in response to the COVID-19 pandemic, including temporary reductions to compensation and benefits and travel costs. Sales and marketing expense increased primarily due to higher personnel-related costs. Research and development expense increased primarily due to higher personnel-related costs. The overall change in currency exchange rates resulted in an increase in operating expenses of approximately 2%.

Livestock, Poultry and Dairy

The following table presents the LPD segment results of operations:

Results of Operations *(dollars in thousands)*	**For the Nine Months Ended September 30,** 2021	Percent of Revenue	2020	Percent of Revenue	**Change** Amount	Percentage
Revenues	$ 101,920		$ 103,369		$ (1,449)	(1.4 %)
Cost of revenue	38,665		39,450		(785)	(2.0 %)
Gross profit	63,255	62.1 %	63,919	61.8 %	(664)	(1.0) %
Operating Expenses:						
Sales and marketing	16,004	15.7 %	14,925	14.4 %	1,079	7.2 %
General and administrative	13,175	12.9 %	12,466	12.1 %	709	5.7 %
Research and development	9,800	9.6 %	8,111	7.8 %	1,689	20.8 %
Total operating expenses	38,979	38.2 %	35,502	34.3 %	3,477	9.8 %
Income from operations	$ 24,276	23.8 %	$ 28,417	27.5 %	$ (4,141)	(14.6) %

Revenue. The favorable impact of foreign currency movements increased revenue by 4.0%. Excluding the impact of currency, overall revenues decreased primarily due to lower demand for diagnostic testing in China, partially offset by higher testing volumes in Europe and the Americas, as compared to pandemic impacts in the prior year. Beginning in the second quarter of 2021, and continuing through the third quarter, we experienced lower livestock testing volumes in China, as changes in disease management approaches, low pork prices, and changes in government requirements related to the live animal imports and livestock infectious disease programs impact testing volumes, in comparison to high prior-year demand for African Swine Fever testing. We anticipate these trends will continue to impact our revenues in China in upcoming quarters.

Gross Profit. The decrease in gross profit was primarily due to lower sales volumes despite a 30 basis point increase in the gross profit margin. The increase in the gross profit margin is primarily due to favorable product costs offset by lower realized prices, higher freight and distribution charges, as well as the impact from foreign currency movements, which decreased gross profit margin by approximately 60 basis points, including the impact of hedge losses in the current year compared to hedge gains in the prior year.

Operating Expenses. Overall operating expenses were higher compared to 2020, during which cost containment efforts were implemented in response to the COVID-19 pandemic, including temporary reductions to compensation and benefits, and travel costs. Sales and marketing expense increased primarily due to higher travel and personnel-related costs, as well as higher marketing and promotional materials, partially offset by lower commissions. General and administrative expenses increased primarily due to higher personnel-related costs, partially offset by an increase in the bad debt reserve during the first half of 2020. Research and development expense increased primarily due to higher personnel-related costs as we leveraged LPD personnel to support our human COVID-19 testing initiatives in the prior year, and third party development costs. The overall change in currency exchange rates resulted in an increase in operating expenses of approximately 3%.

Other

The following table presents the Other results of operations:

Results of Operations *(dollars in thousands)*	For the Nine Months Ended September 30, 2021	Percent of Revenue	2020	Percent of Revenue	Change Amount	Percentage
Revenues	$ 32,119		$ 30,698		$ 1,421	4.6 %
Cost of revenue	15,800		12,677		3,123	24.6 %
Gross profit	16,319	50.8 %	18,021	58.7 %	(1,702)	(9.4 %)
Operating Expenses:						
Sales and marketing	1,959	6.1 %	1,265	4.1 %	694	54.9 %
General and administrative	3,273	10.2 %	2,233	7.3 %	1,040	46.6 %
Research and development	2,017	6.3 %	2,956	9.6 %	(939)	(31.8 %)
Total operating expenses	7,249	22.6 %	6,454	21.0 %	795	12.3 %
Income from operations	$ 9,070	28.2 %	$ 11,567	37.7 %	$ (2,497)	(21.6 %)

Revenue. The increase in revenue was primarily due to higher OPTI Medical consumables and our OPTI COVID-19 PCR testing products and services, partially offset by lower royalty revenue associated with intellectual property related to our former pharmaceutical product line. We currently estimate that the future demand for our OPTI COVID-19 PCR testing products and services will be lower than prior periods, although it is difficult to project given the uncertain nature of the COVID-19 pandemic, including the spread of variants, rates of vaccinations, governmental and private institution testing requirements, and alternative suppliers. The impact of currency movements increased revenue by 2.0%.

Gross Profit. The decrease in gross profit was primarily due to a gross profit margin decrease of 790 basis points despite higher sales volumes. The decrease in the gross profit margin is primarily due to higher product costs associated with write-downs of excess COVID-19 testing inventory in the current year and lower royalty revenue associated with our former pharmaceutical product line. The overall change in currency exchange rates had an immaterial impact on gross profit.

Operating Expenses. Sales and marketing expense increased primarily due to higher personnel-related costs associated with our OPTI COVID-19 PCR product and services. General and administrative expense increased primarily due to higher foreign exchange losses on settlements of foreign currency denominated transactions, as compared to the prior year, for all operating segments, which are reported within our Other segment. Research and development expense decreased primarily due to lower project costs associated with the development of the OPTI COVID-19 PCR test in the prior year.

Non-Operating Items

Interest Expense. Interest expense was $22.3 million for the nine months ended September 30, 2021, as compared to $25.3 million for the same period in the prior year. The decrease in interest expense was primarily the result of lower average debt levels.

Provision for Income Taxes. Our effective income tax rate was 18.1% for the nine months ended September 30, 2021, as compared to 16.0% for the nine months ended September 30, 2020. The increase in our effective tax rate as compared to the same period in the prior year, was primarily driven by lower tax benefits from share-based compensation than the prior year and the resolution of uncertain tax positions.

Liquidity and Capital Resources

We fund the capital needs of our business through cash on hand, funds generated from operations, proceeds from long-term senior note financings, and amounts available under our Credit Facility. At September 30, 2021, we had $145.2 million of cash and cash equivalents, as compared to $383.9 million on December 31, 2020. Working capital totaled $304.2 million at September 30, 2021, as compared to $480.0 million at December 31, 2020. Additionally, at September 30, 2021, we had borrowing availability of $998.6 million under our $1 billion Credit Facility, with no outstanding borrowings on the Credit Facility. The general availability of funds under our Credit Facility is reduced by $1.4 million for outstanding letters of credit. We believe that, if necessary, we could obtain additional borrowings to fund our growth objectives. We further believe that current cash and cash equivalents, funds generated from operations, and committed borrowing availability will be sufficient to fund our operations, capital purchase requirements, and anticipated growth needs for at least the next twelve months. We believe that these resources, coupled with our ability, as needed, to obtain additional financing, will also be sufficient to fund our business as currently conducted for the foreseeable future. We may enter into new financing arrangements or refinance or retire existing debt in the future depending on market conditions. Should we require more capital in the U.S. than is generated by our operations, for example to fund significant discretionary activities, we could elect to raise capital in the U.S. through the incurrence of debt or equity issuances, which we may not be able to complete on favorable terms or at all. In addition, these alternatives could result in increased interest expense or other dilution of our earnings.

We manage our worldwide cash requirements considering available funds among all of our subsidiaries. Our foreign cash and marketable securities are generally available without restrictions to fund ordinary business operations outside the U.S.

The following table presents cash, cash equivalents, and marketable securities held domestically and by our foreign subsidiaries:

Cash, cash equivalents and marketable securities *(dollars in millions)*	September 30, 2021	December 31, 2020
U.S.	$ 6.1	$ 248.4
Foreign	139.1	135.5
Total	$ 145.2	$ 383.9
Total cash, cash equivalents, and marketable securities held in U.S. dollars by our foreign subsidiaries	$ 5.3	$ 18.0

Of the $145.2 million of cash and cash equivalents held as of September 30, 2021, greater than 99% was held as bank deposits.

The following table presents additional key information concerning working capital:

	For the Three Months Ended				
	September 30, 2021	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020
Days sales outstanding (1)	42.7	42.2	41.8	42.2	41.5
Inventory turns (2)	1.9	2.1	2.0	2.1	1.9

(1) Days sales outstanding represents the average of the accounts receivable balances at the beginning and end of each quarter divided by revenue for that quarter, the result of which is then multiplied by 91.25 days.

(2) Inventory turns represent inventory-related cost of product revenue for the 12 months preceding each quarter-end divided by the average inventory balances at the beginning and end of each quarter.

Sources and Uses of Cash

The following table presents cash provided (used):

	For the Nine Months Ended September 30,		
(in thousands)	2021	2020	Dollar Change
Net cash provided by operating activities	$ 545,582	$ 429,129	$ 116,453
Net cash used by investing activities	(248,927)	(93,686)	(155,241)
Net cash used by financing activities	(531,594)	(248,814)	(282,780)
Net effect of changes in exchange rates on cash	(3,786)	(1,368)	(2,418)
Net change in cash and cash equivalents	$ (238,725)	$ 85,261	$ (323,986)

Operating Activities. The increase in cash provided by operating activities of $116.5 million was driven primarily by an increase in net income partially offset by changes in other assets and liabilities. The following table presents cash flow impacts from changes in operating assets and liabilities:

	For the Nine Months Ended September 30,		
(in thousands)	2021	2020	Dollar Change
Accounts receivable	$ (49,050)	$ (72,409)	$ 23,359
Inventories	(46,891)	(25,091)	(21,800)
Accounts payable	637	512	125
Deferred revenue	(7,487)	(10,433)	2,946
Other assets and liabilities	(51,961)	30,579	(82,540)
Total change in cash due to changes in operating assets and liabilities	$ (154,752)	$ (76,842)	$ (77,910)

Cash used due to changes in operating assets and liabilities during the nine months ended September 30, 2021, as compared to the same period in the prior year, increased by approximately $77.9 million. The increase in use of cash for other assets and liabilities in the current year was primarily due to higher payroll and income tax payments, as well as higher incentive payments in 2021, as compared to 2020, and higher investments in customer volume commitment programs to support instrument placements. Additionally, the prior year included a non-cash operating expense related to an ongoing litigation matter. The decrease in cash used by accounts receivable over the same prior-year period was due to the timing of revenue within the prior year, as sales volumes rebounded due to pent-up demand from the beginning of the COVID-19 pandemic. Cash used to purchase inventory in the current period, as compared to the prior period, was higher primarily due to higher inventory levels to support increasing demand and mitigate potential supply-chain shortages.

We have historically experienced proportionally lower net cash flows from operating activities during the first quarter and proportionally higher cash flows from operating activities for the remainder of the year driven primarily by payments related to annual employee incentive programs in the first quarter following the year for which the bonuses were earned.

Investing Activities. Cash used by investing activities was $248.9 million for the nine months ended September 30, 2021, as compared to $93.7 million for the same period in the prior year. The increase in cash used by investing activities was primarily due to business acquisitions in the current year, partially offset by higher purchases of property and equipment in the prior year.

Our outlook for full year capital spending is approximately $150.0 million for 2021.

Financing Activities. Cash used by financing activities was $531.6 million for the nine months ended September 30, 2021, as compared to $248.8 million of cash used for the same period in the prior year. The increase in cash used by financing activities was due to an increase in repurchases of our common stock in the current period as compared to the same period in the prior year when we suspended repurchases due to the COVID-19 pandemic. Cash was also used to pay off our $50.0 million 2021 Series A Notes when due and payable on July 21, 2021. During the first nine months of 2020, the repayments on our Credit Facility, partly offset by issuance of Senior Notes, used approximately $89.6 million in cash.

Cash used to repurchase shares of our common stock increased $319.2 million during the nine months ended September 30, 2021. We believe that the repurchase of our common stock is a favorable means of returning value to our stockholders, and we also repurchase our stock to offset the dilutive effect of our share-based compensation programs. Repurchases of our common stock may vary depending upon the level of other investing activities and the share price. See Note 12 to the unaudited condensed consolidated financial statements in Part I. Item 1. of this Quarterly Report on Form 10-Q for additional information about our share repurchases.

There was no net activity under our Credit Facility during the nine months ended September 30, 2021, as compared to $289.6 million of net repayments in the same period of the prior year. At September 30, 2021, we had no outstanding borrowings under the Credit Facility. The obligations under our Credit Facility may be accelerated upon the occurrence of an event of default under the Credit Facility, which includes customary events of default including payment defaults, defaults in the performance of the affirmative, negative and financial covenants, the inaccuracy of representations or warranties, bankruptcy and insolvency-related defaults, defaults relating to judgments, certain events related to employee pension benefit plans under the Employee Retirement Income Security Act of 1974 ("ERISA"), the failure to pay specified indebtedness, cross-acceleration to specified indebtedness, and a change of control default.

The Credit Agreement contains affirmative, negative, and financial covenants customary for financings of this type. The negative covenants include restrictions on liens, indebtedness of subsidiaries of the Company, fundamental changes, investments, transactions with affiliates, certain restrictive agreements, and sanctions laws and regulations. The financial covenant is a consolidated leverage ratio test.

On July 21, 2021, we paid off our $50.0 million 2021 Series A Notes with cash provided by operations. The aggregate principal amounts of our 2022 Series A Notes for $75.0 million will become due and payable on February 12, 2022. We anticipate paying off our 2022 Series A Notes when due and payable with cash provided by operations. Should we elect to prepay any of our senior notes, such aggregate prepayment will include the applicable make-whole amount(s), as defined within the applicable Senior Note Agreements. Additionally, in the event of a change in control of the Company or upon the disposition of certain assets of the Company the proceeds of which are not reinvested (as defined in the Senior Note Agreements), we may be required to prepay all or a portion of the senior notes. The obligations under the senior notes may be accelerated upon the occurrence of an event of default under the applicable Senior Note Agreements, each of which includes customary events of default including payment defaults, defaults in the performance of the affirmative, negative and financial covenants, the inaccuracy of representations or warranties, bankruptcy and insolvency-related defaults, defaults relating to judgments, certain events related to employee pension benefit plans under ERISA, the failure to pay specified indebtedness, and cross-acceleration to specified indebtedness.

Effect of Currency Translation on Cash. The net effect of changes in foreign currency exchange rates is related to changes in exchange rates between the U.S. dollar and the functional currencies of our foreign subsidiaries. These changes will fluctuate for each period presented as the value of the U.S. dollar relative to the value of foreign currencies changes. A currency's value depends on many factors, including interest rates and the country's debt levels and strength of economy.

Off-Balance Sheet Arrangements. We have no off-balance sheet arrangements or variable interest entities, except for letters of credit and third party guarantees.

Financial Covenant. The sole financial covenant of our Credit Facility and Senior Note Agreements is a consolidated leverage ratio test that requires our ratio of debt to earnings before interest, taxes, depreciation and amortization, non-recurring transaction expenses incurred in connection with acquisitions, share-based compensation expense, and certain other non-cash losses and charges ("Adjusted EBITDA") not to exceed 3.5-to-1. At September 30, 2021, we were in compliance with such covenant. The following details our consolidated leverage ratio calculation:

(in thousands) **Trailing 12 Months Adjusted EBITDA:**		**Twelve months ended September 30, 2021**
Net income attributable to stockholders (as reported)	$	756,864
Interest expense		30,159
Provision for income taxes		131,176
Depreciation and amortization		101,462
Acquisition-related expense		2,324
Share-based compensation expense		35,985
Extraordinary and other non-recurring non-cash charges		5,656
Adjusted EBITDA	$	1,063,626

(in thousands) **Debt to Adjusted EBITDA Ratio:**		**September 30, 2021**
Line of credit	$	—
Current and long-term portions of long-term debt		853,015
Total debt		853,015
Acquisition-related contingent consideration payable		7,348
Financing leases		17
Deferred financing costs		541
Gross debt	$	860,921
Gross debt to Adjusted EBITDA ratio		0.81
Less: Cash and cash equivalents	$	145,203
Net debt	$	715,718
Net debt to Adjusted EBITDA ratio		0.67

Adjusted EBITDA, gross debt, net debt, gross debt to Adjusted EBITDA ratio and net debt to Adjusted EBITDA ratio are non-GAAP financial measures which should be considered in addition to, and not as a replacement for, financial measures presented according to U.S. GAAP. Management believes that reporting these non-GAAP financial measures provides supplemental analysis to help investors further evaluate our business performance and available borrowing capacity under our Credit Facility.

Other Commitments, Contingencies and Guarantees

Significant commitments, contingencies and guarantees at September 30, 2021, are described in Note 16 to the unaudited condensed consolidated financial statements in Part I. Item 1. of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

For quantitative and qualitative disclosures about market risk affecting us, see the section under the heading “Part II. Item 7A. Quantitative and Qualitative Disclosure About Market Risk” of our 2020 Annual Report. As of the date of this Quarterly Report on Form 10-Q, there have been no material changes to the market risks described in our 2020 Annual Report, except for the impact of foreign exchange rates, as discussed below.

<u>Foreign Currency Exchange Impacts</u>. Approximately 22% of our consolidated revenue was derived from products manufactured in the U.S. and sold internationally in local currencies for both the three and nine months ended September 30, 2021, as compared to 21% for both the three and nine months ended September 30, 2020. Strengthening of the U.S. dollar exchange rate relative to other currencies has a negative impact on our revenues derived in currencies other than the U.S. dollar and on profits of products manufactured in the U.S. and sold internationally, and a weakening of the U.S. dollar has the opposite effect. Similarly, to the extent that the U.S. dollar is stronger in current or future periods relative to the exchange rates in effect in the corresponding prior periods, our growth rate will be negatively affected. The impact of foreign currency denominated costs and expenses and foreign currency denominated supply contracts partly offsets this exposure. Additionally, our designated hedges of intercompany inventory purchases and sales help delay the impact of certain exchange rate fluctuations on non-U.S. dollar denominated revenues.

Our foreign currency exchange impacts are comprised of three components: 1) local currency revenues and expenses; 2) the impact of hedge contracts; and 3) intercompany and monetary balances for our subsidiaries that are denominated in a currency that is different from the functional currency used by each subsidiary. Based on projected revenues and expenses for the remainder of 2021, excluding the impact of intercompany and trade balances denominated in currencies other than the functional subsidiary currencies, we project a 1% strengthening of the U.S. dollar would reduce revenue by approximately $3 million and operating income by approximately $1.5 million. Additionally, we project our foreign currency hedge contracts in place as of September 30, 2021, would result in incremental offsetting gains of approximately $0.5 million. The impact of the intercompany and trade balances, and monetary balances referred to in the third component above have been excluded, as they are transacted at multiple times during the year and we are not able to reliably forecast the impact that changes in exchange rates would have on such balances.

At our current foreign currency exchange rate assumptions, we anticipate the effect of a stronger U.S. dollar for the remainder of the year, as compared to the respective prior-year period, will have a unfavorable impact on our operating results by decreasing our revenues, operating profit, and diluted earnings per share for the remainder of the year ending December 31, 2021, by approximately $6 million, $2 million, and $0.02 per share, respectively. This unfavorable year-over-year currency impact includes foreign currency hedging activity, which is expected to increase total Company operating profit by approximately $1.5 million and $0.01 per share for the remainder of the year ended December 31, 2021. The actual impact of changes in the value of the U.S. dollar against foreign currencies in which we transact may materially differ from our expectations described above. The above estimates assume that the value of the U.S. dollar will reflect the euro at 1.14, the British pound at 1.34, the Canadian dollar at 0.79, and the Australian dollar at 0.73; and the Japanese yen at ¥115, the Chinese renminbi at RMB 6.52 and the Brazilian real at R$5.59 relative to the U.S. dollar for the remainder of 2021.

The following table presents the estimated foreign currency exchange impact on our revenues, operating profit, and diluted earnings per share for the current period and as compared to the respective prior-year period:

(in thousands, except per share amounts)	For the Three Months Ended September 30, 2021	For the Three Months Ended September 30, 2020	For the Nine Months Ended September 30, 2021	For the Nine Months Ended September 30, 2020
Revenue impact	**$ 6,760**	**$ 4,867**	**$ 51,474**	**$ (9,183)**
Operating profit impact, excluding hedge activity and exchange impacts on settlement of foreign currency denominated transactions	$ 4,560	$ 2,119	$ 30,490	$ (4,490)
Hedge (losses) gains - current period	(1,583)	(591)	(6,728)	2,562
Exchange (losses) gains on settlements of foreign currency denominated transactions - current period	(838)	616	(1,762)	(492)
Operating profit impact - current period	**$ 2,139**	**$ 2,144**	**$ 22,000**	**$ (2,420)**
Hedge losses (gains) - prior period	591	(3,171)	(2,562)	(7,091)
Exchange (gains) losses on settlement of foreign currency denominated transactions - prior period	(616)	1,007	492	1,548
Operating profit impact - as compared to prior period	**$ 2,114**	**$ (20)**	**$ 19,930**	**$ (7,963)**
Diluted earnings per share impact - as compared to prior period	**$ 0.02**	**$ —**	**$ 0.18**	**$ (0.07)**

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Our management is responsible for establishing and maintaining disclosure controls and procedures, as defined by the SEC in its Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 as amended (the "Exchange Act"). The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act are recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures at September 30, 2021, our Chief Executive Officer and our Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended September 30, 2021, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

Due to the nature of our activities, we are at times subject to pending and threatened legal actions that arise out of the ordinary course of business. In the opinion of management, based in part upon advice of legal counsel, the disposition of any such currently pending matters is not expected to have a material effect on our results of operations, financial condition, or cash flows. However, the results of legal actions cannot be predicted with certainty. Therefore, it is possible that our results of operations, financial condition, or cash flows could be materially adversely affected in any particular period by the unfavorable resolution of one or more legal actions.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risk factors discussed in "Part I. Item 1A. Risk Factors" in this Quarterly Report on Form 10-Q and our 2020 Annual Report, as well as the risk factor below, which supplements and should be read in conjunction with the risk factors disclosed in our 2020 Annual Report, any and all of which could materially affect our business, financial condition, or future results. Except as described below in this Item 1A., there have been no material changes from the risk factors previously disclosed in the 2020 Annual Report. The risks described in our 2020 Annual Report are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, or future results.

Future operating results could be negatively affected by changes in tax rates, the adoption of new U.S. or international tax legislation or exposure to additional tax liabilities

The nature of our global operations subjects us to local, state, regional and federal tax laws in jurisdictions around the world. Our future tax expense could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities or changes in tax laws or their interpretation. Additionally, tax rules governing cross-border activities are continually subject to modification as a result of coordinated actions by governments and organizations such as the Organization for Economic Cooperation and Development ("OECD") and unilateral measures designed by individual countries, both intended to tackle concerns over base erosion and profit shifting and perceived international tax avoidance techniques.

In April 2021, the current U.S. administration proposed comprehensive corporate tax reforms, including (among other things) an increased tax rate and the promotion of a global minimum tax rate. In addition, in June 2021, finance leaders of the Group of Seven countries agreed to back a new global minimum tax rate that would apply regardless of headquarters location or physical presence, and in October 2021, 136 countries (including all Group of Twenty countries) agreed to the OECD's global corporate tax reform plan, which would aim to modify the determination of taxable presence for digital activities and provide for a global minimum tax rate. Although it is uncertain whether some or all of these proposals will be enacted, a significant change in U.S. tax law, or that of other countries where we operate or have a presence, may materially and adversely impact our income tax liability, provision for income taxes, effective tax rate and results of operations.

In addition, we have received a tax ruling from the Netherlands that documents our mutual understanding of how existing tax laws apply to our circumstances. This ruling expires as of December 31, 2022, and we have been informed that it will not be renewed due to changes to the advance ruling policy in the Netherlands. While the absence of an advance agreement does not preclude our ability to continue to apply existing tax laws in the same manner as allowed by the existing ruling, the lack of such agreement creates uncertainty as to our future tax rate. Further, in September 2021, the Dutch Government published proposed legislation that would modify existing rules that, if enacted, could eliminate the benefits to which this ruling applies for fiscal years starting on or after January 1, 2022.

We continue to consider all of these developments within our overall tax strategy, including in connection with evaluating our corporate structure and intercompany relationships, and have taken, and may take further, actions intended to align our corporate structure and intercompany relationships with supporting our growth in international markets and maintaining operational and tax efficiency. These actions may increase our operating costs, and if ineffectual, could increase our income tax liabilities and our global effective tax rate.

Our income tax filings are regularly under audit by various tax authorities, and the final determination of tax audits could be materially different from that which is reflected in historical income tax provisions and accruals. Significant judgment is required in determining our worldwide provision for income taxes. We regularly assess our exposures related to our worldwide provision for income taxes to determine the adequacy of our provision for taxes. Any reduction in these contingent liabilities or additional assessments would increase or decrease income, respectively, in the period such determination is made.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

During the three months ended September 30, 2021, we repurchased shares of common stock as described below:

Period	Total Number of Shares Purchased (a)		Average Price Paid per Share (b)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs [1] (c)	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs [1] (d)
July 1 to July 31, 2021	19,967	$	648.57	19,967	5,637,143
August 1 to August 31, 2021	112,900	$	676.08	112,625	5,524,518
September 1 to September 30, 2021	142,168	$	665.06	141,695	5,382,823
Total	275,035 [2]			274,287	5,382,823

The total shares repurchased include shares surrendered for employee statutory tax withholding. See Note 12 to the unaudited condensed consolidated financial statements in Part I. Item 1. of this Quarterly Report on Form 10-Q for additional information about our share repurchases.

(1) On August 13, 1999, our Board of Directors approved and announced the repurchase of our common stock in the open market or in negotiated transactions pursuant to the Company's share repurchase program. The authorization has been increased by the Board of Directors on numerous occasions; most recently, on February 12, 2020, the maximum level of shares that may be repurchased under the program was increased from 68 million to 73 million shares. There is no specified expiration date for this share repurchase program. There were no other repurchase programs outstanding during the three months ended September 30, 2021, and no share repurchase programs expired during the period. There were 274,287 share repurchases made during the three months ended September 30, 2021, in transactions made pursuant to our share repurchase program.

(2) During the three months ended September 30, 2021, we received 748 shares of our common stock that were surrendered by employees in payment for the minimum required withholding taxes due on the vesting of restricted stock units and settlement of deferred stock units. In the above table, these shares are included in columns (a) and (b), but excluded from columns (c) and (d). These shares do not reduce the number of shares that may yet be purchased under the share repurchase program.

Item 6. Exhibits

Exhibit No.	Description
10.1	Amendment No. 7 to U.S. Supply Agreement effective as of July 9, 2019, among IDEXX Operations, Inc., the Company and Ortho-Clinical Diagnostics, Inc. (“Ortho”) (filed herewith).
10.2	Amendment No. 5 to European Supply Agreement effective as of July 9, 2019, among IDEXX Europe B.V., the Company and Ortho (filed herewith).
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial and related information from IDEXX Laboratories, Inc.’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2021, formatted in Inline eXtensible Business Reportable Language (iXBRL) includes: (i) the Condensed Consolidated Balance Sheet; (ii) the Condensed Consolidated Statement of Income; (iii) the Condensed Consolidated Statements of Comprehensive Income; (iv) the Condensed Consolidated Statement of Changes in Stockholders' Equity; (v) the Condensed Consolidated Statement of Cash Flows; and, (vi) Notes to Consolidated Financial Statements.
104	The cover page from the Company's Quarterly Report of Form 10-Q for the quarter ended September 30, 2021, formatted in Inline XBRL and contained in Exhibit 101.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

IDEXX LABORATORIES, INC.

	/s/ Brian P. McKeon
Date: November 2, 2021	Brian P. McKeon
	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)