

VALUE FOCUS

# Laboratory Services

Mid-Year 2018

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## Industry Specific

# Macroeconomic Trends

The Laboratory Services industry has experienced favorable performance over the last five years as the industry's revenue increased at an average annual rate of 1.5% between 2013 and 2018, reaching an estimated \$19.0 billion by mid-year 2018. As defined by IBISWorld, the laboratory services industry comprises the following segments: Product Performance & Safety Testing (47.2%), Environmental Testing (25.6%), Product Certification (8.1%), Biological and Chemical Testing (6.8%), Agriculture & Food Testing (6.7%), and other (5.6%). In addition to these segments, we focus on medical testing laboratories.

The industry's performance is sensitive to changes in the general economic environment both inside the U.S. and internationally. General economic conditions may impact demand for products and services which, in turn, trigger demand for laboratory services. Most recently, the industry has been the beneficiary of increasing environmental, industrial, and medical regulatory standards promoting demand for lab services. In addition to expanding regulatory regimes, influential growth factors include growing research and development budgets and technological innovations, industry consolidation, pharmacogenomics/companion diagnostics, and cost pressures.

## Environmental Testing

This category includes testing and monitoring of air, noise, water, and soil pollution, as well as industry waste production and disposal. Within an ever-changing environment, this sector has become more robust to ensure compliance with governmental regulation as well as protecting and remediating the environment. Green initiatives and environmental concerns have influenced government and business policies, resulting in a move toward green technology and increased demand for industry services.

## Aging Population and Lifespans

Demand for medical laboratory services is positively linked to an aging population with increasingly longer lifespans. The older population, defined as people aged 65 or older, included over 49 million people, accounting for approximately 15% of the U.S. population in 2016. This compares to 35 million people (12% of the population) in 2000. This increase is primarily due to the "Baby Boomers" born between 1946 and 1964 beginning to turn 65 in 2011, as well as improved life expectancy projections. The CDC currently expects older adults to outnumber children under 18 by 2035.

## Industry Specific

# Macroeconomic Trends

## Research and Development

Increased research and development (R&D) spending has been a key driver of industry growth. R&D is positively correlated to economic growth. During the five years to 2015, R&D expenditure is projected to increase at an annualized rate of 4.1%, fueling demand for laboratory testing services. In addition to creating more products to be tested, improved technology can make testing laboratories more efficient. New methods and equipment reduce the need to replicate results, can eliminate intermediate steps in traditional testing practices, and can develop new tests entirely. New equipment can also reduce the amount of labor needed to run a testing facility, potentially creating cost savings for laboratories.

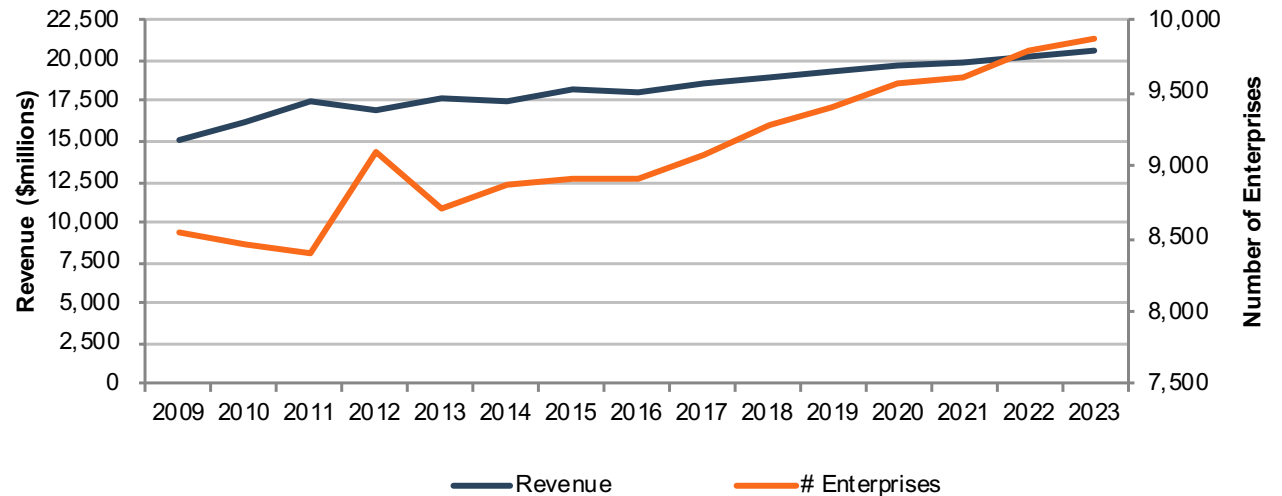
## Revenue & Industry Structure

According to IBISWorld, the Lab Services industry has seen revenue increase at an average annual rate of 1.5% between 2013 and 2018. The industry is expected to grow at an average annual rate of 1.7% during the next five year period as product manufacturers seek to maintain compliance with federal and state regulations and improve products. The FDA, the EPA, and the USDA continually update regulations that seek to adapt to changing consumer and environmental trends. For example, the FDA is in the process of implementing rules that require restaurant menus and vending machines to display calories and nutrition information. Restaurant rules came into effect in May 2018, while vending machine regulations are expected to be implemented in July 2018. Wider access to health insurance could increase demand for medical tests, although limitations on reimbursement through Medicare and Medicaid could limit revenue growth.

Industry Specific  
**Macroeconomic  
 Trends**

The industry is fragmented, with the average revenue per company hovering around \$2.1 million. While there are numerous companies, competition in the industry is based on specialty. A small number of firms with expertise in a specific field, such as food testing or physical safety and engineering integrity, will compete amongst themselves for business. The number of established companies has grown at a compounded annual rate of 1.1% between 2013 and 2018 and is expected to experience continued stable compounded annual growth rate of 1.2% into the projected 2019-2023 period.

**Revenue and Establishments**



Source: IBISWorld

## M&A Transactions

Announced Date	Target / Issuer	Buyers / Investors	Trans. Types	Trans. Status	Total Trans. Value (\$USD mm)	Total Rev. [LTM] (\$USDmm) [Target / Issuer]	EBITDA [LTM] (\$USDmm) [Target/ Issuer]	Business Description [Target/Issuer]
06/20/2018	Castle Worldwide, Inc.	Scantron Corporation	Merger/ Acquisition	Closed	-	-	-	Castle Worldwide, Inc. operates as a certification and licensure testing company.
06/07/2018	Pernicka Corporation	EAG Inc.	Merger/ Acquisition	Closed	-	-	-	Pernicka Corporation provides gas composition analysis for defense, aerospace, and medical device industries.
06/05/2018	Polymer Solutions Incorporated	SGS SA (SWX:SGSN)	Merger/ Acquisition	Closed	-	-	-	Polymer Solutions Inc. offers chemical analysis, physical testing, research and development, and litigation services.
06/01/2018	REACH Genetics, Inc.	-	Private Placement	Announced	0.2	-	-	REACH Genetics, Inc. provides data collection and analysis of chemical, genetic, and phenotypic profiles of hemp.
05/24/2018	RS Calibration Services, Inc.	Trescal SA	Merger/ Acquisition	Closed	-	-	-	RS Calibration Services, Inc. provides calibration and validation services for biomedical, pharmaceutical, and other industries.
04/30/2018	Covance Food Solution	Eurofins Scientific SE (ENXTPA:ERF)	Merger/ Acquisition	Announced	670	160	-	Covance provides routine and specialized lab testing and consulting for the food and beverage industries.
04/16/2018	Silicon Cert, Ltd.	Oneida Research Services, Inc.	Merger/ Acquisition	Closed	-	-	-	Silicon Cert Laboratories, provides reliability testing and analytical services to various industries.
04/10/2018	OptiGen, LLC	Mars Petcare US, Inc.	Merger/ Acquisition	Closed	-	-	-	OptiGen, LLC provides DNA-based diagnoses and information about inherited diseases of dogs.
04/02/2018	Air Pollution Testing, Inc.	Alliance Source Testing, LLC	Merger/ Acquisition	Closed	-	-	-	Air Pollution Testing, Inc. provides emission testing and oil and gas laboratory services.
03/26/2018	Renewable Energy Test Center, LLC	Marubeni Corporation (TSE:8002)	Merger/ Acquisition	Closed	-	-	-	Renewable Energy Test Center, LLC provides engineering, testing, and certification for renewable energy products.
03/01/2018	REI Consultants, Inc.	Pace Analytical Services, Inc.	Merger/ Acquisition	Closed	-	-	-	REI Consultants, Inc. is an environmental consultants specializing in laboratory analysis services.
02/20/2018	Jefferson Education Exchange Inc.	Strada Education Network, Endowment Arm; Curry School Foundation	Private Placement	Closed	1.0	-	-	Jefferson Education Exchange Inc. defines, collects, and analyzes data to educators for decision making.

## M&A Transactions

Announced Date	Target / Issuer	Buyers / Investors	Trans. Types	Trans. Status	Total Trans. Value (\$USD mm)	Total Rev. [LTM] (\$USDmm) [Target / Issuer]	EBITDA [LTM] (\$USDmm) [Target/ Issuer]	Business Description [Target/Issuer]
01/22/2018	Better Environmental Protection Labs, Inc.	EMSL Analytical, Inc.	Merger/ Acquisition	Announced	-	-	-	Better Environmental Protection Labs, Inc. comprises laboratory testing and drinking water testing services.
01/16/2018	Toxicology Holdings Corp.	ACM Medical Laboratory, Inc.	Merger/ Acquisition	Closed	-	-	-	Toxicology Holdings Corp. operates as a toxicology laboratory which provides substance abuse identification and services.
01/11/2018	MET Laboratories, Inc.	Eurofins Scientific SE (ENXTPA:ERF)	Merger/ Acquisition	Closed	-	-	-	MET Laboratories, Inc. provides testing and certification services for electrical products.
01/09/2018	Jabil Inc. (NYSE:JBL)	-	Public Offering	Closed	498.57	22,095.4	1,352.8	Jabil Inc. provides electronic manufacturing services and solutions worldwide.
01/02/2018	Karna, LLC	The Celerian Group	Merger/ Acquisition	Closed	-	-	-	Karna, LLC offers IT consulting, support services, consulting, communications, and lab support services.

Source: S&P Capital IQ

## Public Company Pricing

Selected Financial Data (\$Millions, as of June 30, 2018)

Company Name	Ticker	Market Values				Performance and Valuation					Forward Val. Multiples	
		Stock Price	Shares O/S	Market Cap	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV / Revenue	EV / EBITDA	Revenue	EBITDA
<b>Medical Testing</b>												
Laboratory Corporation of America Holdings <i>Clinical laboratory serving the medical profession</i>	LH	\$179.53	102.3	\$18,366	\$24,627	\$10,979	\$2,089	19.0%	2.2x	11.8x	2.1x	11.2x
Quest Diagnostics Incorporated <i>Diagnostic testing information services</i>	DGX	\$109.94	135.8	14,932	18,750	7,831	1,613	20.6%	2.4x	11.6x	2.4x	11.8x
<b>Life Sciences Tools &amp; Services</b>												
Eurofins Scientific SE <i>Global diversified testing company</i>	ERF	\$555.83	17.7	9,829	11,786	3,871	687	17.7%	3.0x	17.2x	2.6x	13.9x
Agilent Technologies, Inc. <i>Bio-analytical and analytical testing</i>	A	\$61.84	320.0	19,786	18,894	4,720	1,141	24.2%	4.0x	16.6x	3.8x	15.2x
PerkinElmer, Inc. <i>Medical Diagnostic and environmental testing laboratory</i>	PKI	\$73.23	110.6	8,102	9,998	2,387	462	19.3%	4.2x	21.7x	3.5x	15.9x
Thermo Fisher Scientific Inc. <i>Distributor of analytical instruments, equipment, reagents, consumables, software, and services</i>	TMO	\$207.14	402.3	83,337	101,992	23,094	5,781	25.0%	4.4x	17.6x	4.2x	16.5x
ALS Limited <i>Analytical testing of environmental, food, pharmaceutical, and consumer products</i>	ASX:ALQ	\$5.58	488.5	2,724	3,124	1,113	223	20.0%	2.8x	14.0x	2.7x	12.5x

## Public Company Pricing

Selected Financial Data (\$Millions, as of June 30, 2018)

Company Name	Ticker	Market Values				Performance and Valuation					Forward Val. Multiples	
		Stock Price	Shares O/S	Market Cap	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV / Revenue	EV / EBITDA	Revenue	EBITDA
<b>Other Labs &amp; Related Services</b>												
Ecology & Environment, Inc. <i>Environmental consulting firm</i>	EEI	\$12.45	4.3	54	39	106	5	5.1%	0.4x	7.2x	nm	nm
IDEXX Laboratories, Inc. <i>Diagnostic and detection testing for veterinary, food, and water purposes</i>	IDXX	\$217.94	86.9	18,931	19,797	2,117	541	25.6%	9.4x	36.6x	8.7x	32.8x
Danaher Corporation <i>Environmental, life sciences, and industrial technology services for medical, industrial, and commercial purposes</i>	DHR	\$98.68	698.6	68,935	79,364	19,290	4,782	24.8%	4.1x	16.6x	4.0x	16.4x
Clean Harbors, Inc. <i>Environmental remediation and industrial waste management services</i>	CLH	\$55.55	56.2	3,121	4,516	3,102	449	14.5%	1.5x	10.1x	1.4x	9.6x
MetLife, Inc. <i>Testing and certification of electrical products</i>	MET	\$43.60	1,016.5	44,321	120,137	67,959	5,970	8.8%	1.8x	20.1x	1.9x	nm
<b>Average</b>					<b>34,419</b>	<b>12,214</b>	<b>1,979</b>	<b>18.7%</b>	<b>3.3x</b>	<b>16.8x</b>	<b>3.4x</b>	<b>15.6x</b>
<b>Median</b>					<b>18,822</b>	<b>4,295</b>	<b>914</b>	<b>19.7%</b>	<b>2.9x</b>	<b>16.6x</b>	<b>2.7x</b>	<b>14.6x</b>

Source: S&P Capital IQ



# Valuation Trends

## Public Companies

We assessed the historical valuation trends of the public companies in the industry (pages 6-7) by comparing each company's enterprise value divided by LTM EBITDA over the last two years at each quarter-end. The median multiple decreased from 17.1x to 16.5x from December 2017 through June 2018, but are still higher than multiples during 2016. On average, companies focused on the life sciences tool and services earn the highest multiples (median of 16.9x) on the strength of more robust growth expectations.

### Historical Valuation Trends to Public Companies

Company Name	Ticker	Enterprise Value / LTM EBITDA Multiple							
		6/30/18	3/31/18	12/31/17	9/30/17	6/30/17	3/31/17	12/31/16	9/30/16
<b>Medical Testing</b>									
Laboratory Corporation of America Holdings	LH	11.9x	11.2x	11.6x	11.3x	11.6x	10.9x	10.3x	10.9x
Quest Diagnostics Incorporated	DGX	12.0x	11.2x	11.0x	10.6x	12.4x	11.4x	11.0x	10.3x
<b>Life Sciences Tools &amp; Services</b>									
Eurofins Scientific SE	ERF	16.8x	15.9x	17.8x	18.7x	17.7x	15.5x	16.6x	16.6x
Agilent Technologies, Inc.	A	16.6x	18.5x	19.2x	19.0x	18.3x	17.1x	15.1x	16.9x
PerkinElmer, Inc.	PKI	21.7x	22.9x	19.0x	19.4x	20.3x	17.4x	17.5x	18.6x
Thermo Fisher Scientific Inc.	TMO	17.9x	18.7x	18.5x	18.4x	18.0x	16.7x	16.0x	17.6x
ALS Limited	ASX:ALQ	14.0x	14.1x	15.0x	17.0x	16.5x	13.8x	13.8x	14.5x
<b>Other Labs &amp; Related Services</b>									
Ecology & Environment, Inc.	EEI	7.2x	5.4x	4.5x	5.9x	8.2x	6.8x	8.9x	6.8x
IDEXX Laboratories, Inc.	IDXX	36.6x	33.7x	29.2x	30.1x	32.2x	32.0x	26.0x	26.5x
Danaher Corporation	DHR	16.4x	17.2x	16.9x	16.7x	16.9x	17.1x	15.0x	16.5x
Clean Harbors, Inc.	CLH	10.1x	9.4x	10.3x	11.0x	10.9x	11.1x	11.7x	10.3x
MetLife, Inc.	MET	19.6x	19.7x	17.2x	31.7x	31.0x	28.0x	19.0x	12.1x
<b>Median</b>		<b>16.5x</b>	<b>16.5x</b>	<b>17.1x</b>	<b>17.7x</b>	<b>17.3x</b>	<b>16.1x</b>	<b>15.1x</b>	<b>15.5x</b>

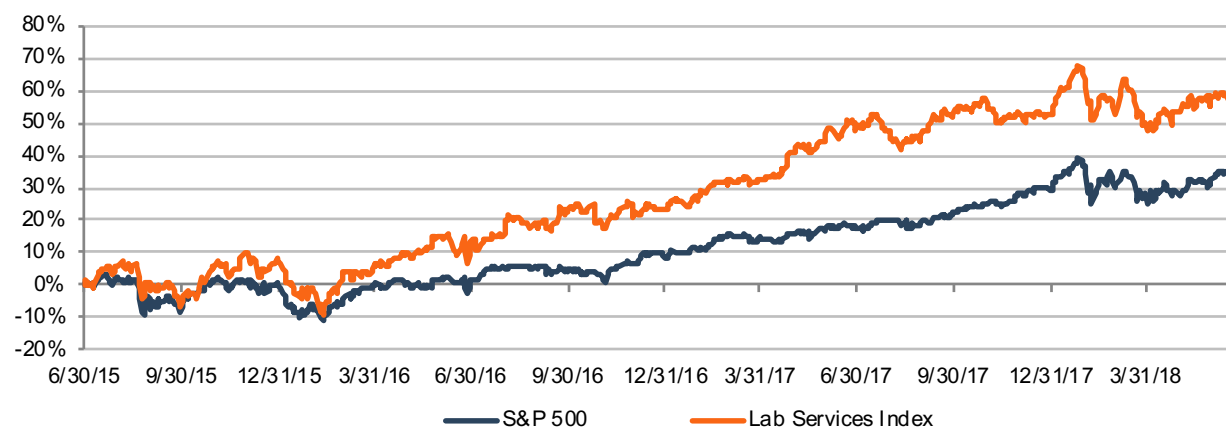
# Valuation Trends

## Lab Services Index

Our Lab Services Index includes the companies outlined on pages 6-7. We compared the Index's performance to the S&P 500 over the last three years as well as the past year. As previously mentioned, the laboratory services industry is influenced by general macroeconomic conditions, depicted by the three year historical analysis. Over the longer-term, lab services companies have outperformed the S&P, while over the shorter term, the S&P 500 have experienced 12% growth, compared to lab services growth of 7%.

### Historical Market Trends

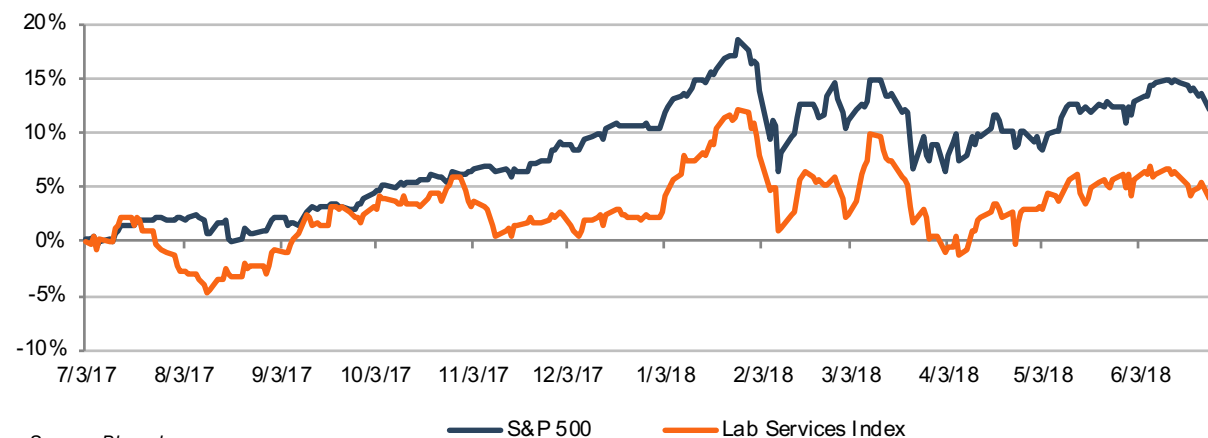
Last 3 Years



Source: Bloomberg

### Historical Market Trends

LTM



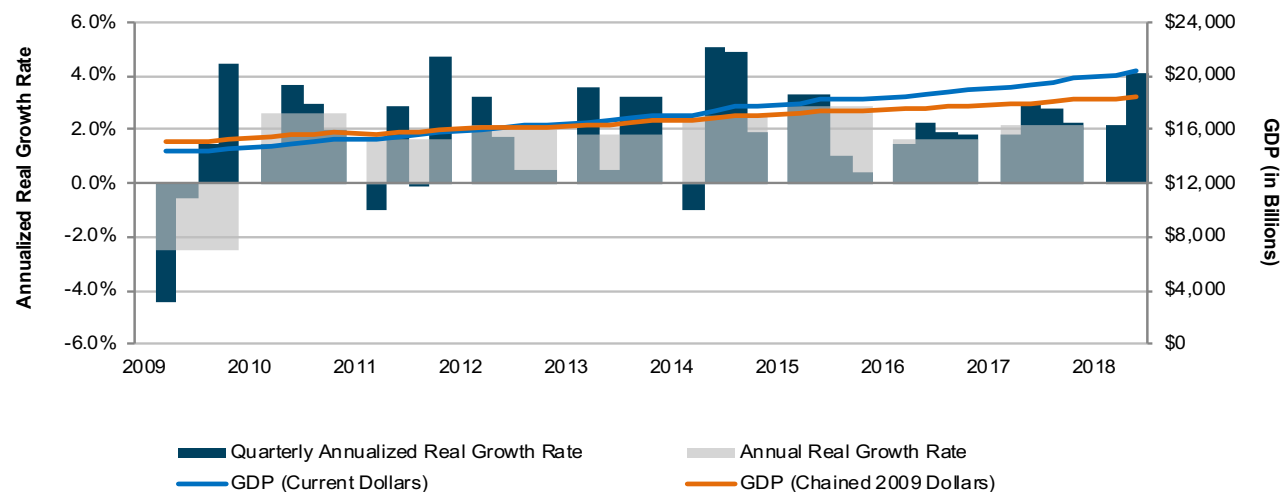
Source: Bloomberg

Macroeconomic Overview

# GDP

According to advance estimates released by the Department of Commerce's Bureau of Economic Analysis, Real Gross Domestic Product, the output of goods and services produced by labor and property located in the United States, increased at an annualized rate of 4.1% during the second quarter of 2018. GDP growth in the second quarter was up from growth of 2.2% in the first quarter of 2018 and represents the sixteenth straight quarter of growth. The increase was attributable to gains in nonresidential fixed investment, personal consumption expenditures, exports, imports (decreased), federal government spending, and state and local government spending, and was offset by declines in private inventory investment and residential fixed investment. Real GDP grew 2.2% during 2017, compared to growth of 2.9% in 2015 and 1.6% in 2016.

## GDP



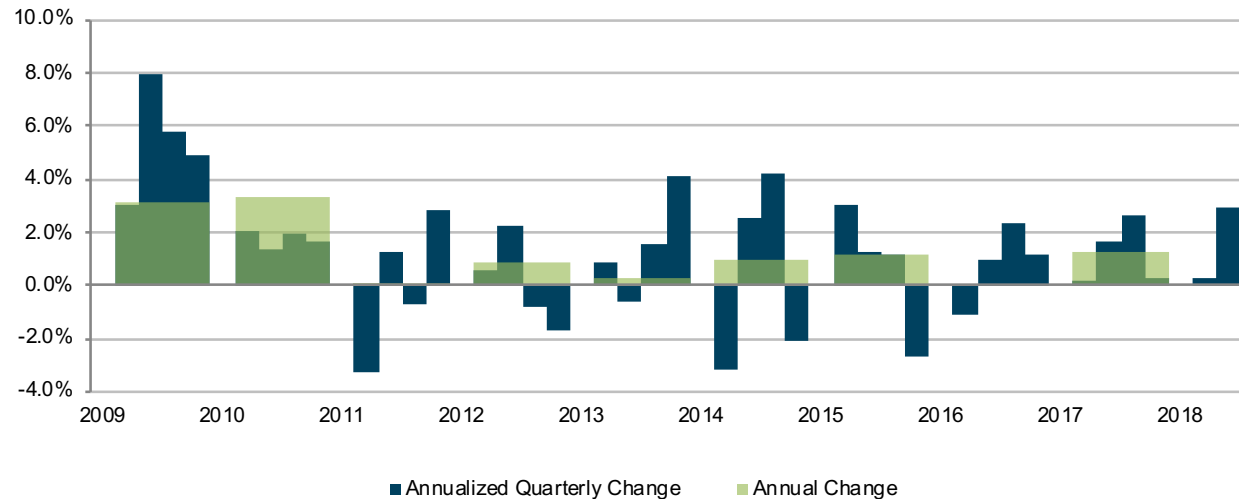
Source: Bureau of Economic Analysis

Macroeconomic Overview

# Business Manufacturing and Productivity

According to the BLS, seasonally adjusted nonfarm business productivity (as measured by the hourly output of all persons) increased at an annual rate of 2.9% in the second quarter of 2018, which is the largest increase since the first quarter of 2015. The productivity increase in the second quarter follows an increase of 0.3% in the first quarter. Productivity increased 1.3% relative to the second quarter of 2017. Productivity increased 3.6% for the business sector (inclusive of farming activity) in the second quarter of 2018, while manufacturing productivity increased 0.9% during the quarter.

**Change in Nonfarm Business Productivity**



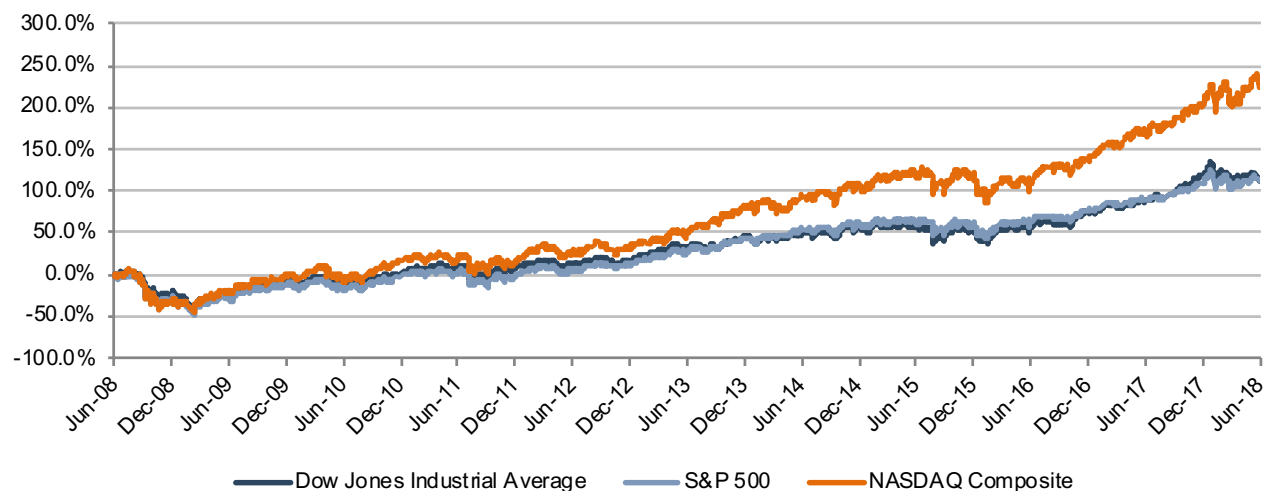
Source: Bureau of Labor Statistics

Macroeconomic Overview

# The Financial Markets

While some of the market turbulence experienced in the first quarter of 2018 was lessened during the second quarter, major U.S. equity indices still underwent a volatile quarter on the heels of continued trade conflict between the United States and China. Still, the market recovered from a turbulent first quarter, with each major index analyzed returning a gain. The Dow Jones Industrial Average ended the second quarter of 2018 at 24,271, up 0.7% for the quarter, following a decline of 2.5% in the first quarter of the year and a gain of 10.3% in the fourth quarter of 2017. The S&P 500 gained 6.1% in the fourth quarter of 2017 and closed the year up 19.4% over 2016. The S&P 500 Index recovered from a decrease of 1.2% during the first quarter of 2018 and closed at 2,718 at the end of the second quarter. The NASDAQ Composite Index increased 6.3% during the second quarter to close at 7,510, following gains of 6.3% and 2.3% in the fourth quarter of 2017 and first quarter of 2018, respectively.

**Equity Index Price Return**



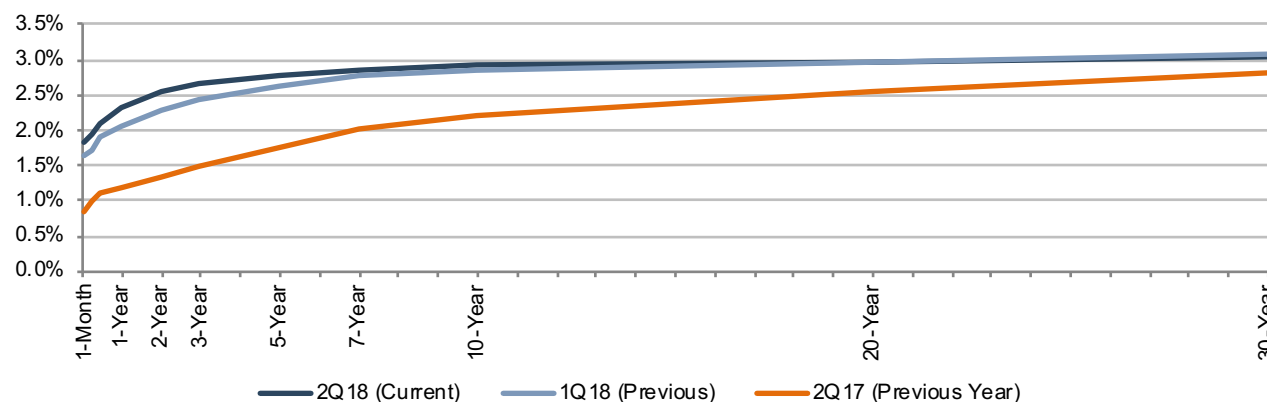
Source: Bloomberg L.P.

Macroeconomic Overview

# Yield Curve

Treasury yields increased during the second quarter of 2018. Bond prices are negatively correlated with their respective yields. Bond prices can shift abruptly due to investor reactions to major variances in reported economic data versus market expectations (e.g., expected inflation, growth, monetary policy, and other Federal Reserve actions). Further, the spread between 2-year and 10-year Treasury note yields narrowed significantly over the quarter, as growth in the 2-year note's yield far outpaced that of the 10-year note. At the end of the first quarter of 2018, the spread between the two yields was 56 basis points. This spread had fallen to 38 basis points by the end of the second quarter, suggesting a flattening yield curve. Investors generally view the slope of the yield curve as an indicator of the direction of the economy. Steeper sloped yield curves imply greater future economic growth.

**U.S. Treasury Yield Curve**



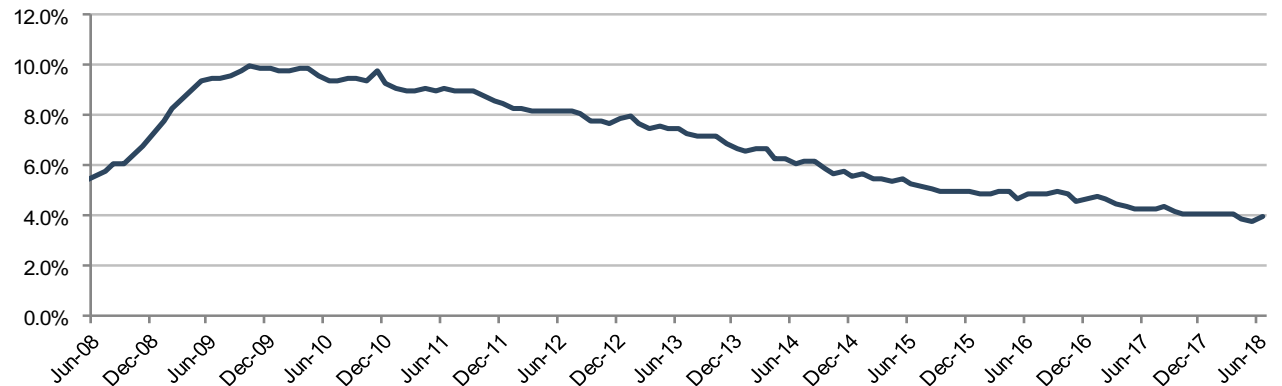
Source: Federal Reserve Statistical Release H.15  
 Note: Figures shown are the average yield for the last month of the quarter.

Macroeconomic Overview  
**Unemployment  
and Payroll  
Jobs**

According to the BLS, the unemployment rate (U-3) was 4.0% in June 2018, which is up from 3.9% in April 2018 and 3.8% in May 2018. The May 2018 U-3 unemployment rate of 3.8% matched an 18-year low. Economists surveyed by *The Wall Street Journal* anticipate unemployment rates of 3.7% and 3.6% in December 2018 and June 2019, respectively.

The number of nonfarm payroll jobs increased by 213,000 in June 2018, and June's gain follows increases of 175,000 and 244,000 jobs in April and May, respectively. Population growth alone adds approximately 94,000 individuals to the workforce per month.

**Civilian Unemployment Rate**



Source: Bureau of Labor Statistics

## Benchmarking Data for Testing Laboratories

Benchmarking to peer performance is a valuable tool for business managers. In our valuation practice, we routinely examine peer data published by Risk Management Association ("RMA"). In this issue, we present a summary of the data presented by RMA for testing laboratories.

The 2017-2018 *Annual Statement Studies* published by RMA compiles average percentage income statements and balance sheets and key financial ratios of Testing Laboratories classified under North American Industry Classification System ("NAICS") #54138. We compared three sales categories within this industry: \$5-10 million (35 companies), \$10-25 million (36 companies), and \$25 million and over (38 companies). The percentage balance sheet, percentage income statement, and selected financial ratios are summarized to the right.

Percentage Balance Sheets	Sales \$5-10M	Sales \$10-25M	Sales \$25M+
Total Current Assets	57.9%	53.5%	49.3%
Net Fixed Assets	27.2%	29.5%	29.7%
Other Assets	14.9%	17.0%	20.9%
Total Assets	100.0%	100.0%	99.9%
Total Current Liabilities	35.0%	26.1%	32.7%
Long-Term Debt	27.4%	9.6%	15.7%
Other Liabilities	6.2%	5.3%	6.8%
Total Liabilities	68.6%	41.0%	55.2%
Total Equity	31.4%	58.9%	44.8%
Total Liabilities and Equity	100.0%	99.9%	100.0%

Percentage Income Statements	Sales \$5-10M	Sales \$10-25M	Sales \$25M+
Operating Income	7.1%	10.7%	6.6%
Other Income / (Expense)	-1.5%	-0.9%	-1.2%
Pre-Tax Income	5.6%	9.8%	5.4%
+ Depreciation & Amortization	3.1%	3.4%	4.2%
EBITDA	8.7%	13.2%	9.6%

Ratio Analysis	Sales \$5-10M	Sales \$10-25M	Sales \$25M+
Sales / Receivables	6.3	7.1	6.0
Working Capital / Sales	9.8%	13.7%	12.0%
Sales / Net Fixed Assets	9.2	8.2	5.3
Pre-tax Return on Equity	34.3%	32.5%	22.9%

Source: Risk Management Association



# Benchmarking Data for Testing Laboratories

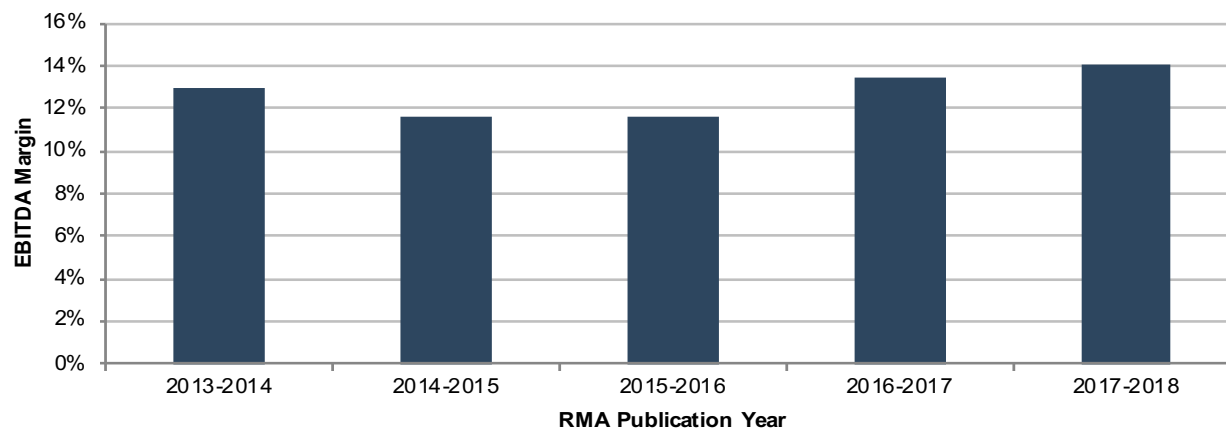
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From a balance sheet perspective, the smaller companies carry larger debt balances (27% of total assets) than their larger peers and tend to maintain lower margins. Overall asset utilization is similar though, with smaller firms generating sales of \$6.30 per dollar of fixed assets, compared to \$7.10 and \$6.0 for the medium- and larger-sized companies, respectively. On a pre-tax basis, return on equity for the industry composites range from 23% to 34%, suggesting that tradenames, customer relationships and other intangible assets are important components of the value of such labs.

The following chart summarizes EBITDA margin by year for the middle size cohort. Over the period analyzed, margins have fluctuated between 11.6% and 14.1%.

The peer group data from RMA can help lab managers benchmark their operations against a diverse group of other labs and help identify opportunities for improvement.

**EBITDA Margin (Sales of \$10-25 Million)**



Source: NAICS 541380 (Sales of \$10-25 Million)

# Mercer Capital

## Laboratory Services Industry

Mercer Capital has expertise providing business valuation and financial advisory services to companies in the laboratory services industry.

Mercer Capital provides business valuation and financial advisory services to laboratory service companies throughout the nation. We provide valuation services for tax purposes, buy-sell agreements, partner buyouts, and other corporate planning purposes. Mercer Capital also works with owners who are considering the sale of their dealership or the acquisition of other laboratories.

### Services Provided

- Valuation of laboratory services industry companies
- Transaction advisory for acquisitions and divestitures
- Valuations for purchase accounting and impairment testing
- Fairness and solvency opinions
- Litigation support for economic damages and valuation and shareholder disputes

Contact a Mercer Capital professional to discuss your needs in confidence.

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