



PRATT'S STATS PRIVATE DEAL UPDATE

4Q 2016

A QUARTERLY PUBLICATION ANALYZING PRIVATE COMPANY ACQUISITIONS
BY PRIVATE BUYERS FROM THE PRATT'S STATS DATABASE.

INTRODUCTION

The quarterly *Pratt's Stats Private Deal Update (PDU)* provides general trend information on valuation multiples and profit margins for transactions in the *Pratt's Stats* database, available exclusively through Business Valuation Resources, LLC (BVR) at www.BVMarketData.com.¹ The *PDU* also includes an excerpt from the *Economic Outlook Update*,² published by BVR.

The charts and graphs in *PDU* present median value. The majority of valuation practitioners accept the median (the middle observation) as best measure of central tendency for valuation multiples and profit margins because outliers can distort the mean (the arithmetic average). *Pratt's Stats* users can conduct comparative analysis in the database to determine which transactions to use.

Financial advisors, merger and acquisition professionals, business appraisers, business brokers, investment bankers and many others use the *Pratt's Stats* database to determine the value of a subject company by applying the market approach with comparable company data.

Pratt's Stats is the premier source for private business purchase details and includes both private and public buyers. *Pratt's Stats* includes up to 100 data points that highlight the financial and transactional details of the business sales. As of the publication date, the *Pratt's Stats* database contains 18,688 transactions in which the buyer was a private party. The database includes a total of 25,834 transactions in which a privately held company was sold to either a private or public buyer. Exhibit 1 shows deal count in *Pratt's Stats* for private buyers only.

1. Brokers who contribute transaction details on closed business sales receive three months of free access to the database for each deal included in *Pratt's Stats*. For more information, visit www.BVMarketData.com/Contribute. You may also send an email to BVMDQuestions@bvresources.com.
2. The *Economic Outlook Update (EOU)* is published monthly and quarterly by BVR and provides details on the state of the U.S. economy and an outlook for the future. The *EOU* covers general economic conditions, GDP, job creation, consumer confidence, the stock market, bond prices, energy prices, the real estate market, and more. Visit www.BVMarketData.com to learn more.

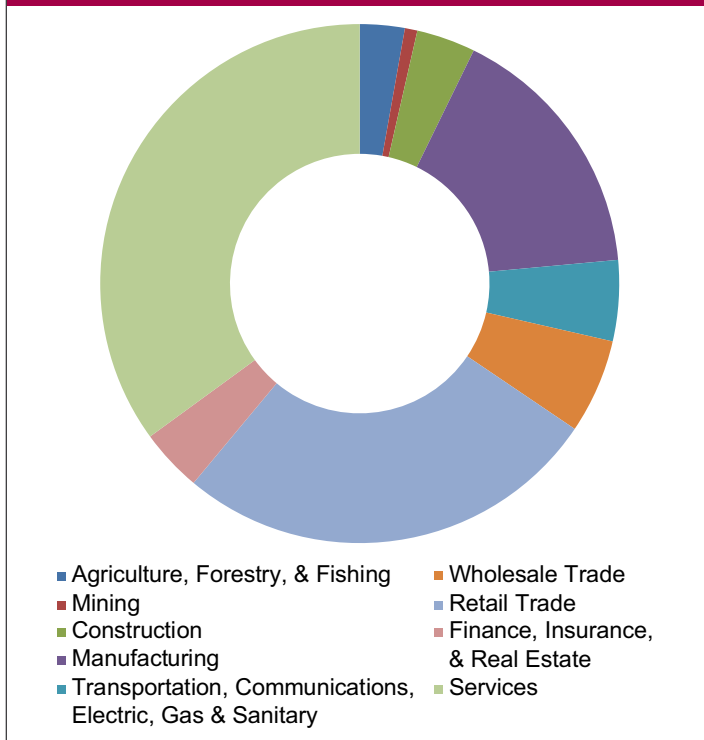
4Q 2016

INTRODUCTION	1
Exhibit 1: Summary Information (Private Buyers Only)	2
Exhibit 1A: Distribution of Transactions by Major Industry (All Buyers)	2
Exhibit 1B: Median MVIC Price and Median Revenue (Private Buyers)	3
Exhibit 1C: Median MVIC Price and Median MVIC/Revenue (Private Buyers)	3
MULTIPLES AND MARGINS—BY SIZE	4
Exhibit 2: Median Valuation Multiples Organized by Net Sales Range (Private Buyers)	4
Exhibit 2A: Median MVIC/Net Sales by Revenue Range (Private Buyers)	4
Exhibit 2B: Median MVIC/SDE by Revenue Range (Private Buyers)	5
Exhibit 2C: Median MVIC/EBITDA by Revenue Range (Private Buyers)	5
Exhibit 3: Median Profit Margins Organized by Net Sales Range (Private Buyers)	6
Exhibit 3A: Gross Profit Margin by Revenue Range (Private Buyers)	6
Exhibit 3B: Operating Profit Margin by Revenue Range (Private Buyers)	7
Exhibit 3C: Net Profit Margin by Revenue Range (Private Buyers)	7
INTERQUARTILE RANGE—BY SECTOR AND BY YEAR	8
Exhibit 4A: MVIC/Revenue Interquartile Range by Sector (All Buyers)	8
Exhibit 4B: MVIC/EBITDA Interquartile Range by Sector (All Buyers)	8
Exhibit 4C: MVIC/Revenue Interquartile Range by Year (All Buyers)	9
Exhibit 4D: MVIC/EBITDA Interquartile Range by Year (All Buyers)	9
MULTIPLES AND MARGINS—BY SECTOR AND BY YEAR	10
Exhibit 5: Median MVIC/Net Sales by Sector (Private Buyers)	10
Exhibit 6: Median MVIC/Seller's Discretionary Earnings by Sector (Private Buyers)	11
Exhibit 7: Median MVIC/EBITDA by Sector (Private Buyers)	12
Exhibit 8: Median Gross Profit Margins by Sector (Private Buyers)	13
Exhibit 9: Median Operating Profit Margins by Sector (Private Buyers)	14
Exhibit 10: Median Net Profit Margins by Sector (Private Buyers)	15
MULTIPLES AND MARGINS—PRIVATE VS. PUBLIC BUYERS	16
Exhibit 11: Agriculture, Forestry, & Fishing: SIC 0111-0971	16
Exhibit 12: Mining: SIC 1011-1499	17
Exhibit 13: Construction: SIC 1521-1799	17
Exhibit 14: Manufacturing: SIC 2011-3999	18
Exhibit 15: Transportation, Communications, Electric, Gas & Sanitary: SIC 4011-4971	18
Exhibit 16: Wholesale Trade: SIC 5012-5199	19
Exhibit 17: Retail Trade: SIC 5211-5999	19
Exhibit 18: Finance, Insurance, & Real Estate: SIC 6011-6799	20
Exhibit 19: Services: SIC 7011-9999	20
Exhibit 20: All Industries	21
MULTIPLES AND MARGINS—BY SECTOR VS. MEDIAN FOR ALL SECTORS	22
Exhibit 21: Median Valuation Multiples by Sector (All Buyers)	22
Exhibit 21A: Median MVIC/Net Sales (All Buyers)	22
Exhibit 21B: Median MVIC/Gross Profit (All Buyers)	22
Exhibit 21C: Median MVIC/EBIT (All Buyers)	23
Exhibit 21D: Median MVIC/EBITDA (All Buyers)	23
Exhibit 21E: Median MVIC/SDE (All Buyers)	23
Exhibit 22: Median Profit Margins by Sector (All Buyers)	24
Exhibit 22A: Median Gross Profit Margin (All Buyers)	24
Exhibit 22B: Median Operating Profit Margin (All Buyers)	25
Exhibit 22C: Median Net Profit Margin (All Buyers)	25
ECONOMIC OUTLOOK	26
Key Economic Variables Actual 2004-2015 and Forecast 2016-2026	26

Exhibit 1: Summary Information (Private Buyers Only)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Count	706	953	1,036	1,051	1,189	1,498	995	1,123	1,112	491,544	1,244	1,372	1,360	794
Median MVIC Price	\$200,000	\$197,500	\$203,700	\$225,000	\$240,000	\$190,000	\$195,000	\$160,000	\$185,000	\$200,000	\$200,000	\$242,500	\$215,000	\$242,500
Median Revenue	\$449,596	\$447,276	\$442,317	\$487,503	\$504,871	\$450,386	\$455,302	\$403,400	\$449,284	\$476,370	\$491,544	\$534,512	\$508,460	\$553,070
Median MVIC Price/Revenue	0.45	0.48	0.47	0.49	0.49	0.46	0.45	0.45	0.47	0.45	0.46	0.47	0.44	0.47

Exhibit 1A: Distribution of Transactions by Major Industry (All Buyers)



Pratt's Stats Calculations

MVIC: Total consideration paid to the seller and includes any cash, notes and/or securities that were used as a form of payment plus any interest-bearing liabilities assumed by the buyer. The MVIC price includes the non-compete value and the assumption of interest-bearing liabilities and excludes (1) the real estate value and (2) any earn-outs (because they have not yet been earned, and they may not be earned) and (3) the employment/consulting agreement values.

Gross Profit: Net Sales - Cost of Goods Sold

Operating Profit: Gross Profit - Total Operating Expenses

Net Income: EBT - Tax Expense

EBIT: Operating Profit

EBITDA: Operating Profit + Noncash Charges (Depreciation and/or Amortization)

Seller's Discretionary Earnings (SDE) = Operating Profit + Noncash Charges + Owner's Compensation

Gross Profit Margin: Gross Profit/Sales

Operating Profit Margin: Operating Profit/Sales

Net Profit Margin: Net Income/Sales

<p>Adam Manson Editor</p> <p>Retta Dodge Customer Service</p> <p>David Foster CEO</p> <p>Lucretia Lyons President</p> <p>Doug Twitchell Publisher</p>	<p>The <i>Pratt's Stats Private Deal Update</i> (ISSN 1937-9021) is published quarterly and exclusively for subscribers of the Pratt's Stats database by Business Valuation Resources, LLC, 1000 SW Broadway, Suite 1200, Portland OR 97205-3035. Contact info@bvresources.com for more information or visit our website at www.BVMarketData.com.</p> <p>Although the information in this publication has been obtained from sources that BVR believes to be reliable, we do not guarantee its accuracy, and such information may be condensed or incomplete. This publication is intended for information purposes only, and it is not intended as financial, investment, legal, or consulting advice.</p> <p>No portion of this document can be republished without the express written consent of Business Valuation Resources, LLC.</p>
--	---

Exhibit 1B: Median MVIC Price and Median Revenue (Private Buyers)

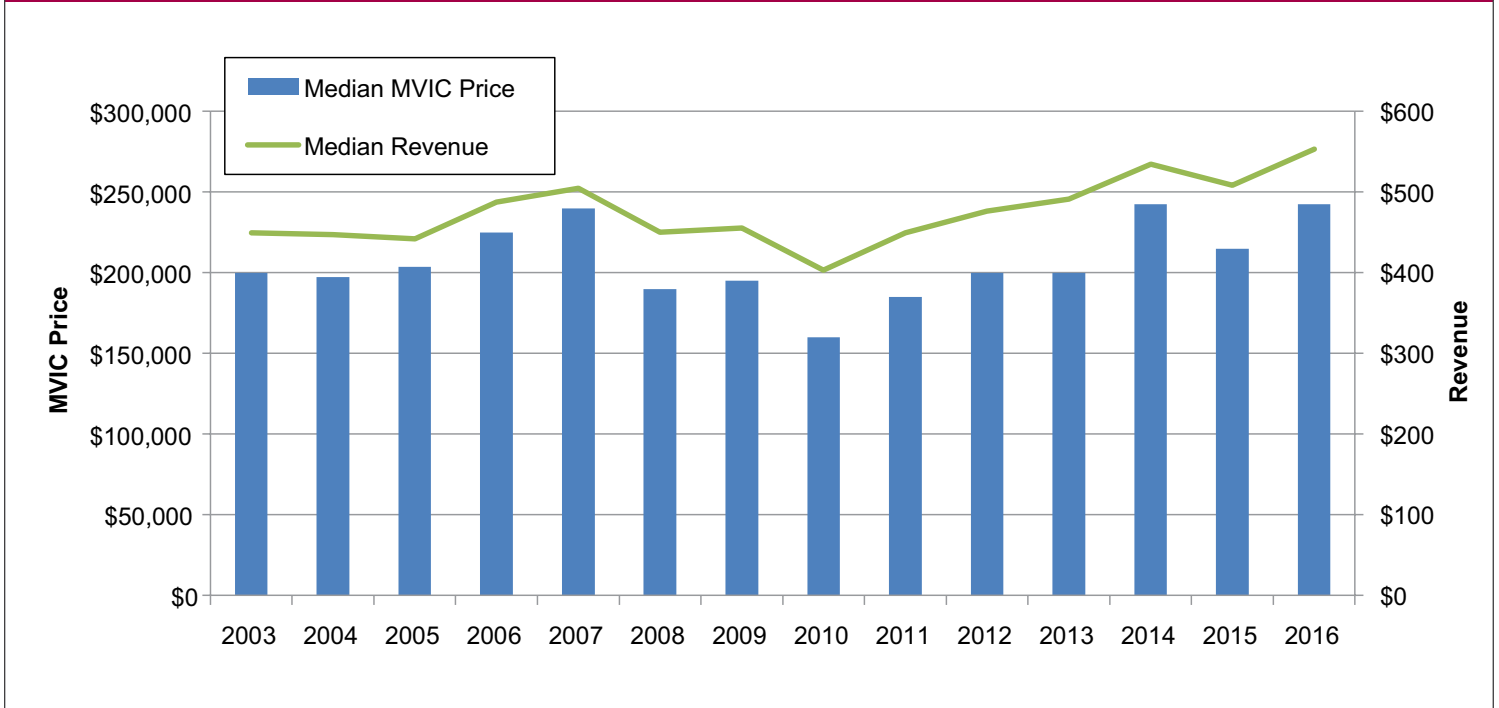
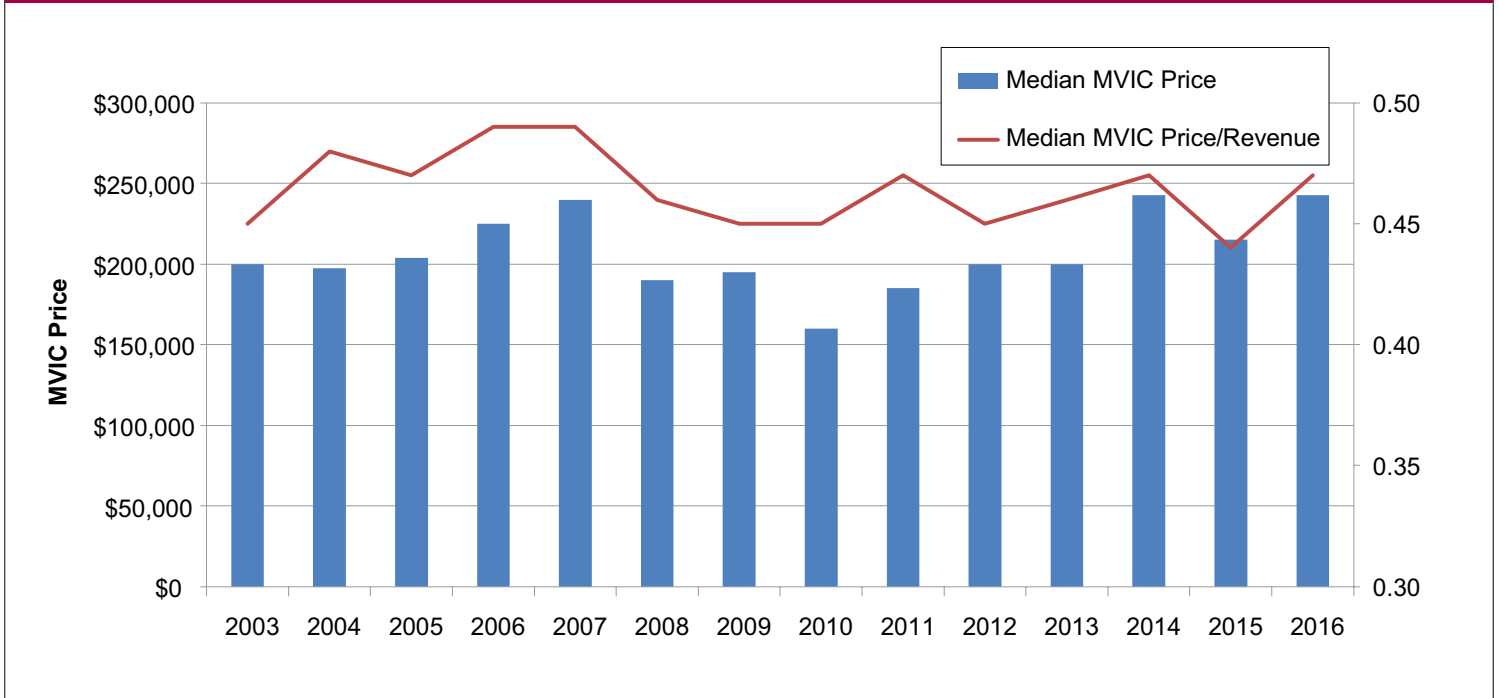


Exhibit 1C: Median MVIC Price and Median MVIC/Revenue (Private Buyers)



MULTIPLES AND MARGINS—BY SIZE

Exhibit 2 presents median valuation multiples based on revenue ranges for all industries.

Companies with sales under \$1 million tended to have the lowest MVIC/SDE and MVIC/EBITDA multiples, while companies with sales over \$5 million tended to have the largest MVIC/SDE and MVIC/EBITDA multiples. In recent years, companies with sales between \$1 million and \$5 million tended to have the lowest MVIC/revenue multiples.

Exhibit 3 presents median profit margins based on revenue ranges for all industries.

There appears to be a negative correlation between firm revenues and profit margins. As firm revenues increase, the various profit margins tend to decrease. Firms with revenues of \$5 million or greater tended to have the lowest profit margins. Most of the smaller firms are pass-through entities (S Corporations, LLCs, etc.) while many of the larger firms are C Corporations—this may explain the lower profit margins of the larger firms.

Exhibit 2: Median Valuation Multiples Organized by Net Sales Range (Private Buyers)														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MVIC/Net Sales														
\$0-\$1M	0.48	0.50	0.48	0.50	0.49	0.48	0.47	0.46	0.49	0.47	0.47	0.49	0.46	0.48
\$1M-\$5M	0.40	0.43	0.42	0.41	0.45	0.40	0.41	0.40	0.36	0.38	0.43	0.40	0.40	0.46
>\$5M	0.38	0.50	0.39	0.60	0.53	0.44	0.42	0.50	0.54	0.51	0.48	0.53	0.58	0.39
MVIC/Seller's Discretionary Earnings														
\$0-\$1M	2.51	2.52	2.59	2.71	2.48	2.03	1.90	1.74	2.10	2.00	1.95	1.97	2.12	1.94
\$1M-\$5M	2.77	3.17	3.13	3.28	2.83	2.96	2.52	2.66	2.74	2.73	2.71	2.98	2.80	2.90
>\$5M	4.27	4.26	3.23	4.02	5.18	3.38	3.80	3.10	4.40	4.07	4.15	4.09	3.57	3.25
MVIC/EBITDA														
\$0-\$1M	3.80	3.80	4.05	4.15	3.73	2.58	2.35	2.35	2.51	2.45	2.44	2.57	2.81	2.57
\$1M-\$5M	7.16	5.50	5.72	5.55	5.40	4.49	4.19	3.85	3.99	3.90	4.08	4.34	4.34	4.27
>\$5M	6.24	6.74	4.48	4.96	6.74	4.81	4.72	3.92	5.58	5.49	6.76	7.29	5.34	4.33

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. Pratt's Stats also includes acquisitions by public buyers, but those data are not included here.

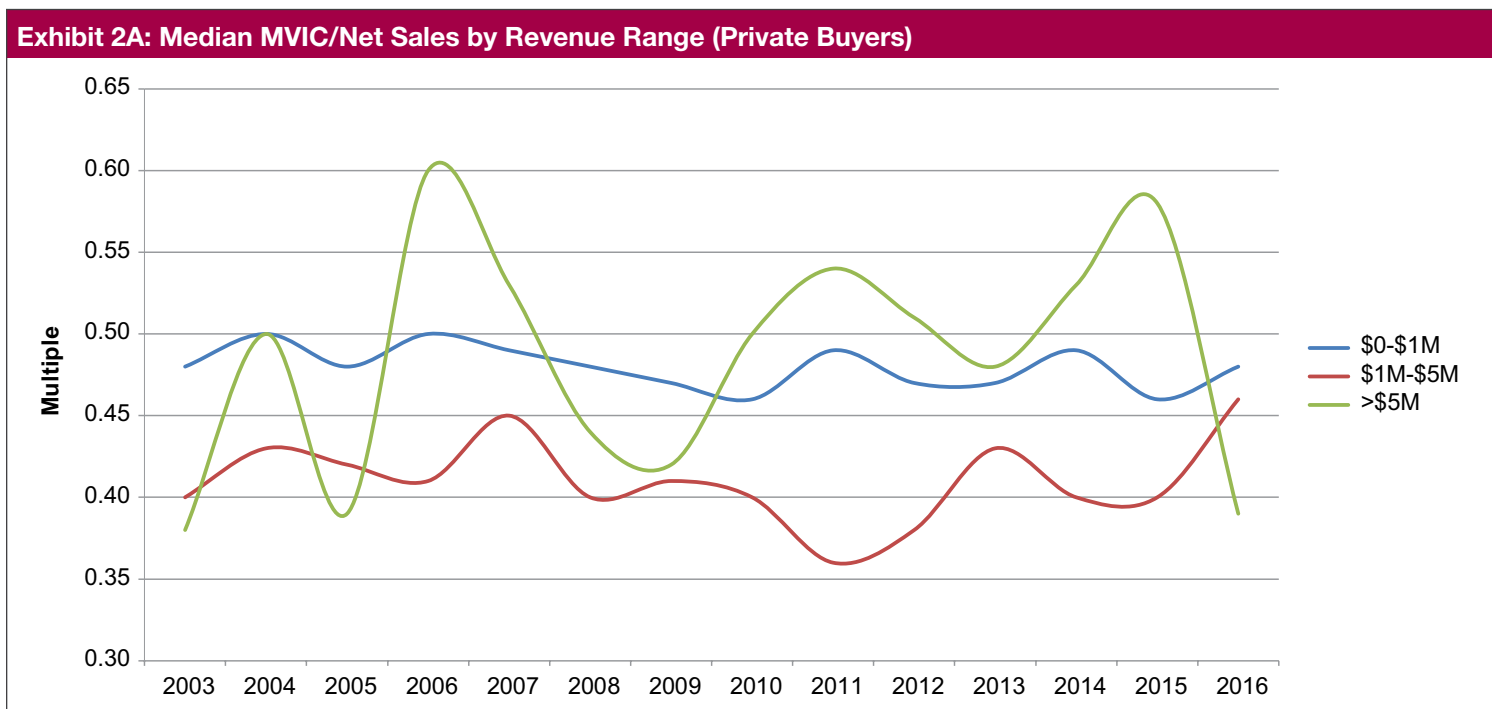


Exhibit 2B: Median MVIC/SDE by Revenue Range (Private Buyers)

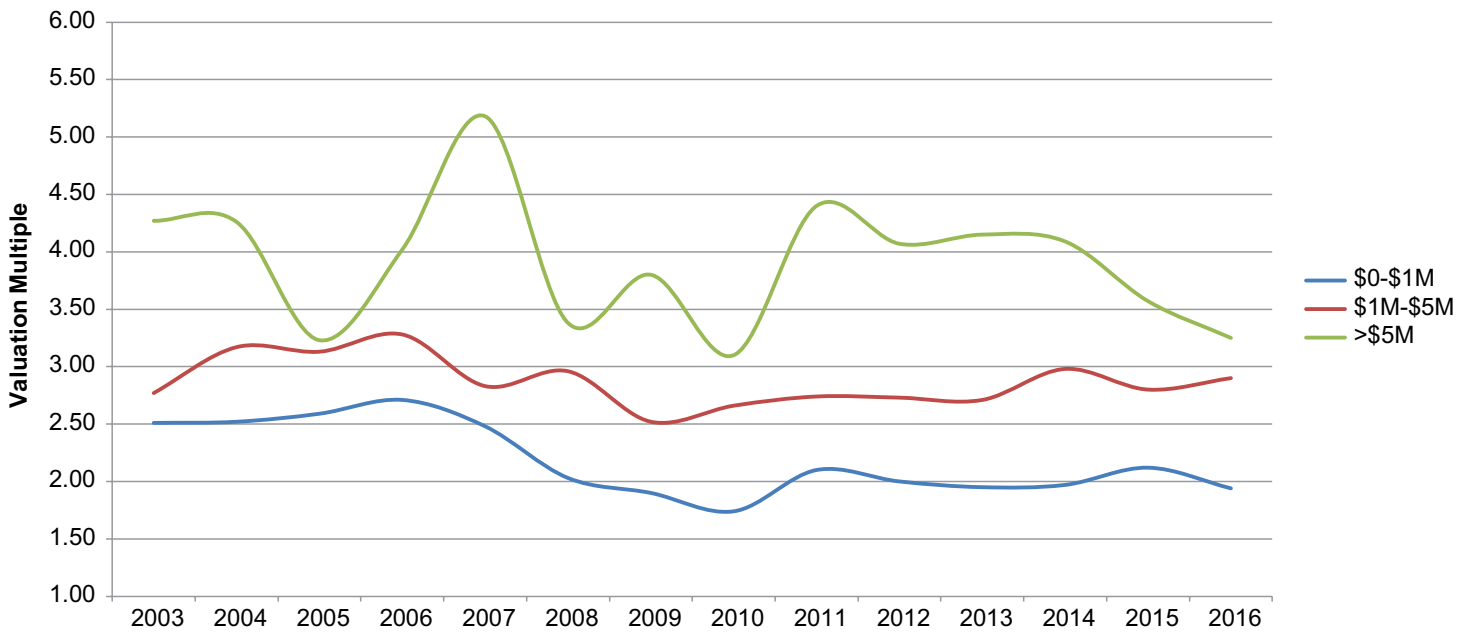


Exhibit 2C: Median MVIC/EBITDA by Revenue Range (Private Buyers)

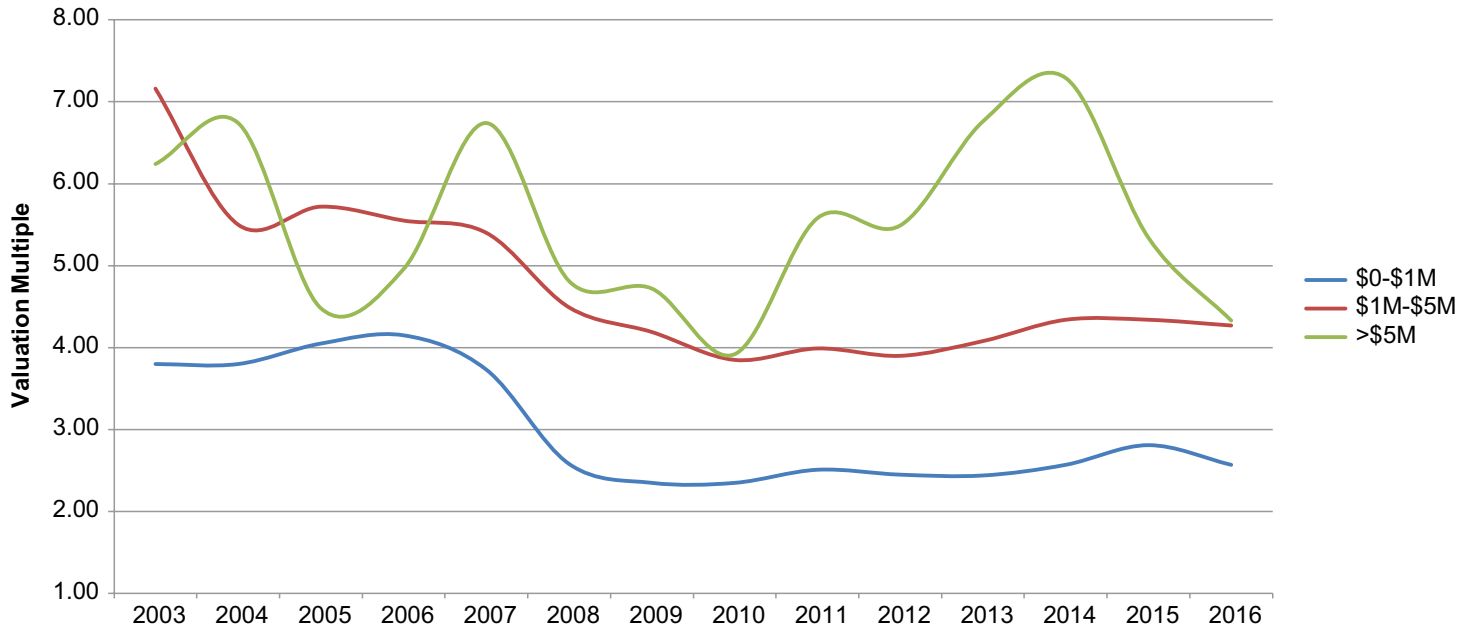


Exhibit 3: Median Profit Margins Organized by Net Sales Range (Private Buyers)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Profit Margin														
\$0-\$1M	68%	70%	69%	67%	70%	70%	70%	71%	70%	72%	72%	72%	70%	69%
\$1M-\$5M	39%	42%	40%	42%	50%	46%	54%	50%	45%	45%	53%	51%	53%	53%
>\$5M	25%	33%	28%	32%	31%	34%	37%	35%	28%	28%	32%	32%	31%	29%
Operating Profit Margin														
\$0-\$1M	11%	10%	11%	10%	12%	16%	17%	17%	14%	16%	16%	16%	14%	16%
\$1M-\$5M	4%	5%	5%	5%	7%	7%	7%	7%	7%	10%	9%	9%	8%	10%
>\$5M	3%	5%	4%	10%	6%	7%	8%	9%	7%	7%	7%	7%	6%	7%
Net Profit Margin														
\$0-\$1M	10%	9%	11%	10%	11%	16%	16%	16%	14%	16%	15%	14%	12%	15%
\$1M-\$5M	4%	4%	5%	4%	7%	7%	5%	7%	7%	9%	9%	7%	7%	9%
>\$5M	3%	4%	4%	9%	5%	5%	7%	8%	7%	7%	5%	5%	5%	7%

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. Pratt's Stats also includes acquisitions by public buyers, but those data are not included here.

Exhibit 3A: Gross Profit Margin by Revenue Range (Private Buyers)

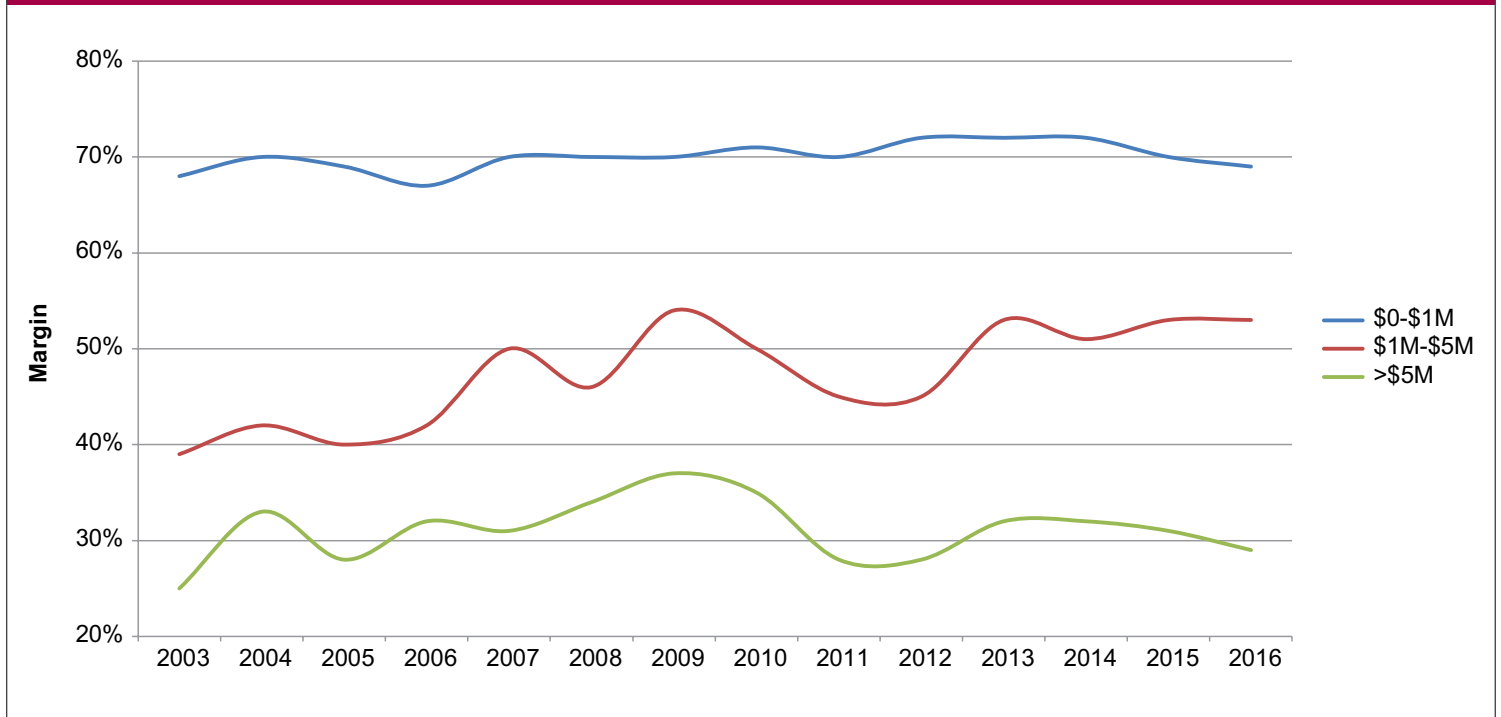


Exhibit 3B: Operating Profit Margin by Revenue Range (Private Buyers)

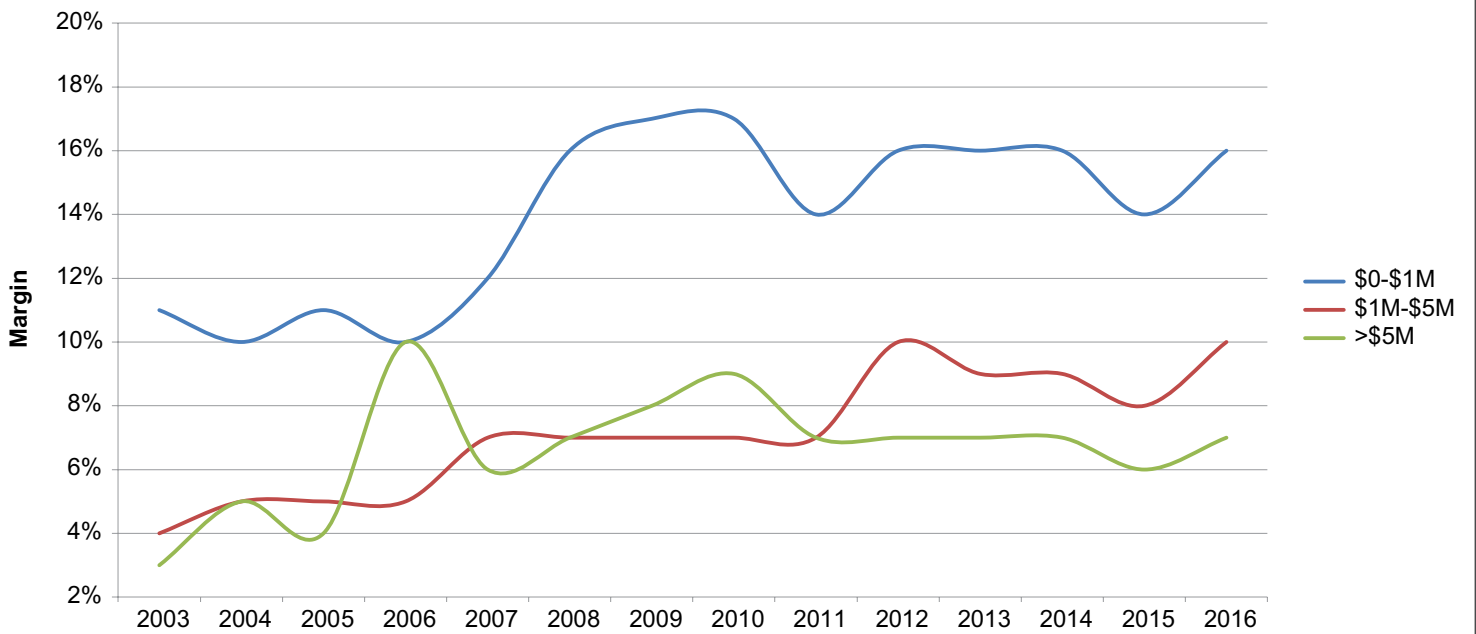
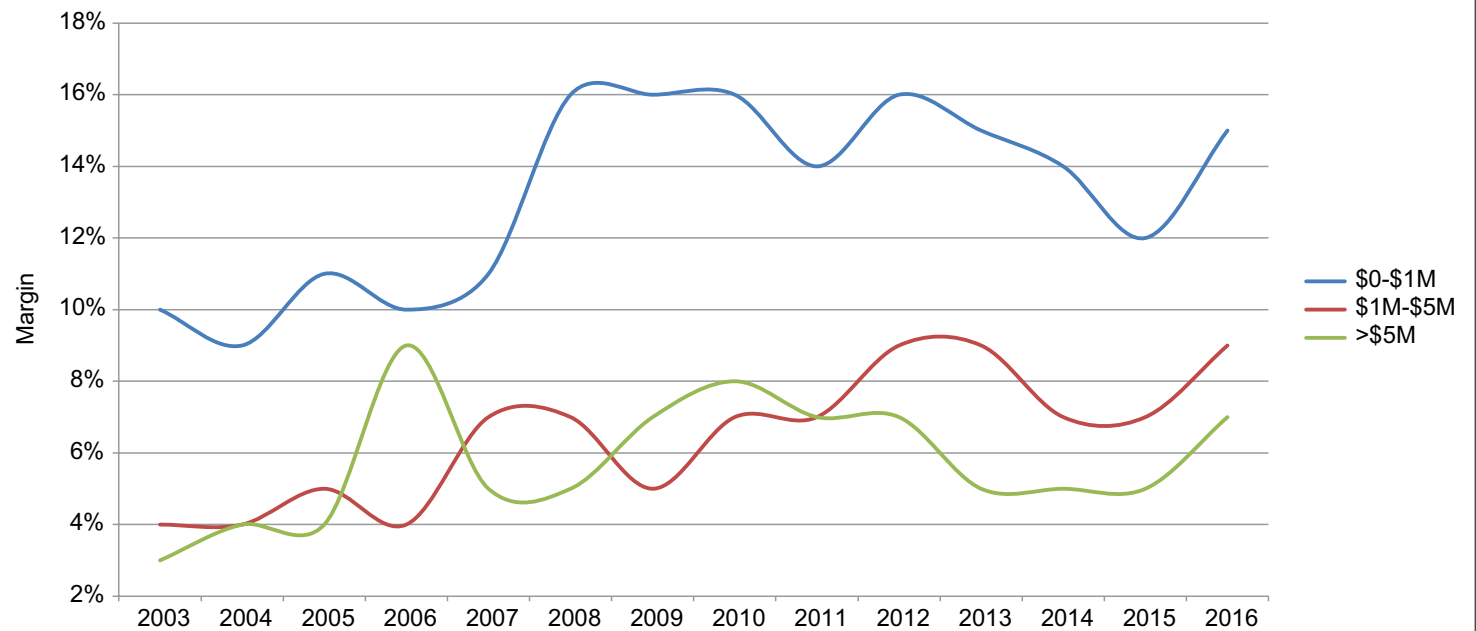


Exhibit 3C: Net Profit Margin by Revenue Range (Private Buyers)



INTERQUARTILE RANGE—BY SECTOR AND BY YEAR

The graphs display the interquartile range of the MVIC/Revenue and MVIC/EBITDA multiples by major sector and by year for all buyer types. In addition to showing the median MVIC/Revenue and MVIC/EBITDA value by sector and year, the interquartile range provides a measure of dispersion. Interquartile range is the difference between the 25th and 75th percentiles (also called the first and third quartiles), so the interquartile

range describes the middle 50% of observations. The top of the orange rectangle indicates the 75th percentile, the bottom of the blue rectangle indicates the 25th percentile, and the line where the two rectangles meet represents the median. If the interquartile range is large, it means that the middle 50% of observations are spaced wide apart, and, if the interquartile range is narrow, it means the middle 50% of observations are spaced close together.

Exhibit 4A: MVIC/Revenue Interquartile Range by Sector (All Buyers)

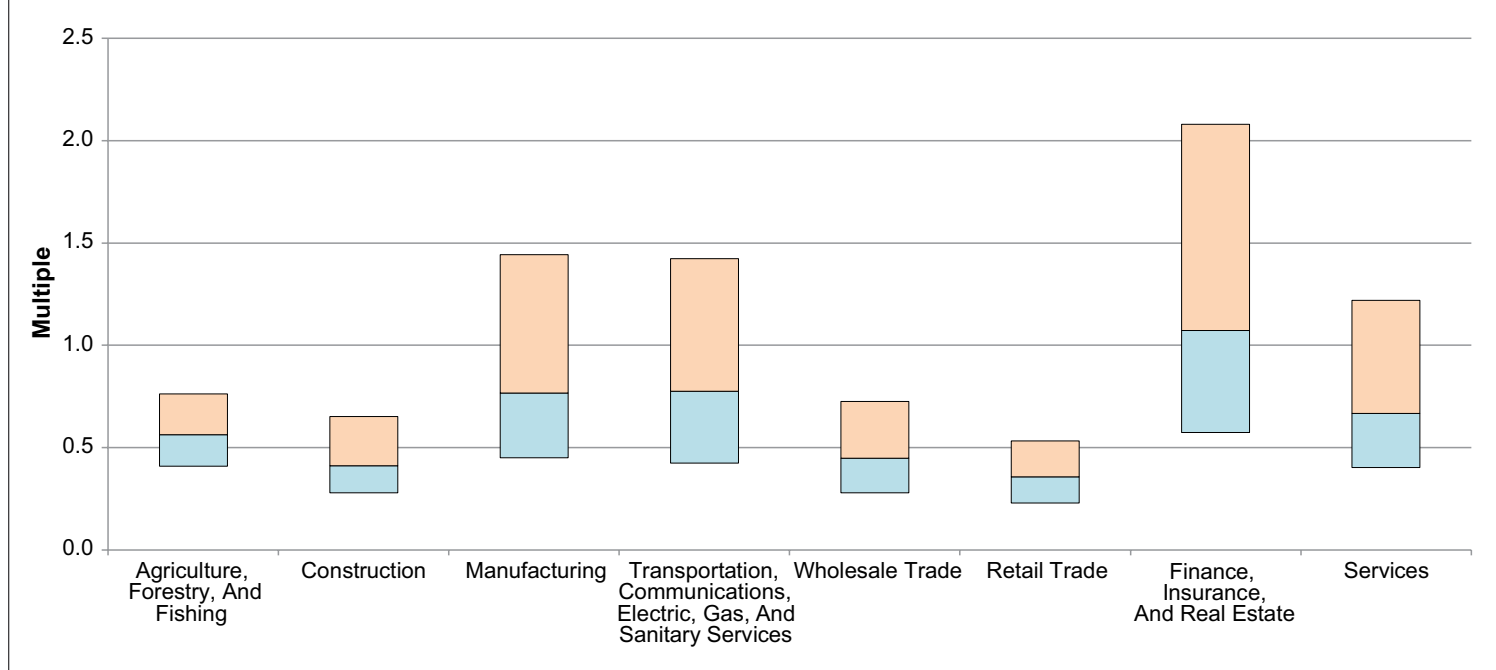


Exhibit 4B: MVIC/EBITDA Interquartile Range by Sector (All Buyers)

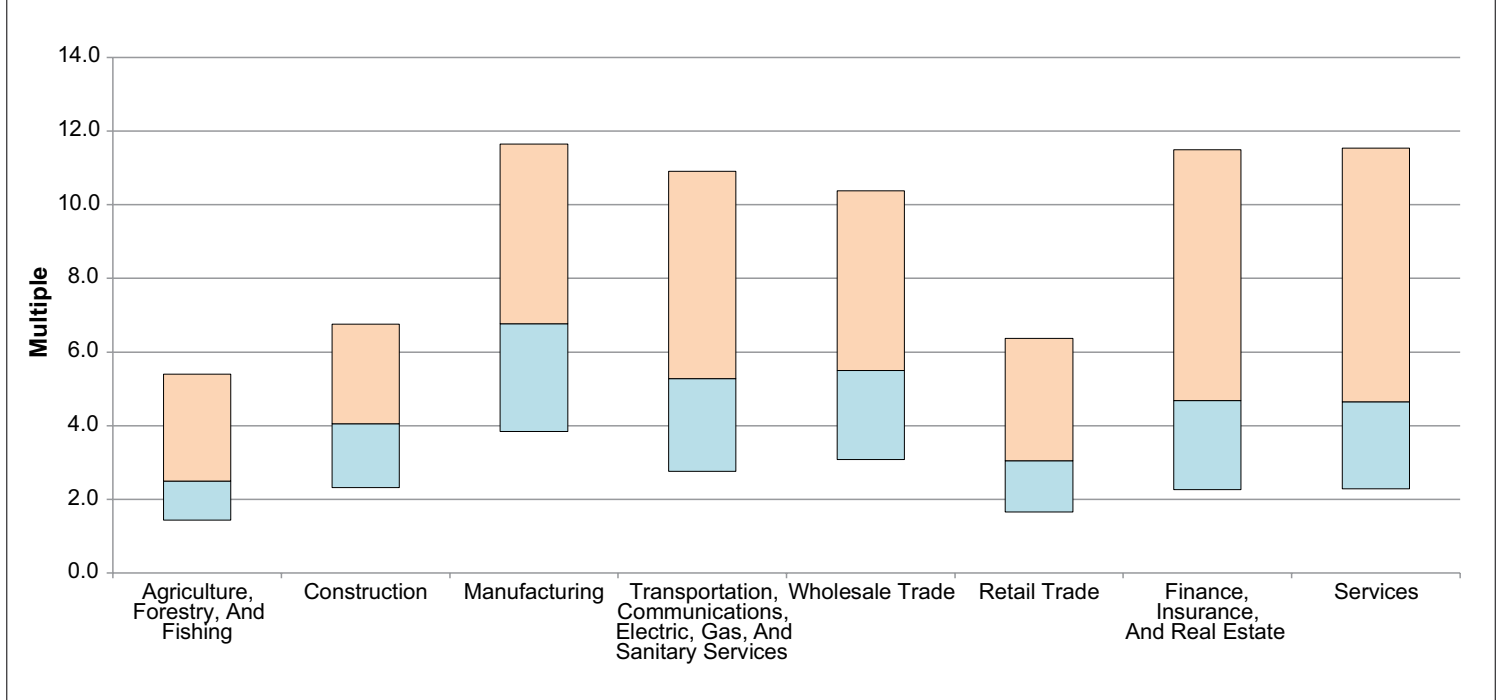


Exhibit 4C: MVIC/Revenue Interquartile Range by Year (All Buyers)

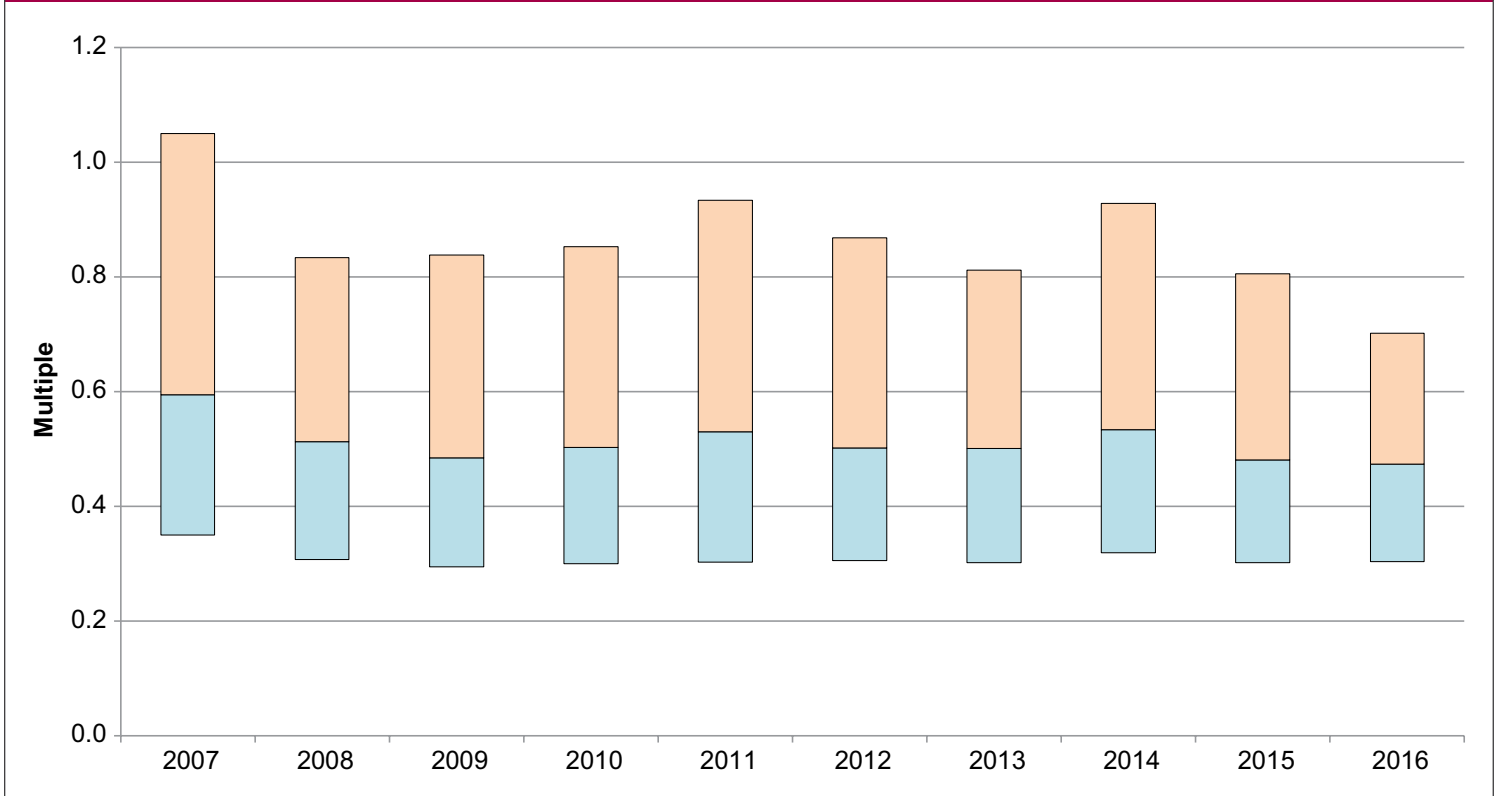
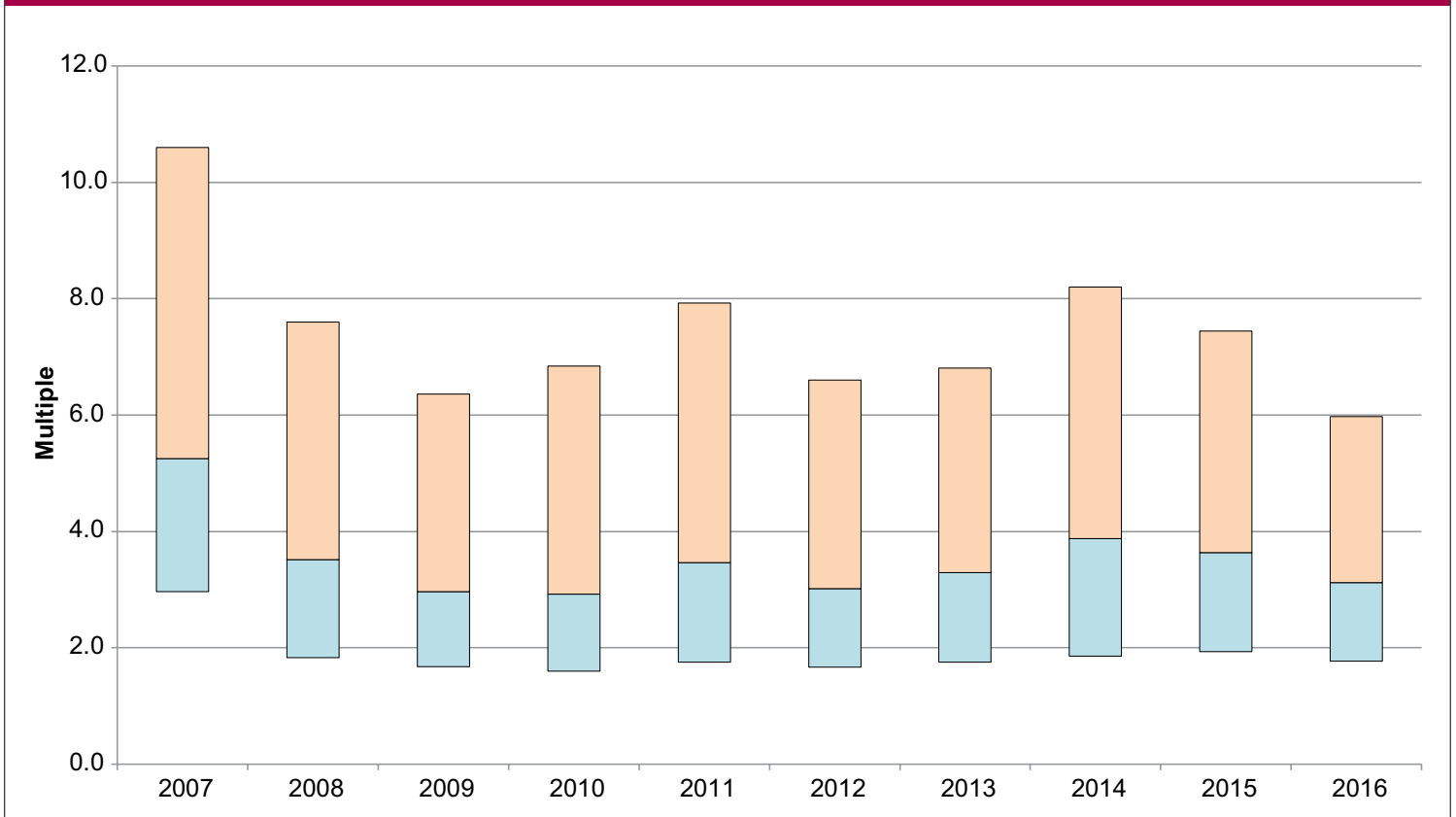


Exhibit 4D: MVIC/EBITDA Interquartile Range by Year (All Buyers)



MULTIPLES AND MARGINS—BY SECTOR AND BY YEAR

Exhibits 5 through 7 present median valuation multiples based on major industry groups, as identified by SIC code.

Not all of the major industries were included in the charts and graphs, as there was not enough transactional data for those industries to make the results meaningful.

Exhibit 5: Median MVIC/Net Sales by Sector (Private Buyers)															
SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	0.51	0.56	0.47	0.48	0.66	0.50	0.70	0.54	0.63	0.54	0.61	0.55	0.51	0.58
1521-1799	Construction	0.32	0.34	0.43	0.37	0.42	0.40	0.40	0.37	0.36	0.43	0.42	0.41	0.45	0.40
2011-3999	Manufacturing	0.58	0.66	0.61	0.58	0.65	0.53	0.61	0.58	0.53	0.54	0.57	0.53	0.54	0.56
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	0.44	0.51	0.55	0.68	0.65	0.69	0.42	0.58	0.62	0.63	0.67	0.60	0.71	0.74
5012-5199	Wholesale Trade	0.35	0.41	0.43	0.40	0.42	0.46	0.42	0.46	0.44	0.42	0.40	0.41	0.46	0.45
5211-5999	Retail Trade	0.34	0.38	0.39	0.42	0.39	0.36	0.33	0.33	0.32	0.31	0.33	0.33	0.33	0.35
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	0.81	0.65	0.80	0.76	0.82	0.92	0.87	1.07	0.68	0.75	0.86	0.69
7011-9999	Services	0.60	0.59	0.58	0.58	0.59	0.55	0.54	0.52	0.56	0.52	0.55	0.55	0.49	0.54
0139-9999	All Industries	0.46	0.48	0.47	0.49	0.49	0.46	0.45	0.45	0.47	0.45	0.46	0.47	0.44	0.47

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

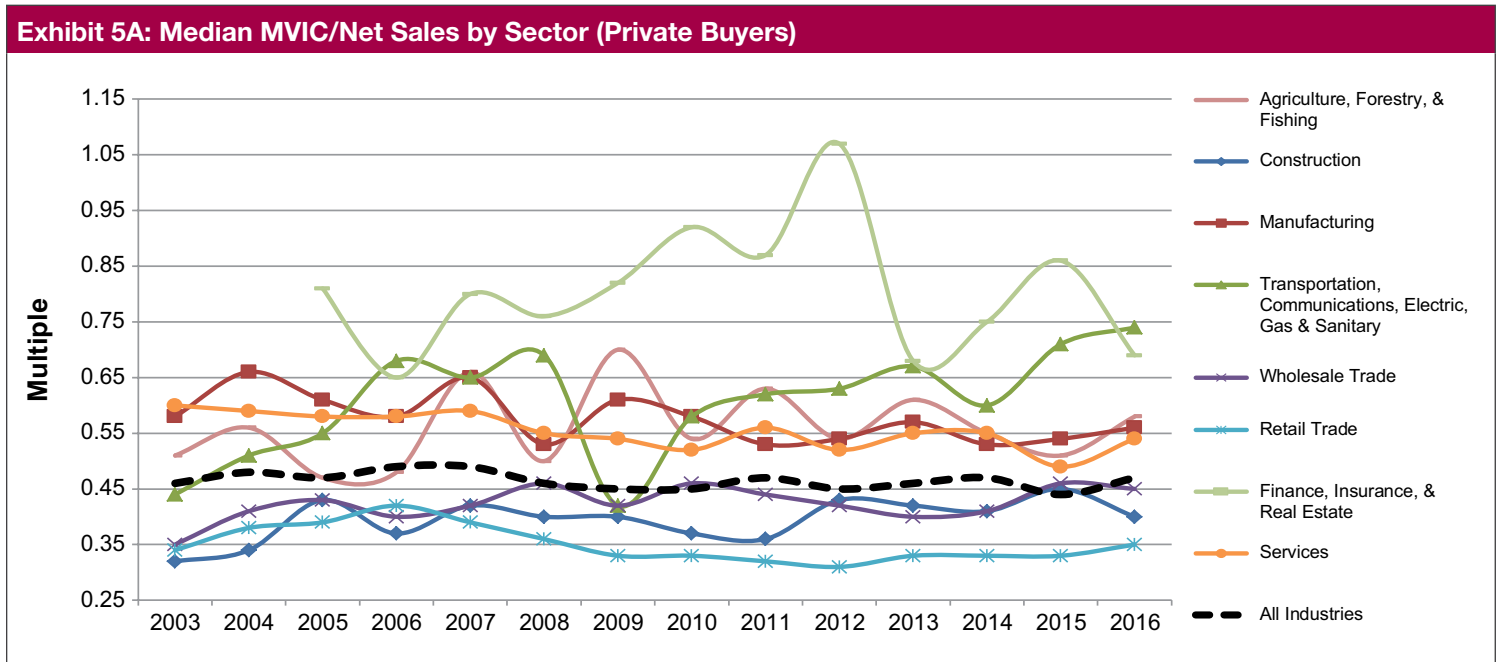


Exhibit 6: Median MVIC/Seller's Discretionary Earnings by Sector (Private Buyers)

SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	N/A	N/A	1.66	1.81	2.72	1.66	1.53	1.65	2.00	1.82	1.49	1.83	2.05	1.91
1521-1799	Construction	1.82	3.08	2.88	2.64	2.14	2.59	2.41	2.46	2.19	2.88	2.12	2.10	2.48	2.14
2011-3999	Manufacturing	3.55	3.60	3.28	3.44	3.46	2.80	2.52	2.74	3.25	2.98	3.07	2.78	2.69	2.95
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	2.54	2.96	4.53	3.95	2.30	2.08	1.82	2.17	2.08	2.30	2.81	2.72	2.67	3.11
5012-5199	Wholesale Trade	3.06	3.65	2.89	2.76	2.87	2.89	2.99	3.15	2.84	2.67	3.31	3.13	3.09	3.50
5211-5999	Retail Trade	2.80	2.80	2.63	3.18	2.69	1.93	1.88	1.69	2.02	1.86	1.96	2.01	2.15	2.14
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	N/A	N/A	3.73	2.35	2.16	2.07	2.00	2.22	2.06	2.43	2.59	2.55
7011-9999	Services	2.19	1.97	2.48	2.73	2.52	2.27	1.88	1.81	2.28	2.04	2.15	2.10	2.21	2.00
0139-9999	All Industries	2.61	2.80	2.78	2.86	2.67	2.24	2.08	1.91	2.26	2.13	2.15	2.18	2.31	2.29

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

Exhibit 6A: Median MVIC/Seller's Discretionary Earnings by Sector (Private Buyers)

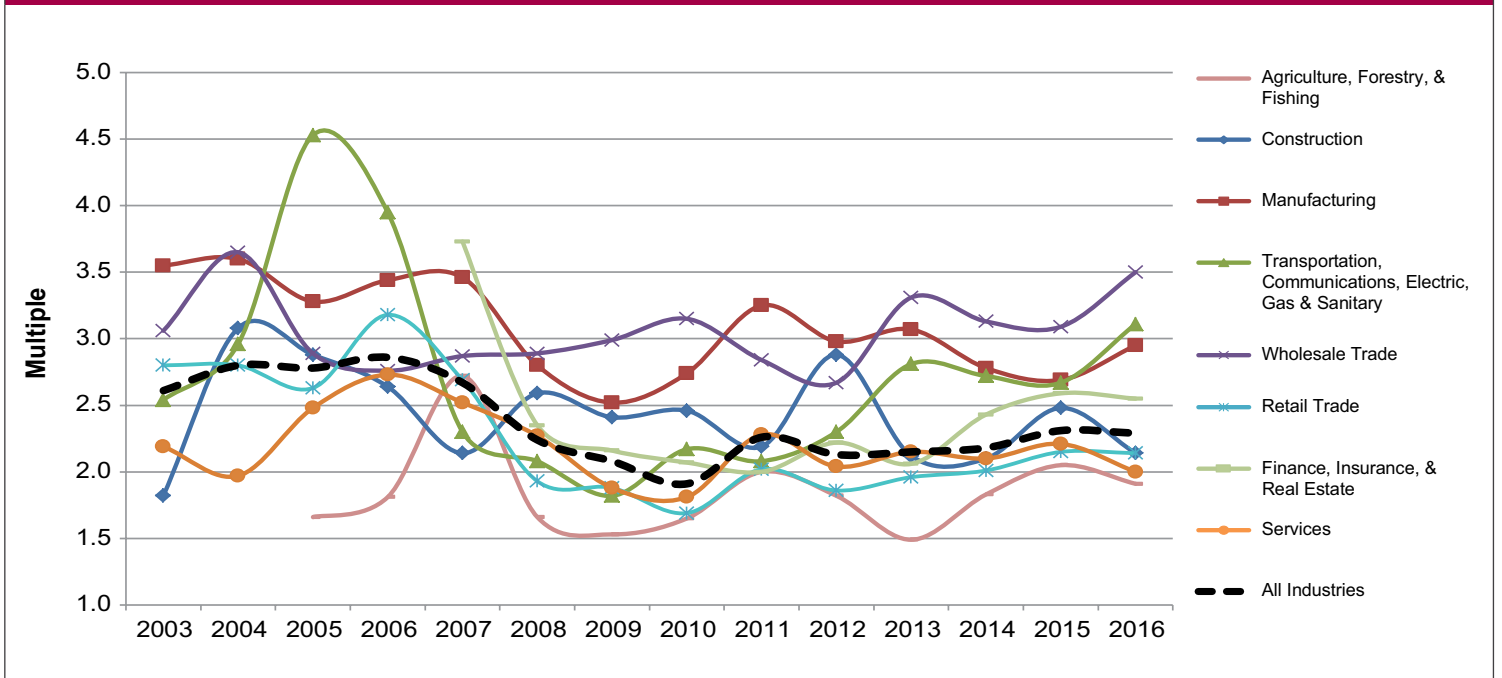
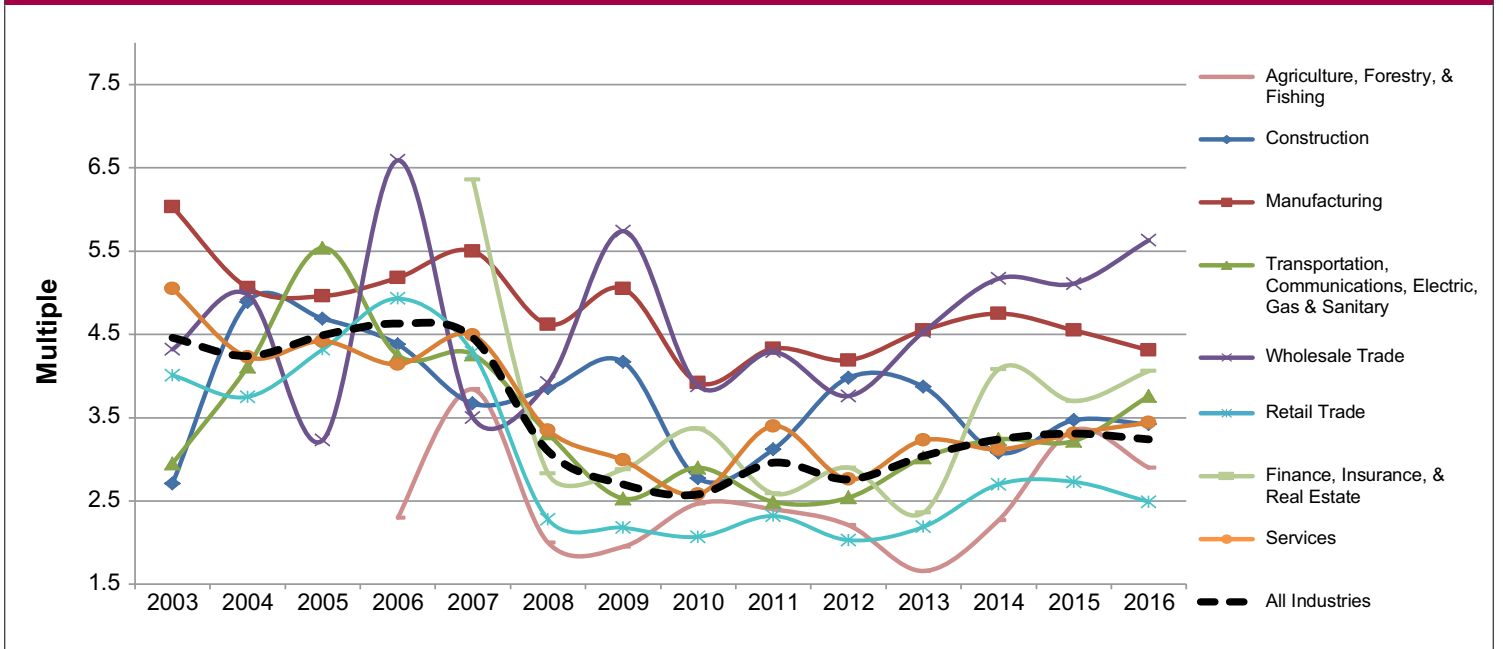


Exhibit 7: Median MVIC/EBITDA by Sector (Private Buyers)

SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	N/A	N/A	N/A	2.30	3.84	2.00	1.95	2.47	2.40	2.21	1.66	2.27	3.35	2.90
1521-1799	Construction	2.71	4.89	4.69	4.38	3.67	3.85	4.17	2.77	3.12	3.98	3.87	3.08	3.47	3.42
2011-3999	Manufacturing	6.03	5.06	4.96	5.18	5.50	4.62	5.05	3.92	4.33	4.19	4.55	4.75	4.55	4.31
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	2.95	4.11	5.54	4.25	4.26	3.31	2.53	2.90	2.49	2.54	3.02	3.24	3.22	3.76
5012-5199	Wholesale Trade	4.32	4.98	3.23	6.59	3.50	3.92	5.74	3.88	4.29	3.76	4.53	5.17	5.11	5.63
5211-5999	Retail Trade	4.01	3.75	4.32	4.93	4.28	2.28	2.18	2.07	2.32	2.03	2.19	2.70	2.73	2.49
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	N/A	N/A	6.36	2.83	2.88	3.37	2.59	2.90	2.36	4.08	3.70	4.06
7011-9999	Services	5.05	4.23	4.42	4.14	4.49	3.35	2.99	2.58	3.40	2.76	3.23	3.12	3.31	3.44
0139-9999	All Industries	4.46	4.24	4.49	4.63	4.46	3.10	2.70	2.58	2.96	2.76	3.04	3.24	3.31	3.24

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

Exhibit 7A: Median MVIC/EBITDA by Sector (Private Buyers)



Exhibits 8 through 10 present median profit margins based on major industry groups, as identified by SIC code.

Not all of the major industries were included in the charts, as there was not enough transactional data for those industries to make the results meaningful.

Exhibit 8: Median Gross Profit Margins by Sector (Private Buyers)

SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	89%	93%	99%	76%	79%	85%	96%	87%	90%	80%	91%	85%	84%	78%
1521-1799	Construction	54%	46%	48%	45%	54%	41%	48%	43%	44%	43%	47%	54%	54%	52%
2011-3999	Manufacturing	49%	47%	52%	53%	51%	56%	55%	59%	52%	53%	48%	52%	53%	54%
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	82%	67%	77%	100%	92%	80%	83%	64%	89%	94%	83%	71%	88%	73%
5012-5199	Wholesale Trade	36%	40%	41%	41%	38%	40%	38%	45%	42%	39%	42%	40%	40%	36%
5211-5999	Retail Trade	58%	56%	58%	57%	62%	63%	61%	63%	63%	62%	63%	62%	62%	61%
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	100%	100%	100%	100%	98%	100%	100%	100%	99%	100%	100%	86%
7011-9999	Services	95%	97%	89%	83%	90%	89%	90%	90%	90%	90%	90%	90%	89%	87%
0139-9999	All Industries	63%	64%	63%	61%	65%	66%	67%	67%	67%	68%	69%	66%	66%	65%

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

Exhibit 8A: Median Gross Profit Margins by Sector (Private Buyers)

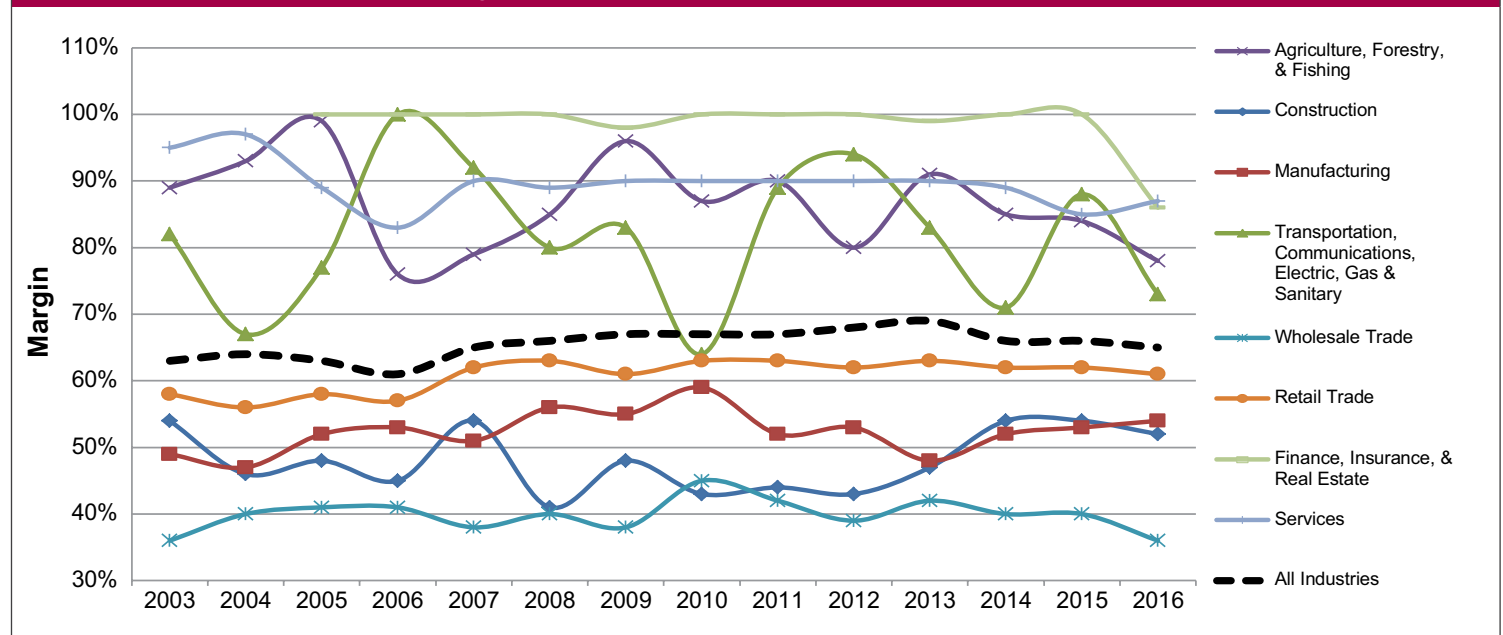


Exhibit 9: Median Operating Profit Margins by Sector (Private Buyers)

SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	17%	21%	23%	10%	15%	16%	26%	18%	22%	18%	31%	25%	14%	18%
1521-1799	Construction	11%	4%	10%	9%	12%	12%	9%	8%	9%	10%	8%	11%	12%	13%
2011-3999	Manufacturing	8%	10%	9%	10%	9%	10%	13%	13%	9%	11%	10%	9%	8%	8%
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	8%	15%	9%	11%	20%	15%	15%	11%	13%	21%	16%	15%	17%	13%
5012-5199	Wholesale Trade	6%	7%	11%	6%	7%	10%	7%	10%	10%	8%	7%	7%	6%	11%
5211-5999	Retail Trade	7%	8%	8%	6%	8%	13%	12%	13%	10%	13%	13%	11%	10%	13%
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	32%	13%	12%	24%	29%	23%	26%	20%	26%	19%	16%	11%
7011-9999	Services	9%	9%	11%	12%	11%	15%	16%	17%	14%	17%	13%	15%	14%	16%
0139-9999	All Industries	8%	8%	10%	9%	10%	13%	14%	14%	12%	13%	14%	12%	11%	14%

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

Exhibit 9A: Median Operating Profit Margins by Sector (Private Buyers)

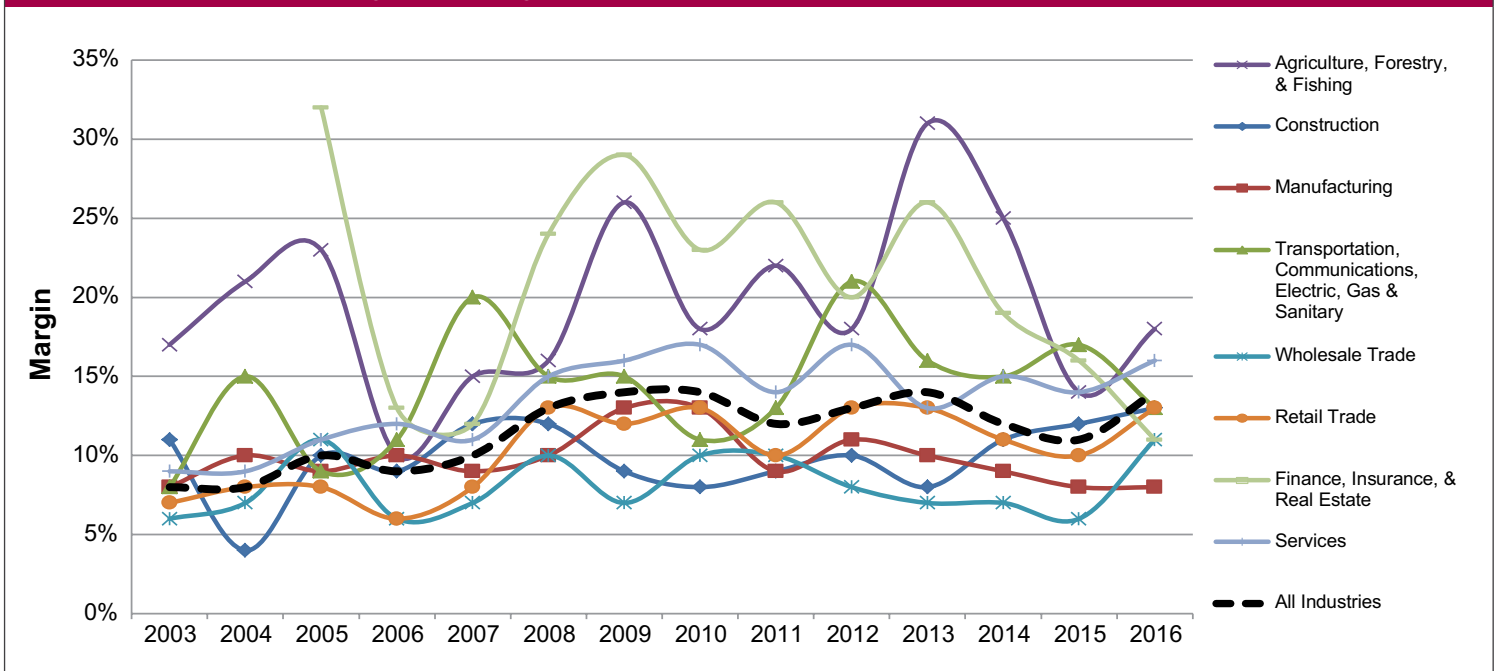
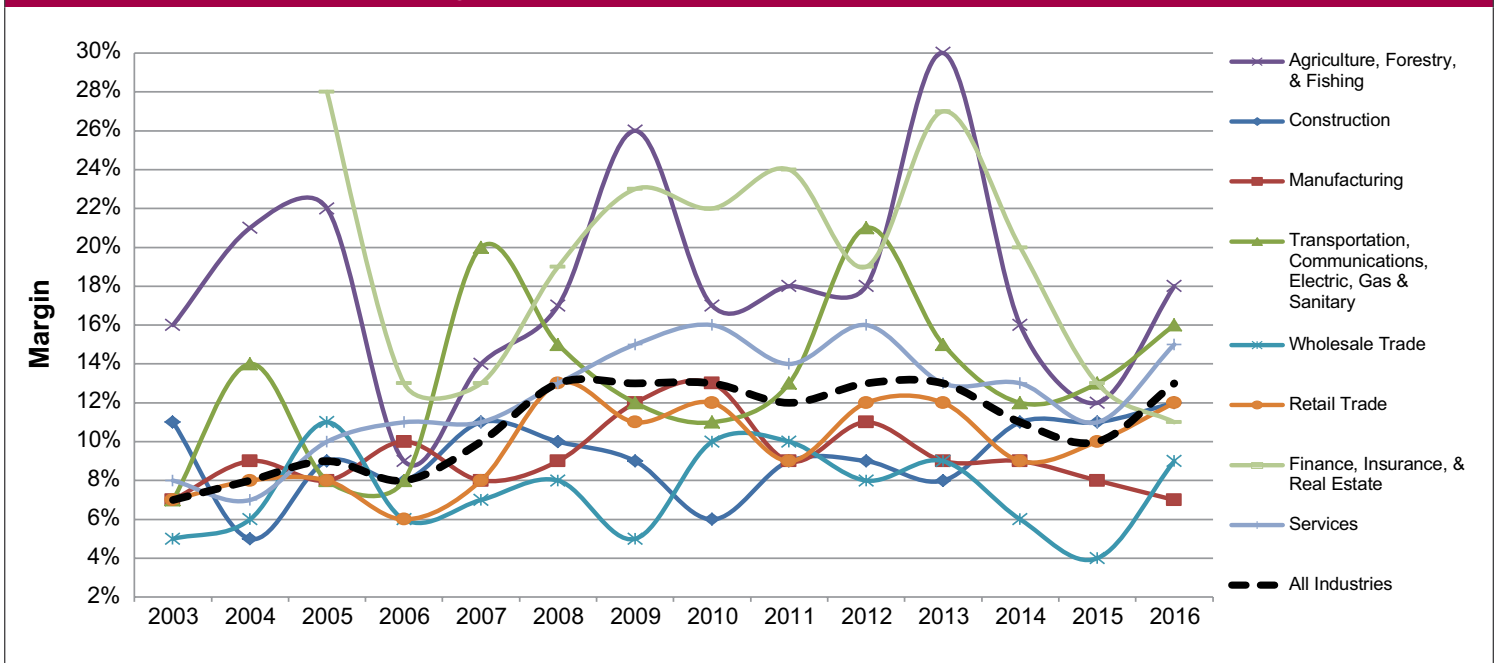


Exhibit 10: Median Net Profit Margins by Sector (Private Buyers)

SIC	Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0111-0971	Agriculture, Forestry, & Fishing	16%	21%	22%	9%	14%	17%	26%	17%	18%	18%	30%	16%	12%	18%
1521-1799	Construction	11%	5%	9%	8%	11%	10%	9%	6%	9%	9%	8%	11%	11%	12%
2011-3999	Manufacturing	7%	9%	8%	10%	8%	9%	12%	13%	9%	11%	9%	9%	8%	7%
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	7%	14%	8%	8%	20%	15%	12%	11%	13%	21%	15%	12%	13%	16%
5012-5199	Wholesale Trade	5%	6%	11%	6%	7%	8%	5%	10%	10%	8%	9%	6%	4%	9%
5211-5999	Retail Trade	7%	8%	8%	6%	8%	13%	11%	12%	9%	12%	12%	9%	10%	12%
6011-6799	Finance, Insurance, & Real Estate	N/A	N/A	28%	13%	13%	19%	23%	22%	24%	19%	27%	20%	13%	11%
7011-9999	Services	8%	7%	10%	11%	11%	13%	15%	16%	14%	16%	13%	13%	11%	15%
0139-9999	All Industries	7%	8%	9%	8%	10%	13%	13%	13%	12%	13%	13%	11%	10%	13%

Note: Each data point in this chart was based on a minimum of 10 transactions by private buyers of private companies. *Pratt's Stats* also includes acquisitions by public buyers, but those data are not included here.

Exhibit 10A: Median Net Profit Margins by Sector (Private Buyers)



MULTIPLES AND MARGINS—PRIVATE VS. PUBLIC BUYERS

Exhibits 11 through 20 compare the median valuation multiples private buyers paid (those transactions brokered by business intermediaries) to what public company buyers paid based on major industry groups, as identified by SIC code.

In general, public buyers paid higher multiples for private targets than private buyers paid. This may partially reflect synergies between the public buyer and the private target. Also, the typical acquisition public buyers made was larger than those made by private buyers, so the possibility exists that larger companies may sell for higher multiples than smaller companies.

Exhibit 11: Median Valuation Multiples and Profit Margins Agriculture, Forestry, & Fishing: SIC 0111-0971 – Public vs. Private Buyers									
	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.56	2.61	2.44	87%	19%	18%	692	\$265,576	\$150,000
Public Buyers	0.93	12.66	8.89	22%	6%	4%	29	\$42,883,120	\$35,000,000

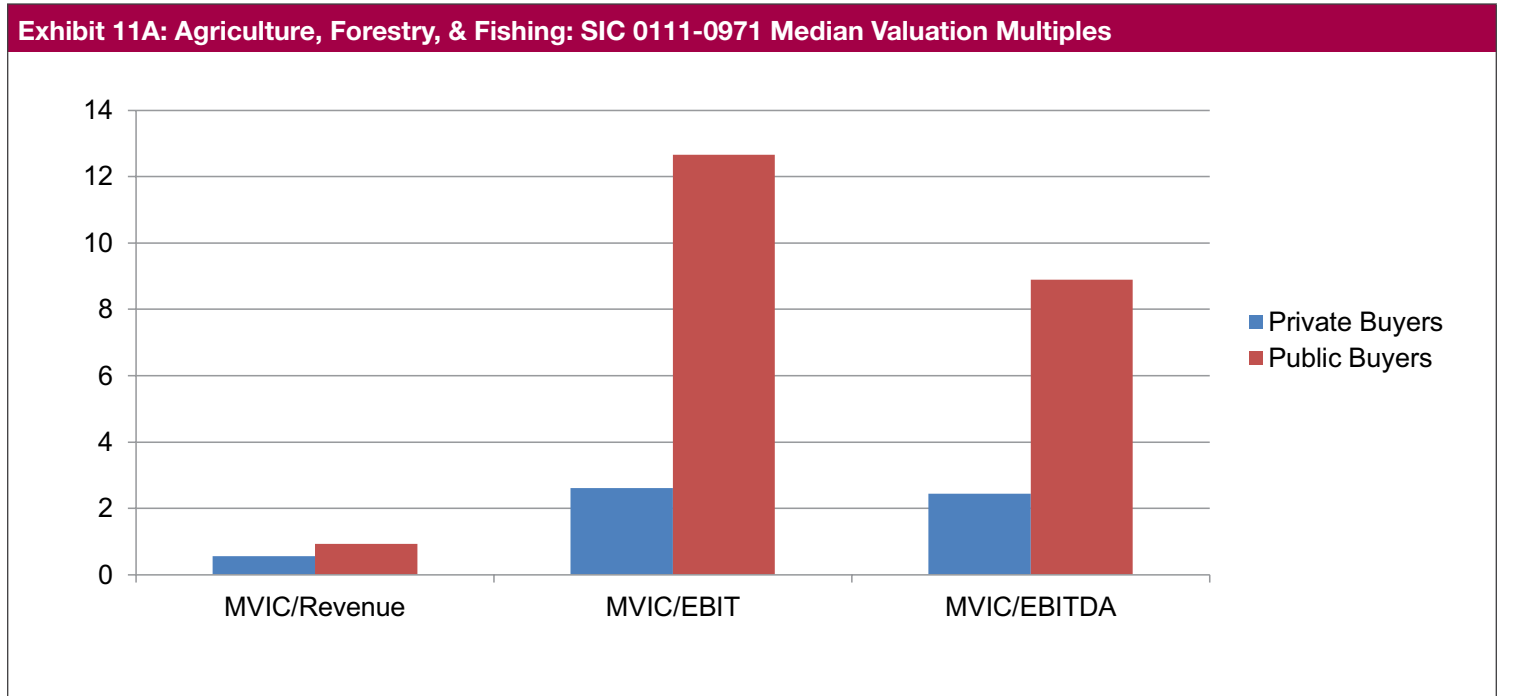


Exhibit 12: Median Valuation Multiples and Profit Margins Mining: SIC 1011-1499 All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.97	7.25	5.64	62%	15%	11%	27	\$6,438,000	\$5,400,000
Public Buyers	2.07	12.18	8.70	52%	10%	7%	174	\$15,751,530	\$29,318,780

Exhibit 12A: Mining SIC 1011-1499 Median Valuation Multiples

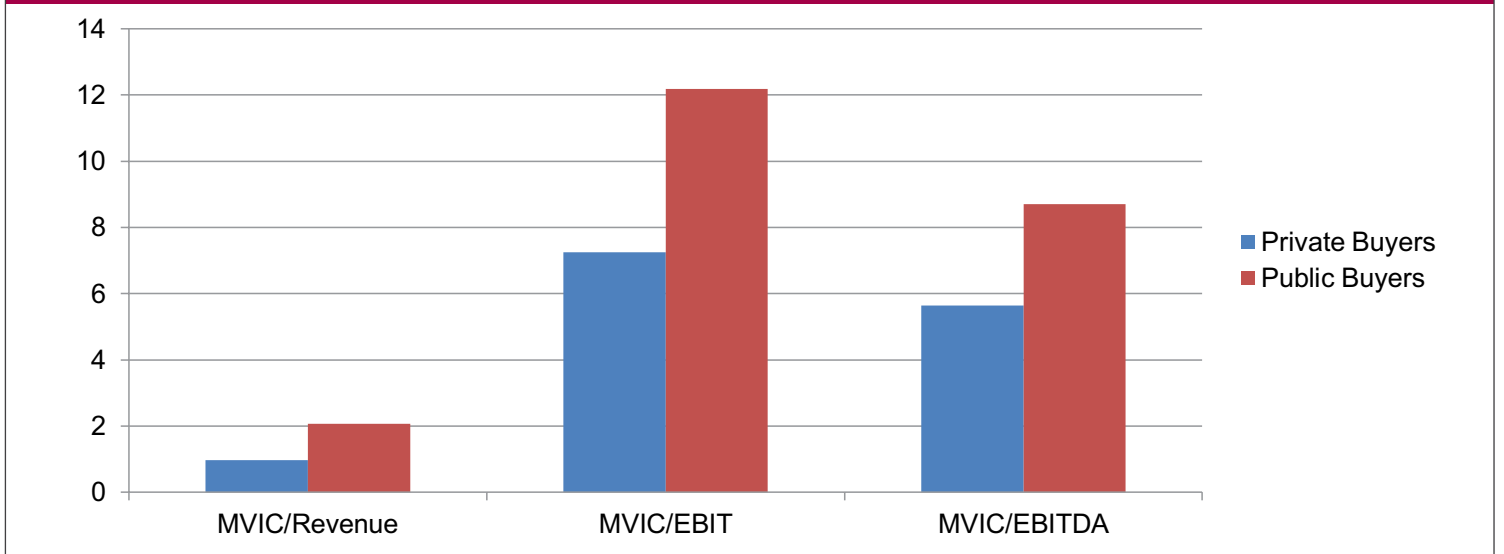


Exhibit 13: Median Valuation Multiples and Profit Margins Construction: SIC 1521-1799, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.39	3.89	3.83	46%	10%	9%	812	\$976,334	\$381,909
Public Buyers	0.56	6.84	6.18	22%	7%	5%	137	\$31,417,480	\$17,814,180

Exhibit 13A: Construction SIC 1521-1799 Median Valuation Multiples

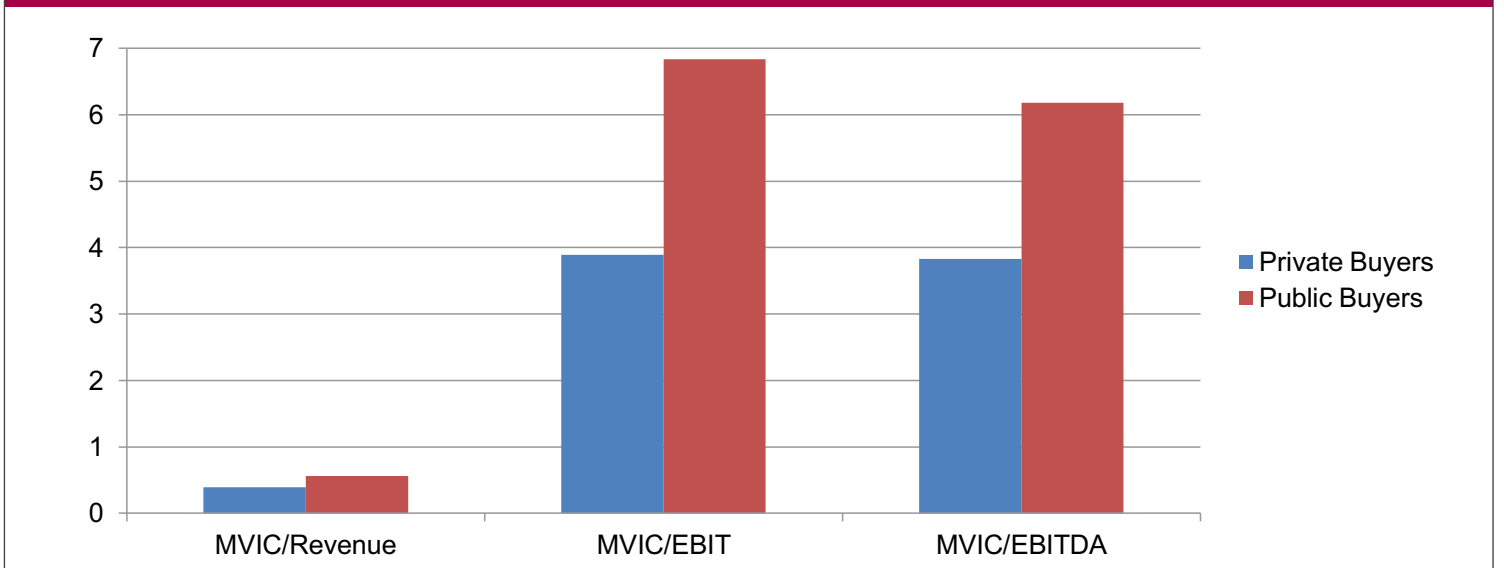


Exhibit 14: Median Valuation Multiples and Profit Margins Manufacturing: SIC 2011-3999, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.58	5.19	4.85	51%	10%	9%	2,004	\$866,116	\$460,000
Public Buyers	1.19	11.41	9.18	34%	5%	3%	2,207	\$20,331,000	\$26,422,000

Exhibit 14A: Manufacturing SIC 2011-3999 Median Valuation Multiples

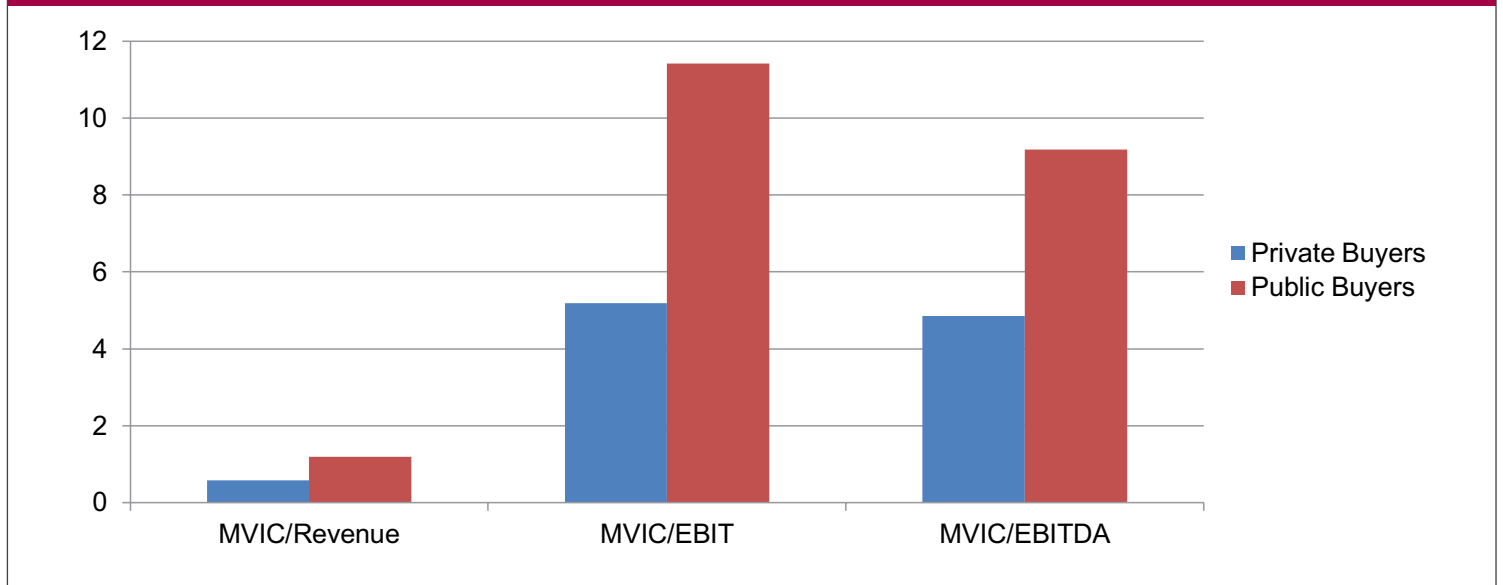


Exhibit 15: Median Valuation Multiples and Profit Margins Transportation, Communications, Electric, Gas & Sanitary: SIC 4011-4971, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.61	3.46	3.26	81%	13%	13%	700	\$597,869	\$325,000
Public Buyers	1.29	12.99	9.28	41%	4%	2%	601	\$15,167,900	\$18,000,000

Exhibit 15A: Transportation, Communications, Electric, Gas & Sanitary SIC 4011-4971 Median Valuation Multiples

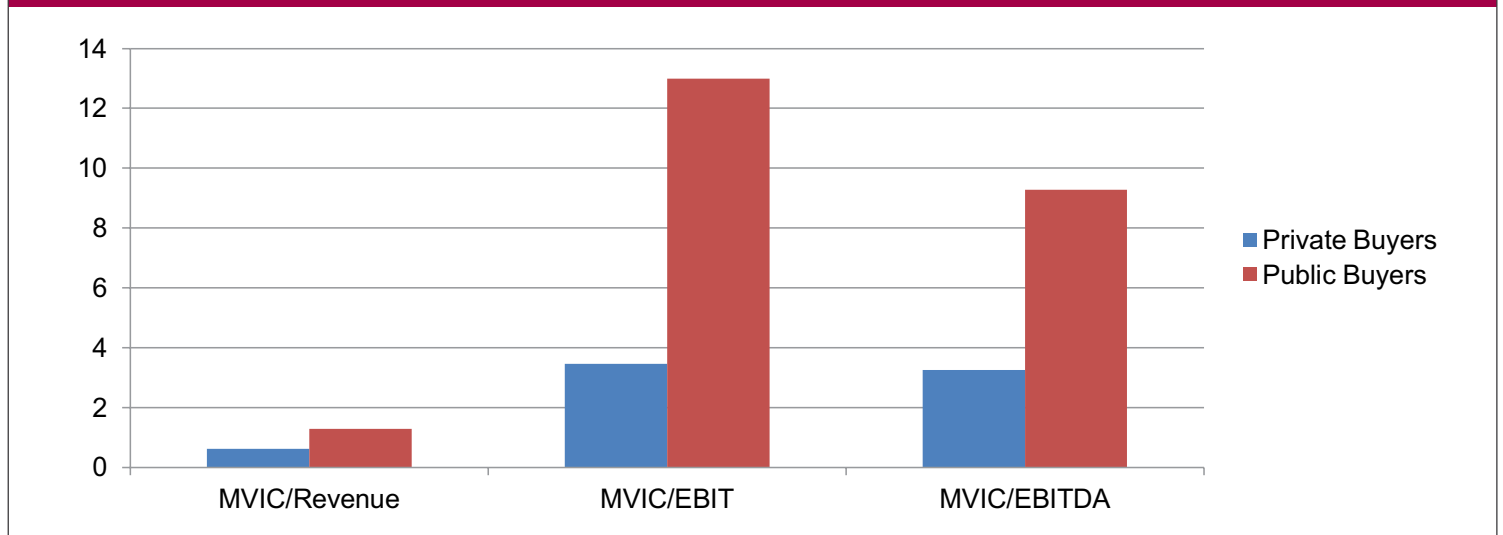


Exhibit 16: Median Valuation Multiples and Profit Margins Wholesale Trade: SIC 5012-5199, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.42	4.67	4.67	39%	7%	7%	1,152	\$905,466	\$366,000
Public Buyers	0.63	10.77	8.56	27%	4%	2%	368	\$26,910,710	\$14,750,000

Exhibit 16A: Wholesale Trade SIC 5012-5199 Median Valuation Multiples

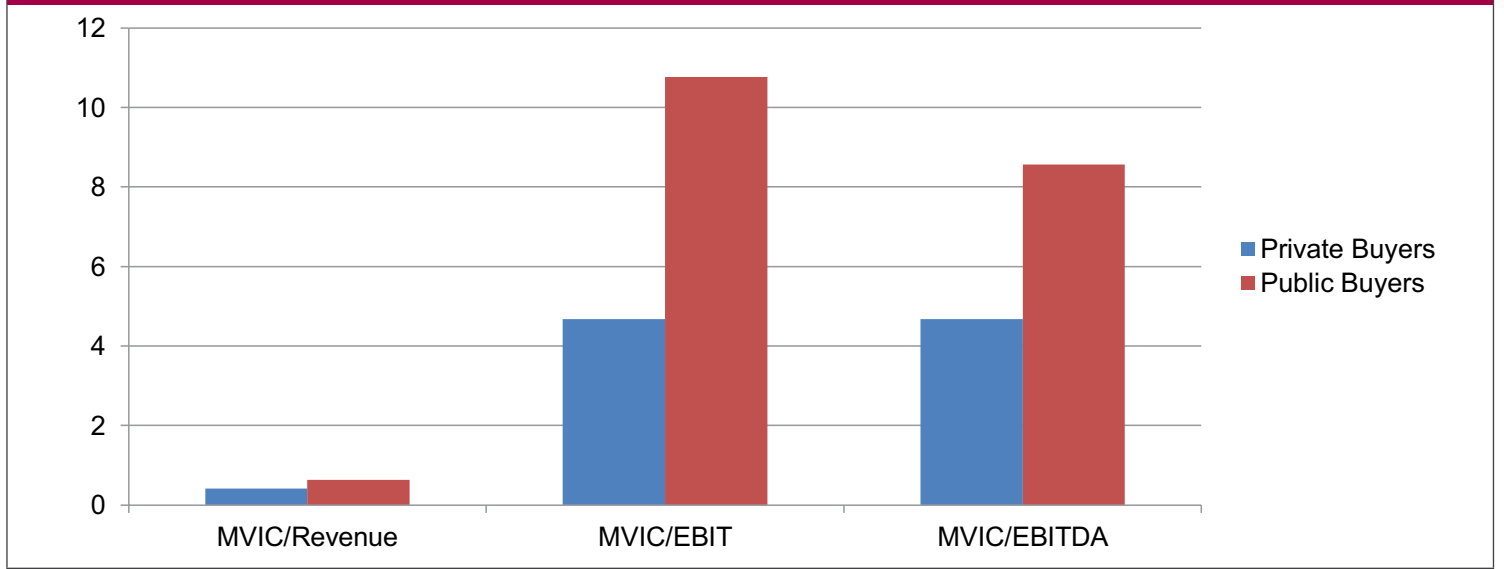
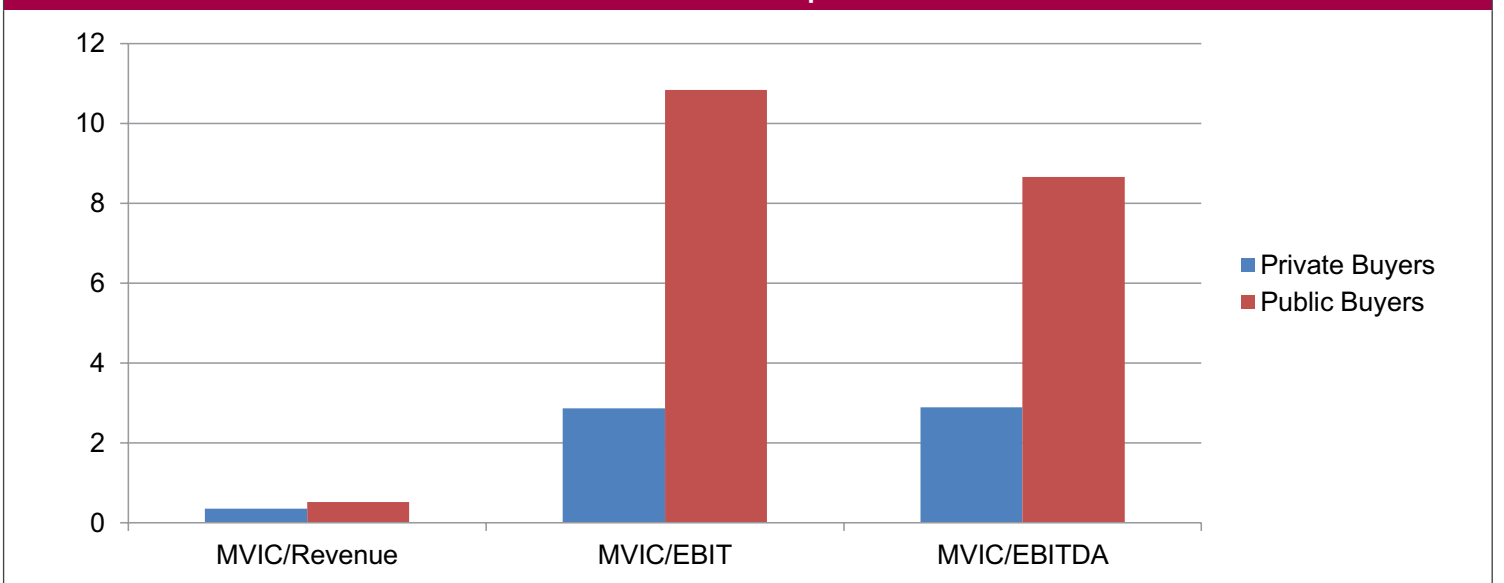


Exhibit 17: Median Valuation Multiples and Profit Margins Retail Trade: SIC 5211-5999, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.35	2.86	2.89	60%	10%	9%	6,492	\$447,850	\$150,000
Public Buyers	0.52	10.83	8.66	34%	2%	2%	379	\$30,357,920	\$16,651,500

Exhibit 17A: Retail Trade SIC 5211-5999 Median Valuation Multiples



**Exhibit 18: Median Valuation Multiples and Profit Margins
Finance, Insurance, & Real Estate: SIC 6011-6799, All Years—Public vs. Private Buyers**

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.80	3.36	3.17	100%	21%	19%	518	\$293,424	\$207,500
Public Buyers	1.82	11.68	9.94	100%	11%	7%	492	\$15,546,380	\$27,502,000

Exhibit 18A: Finance, Insurance, & Real Estate SIC 6011-6799 Median Valuation Multiples

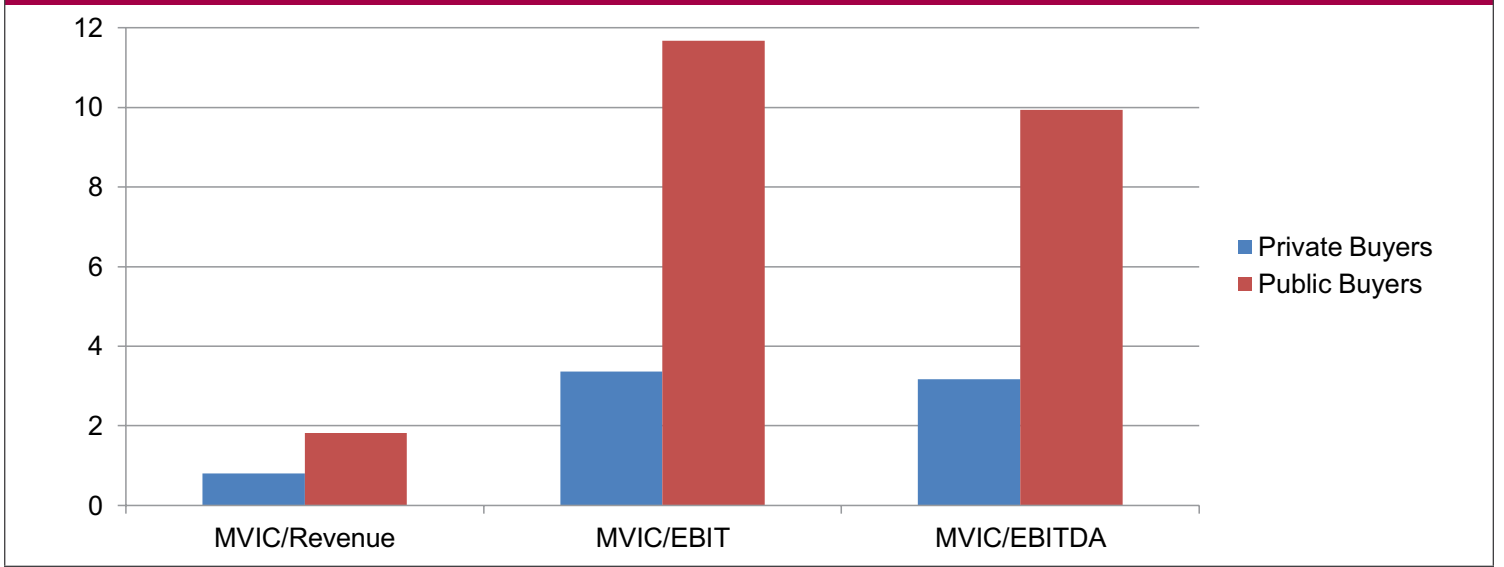


Exhibit 19: Median Valuation Multiples and Profit Margins Services: SIC 7011-9999, All Years—Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.56	3.58	3.64	90%	12%	12%	6,291	\$385,679	\$196,000
Public Buyers	1.64	13.80	11.22	54%	2%	0%	2,759	\$6,826,667	\$13,085,000

Exhibit 19A: Services SIC 7011-9999 Median Valuation Multiples

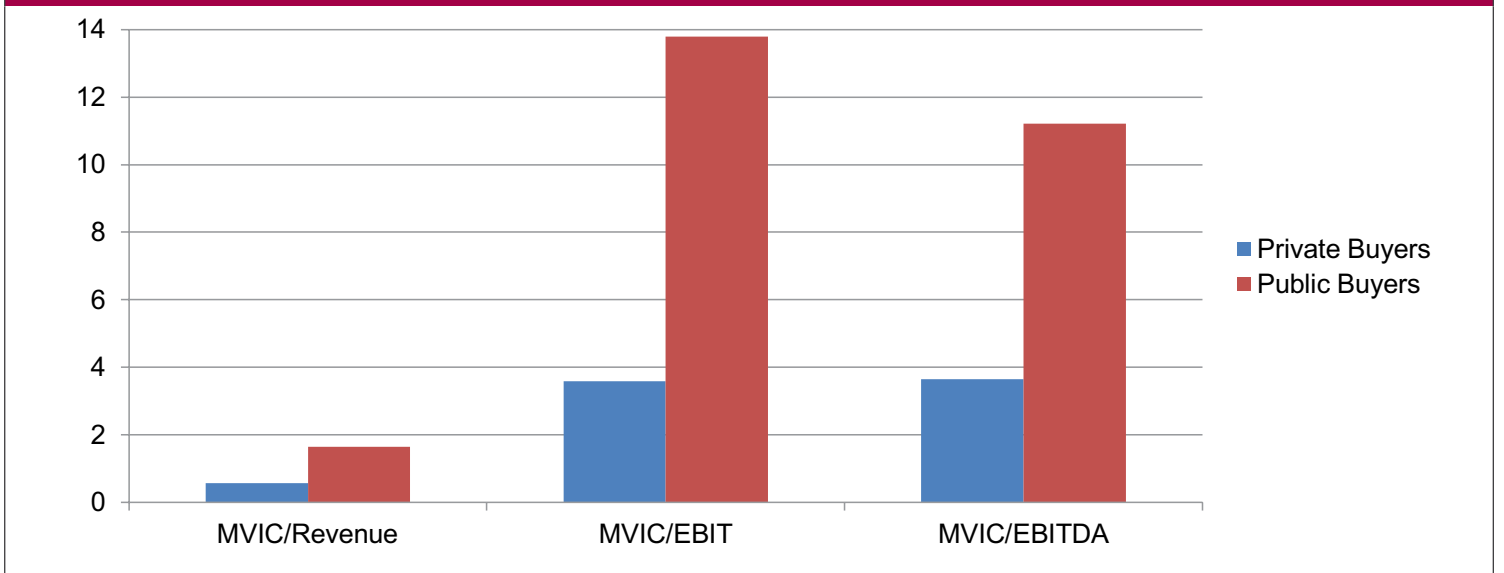
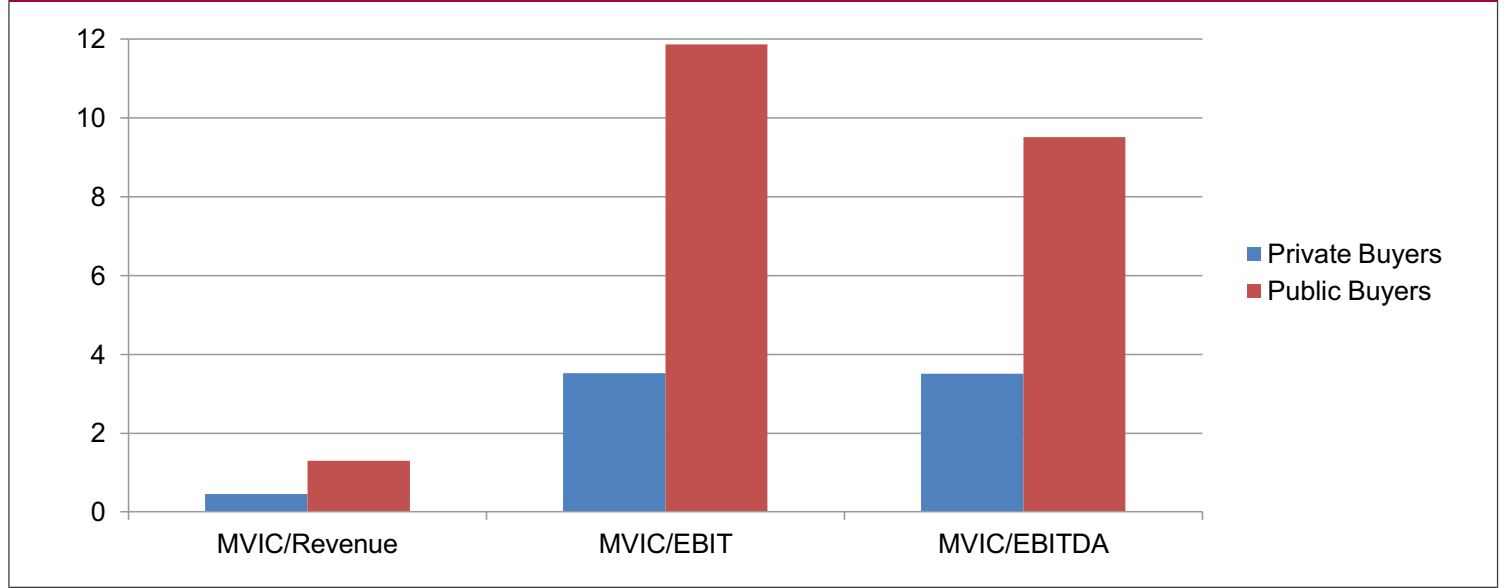


Exhibit 20: Median Valuation Multiples and Profit Margins All Industries: All Years – Public vs. Private Buyers

	MVIC/ Revenue	MVIC/ EBIT	MVIC/ EBITDA	Gross Profit Margin	Operating Profit Margin	Net Profit Margin	Transaction Count	Median Net Sales	Median MVIC
Private Buyers	0.46	3.52	3.51	65%	11%	10%	18,688	\$475,000	\$200,000
Public Buyers	1.30	11.87	9.51	42%	4%	2%	7,146	\$13,212,574	\$18,908,744

Exhibit 20A: All Industries Median Valuation Multiples



MULTIPLES AND MARGINS—BY SECTOR VS. MEDIAN FOR ALL SECTORS

Exhibits 21 and 22, and the corresponding graphs, compare the median valuation multiples and median profit margins across the major industry groups.

The data in the table and graphs include all transactions in *Pratt's Stats* from all years and all buyer types. As seen below, the mining industry has consistently higher median valuation multiples than any other major industry.

Exhibit 21: Median Valuation Multiples by Sector (All Buyers)

SIC	Sector	Count	MVIC/Net Sales	MVIC/Gross Profit	MVIC/EBIT	MVIC/EBITDA	MVIC/SDE
0111-0971	Agriculture, Forestry, & Fishing	721	0.56	0.73	2.77	2.51	1.83
1011-1499	Mining	201	1.78	3.48	11.27	8.14	3.83
1521-1799	Construction	949	0.41	0.98	4.34	4.05	2.41
2011-3999	Manufacturing	4,211	0.77	1.97	6.79	7.99	3.06
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	1,301	0.78	1.30	6.25	5.34	2.43
5012-5199	Wholesale Trade	1,520	0.45	1.29	5.90	5.50	3.07
5211-5999	Retail Trade	6,871	0.36	0.69	3.05	3.01	2.13
6011-6799	Finance, Insurance, & Real Estate	1,010	1.07	1.45	6.08	5.25	2.27
7011-9999	Services	9,050	0.67	0.93	4.67	4.73	2.13
0139-9999	All Industries	25,834	0.55	0.98	4.46	4.64	2.31

Exhibit 21A: Median MVIC/Net Sales (All Buyers)

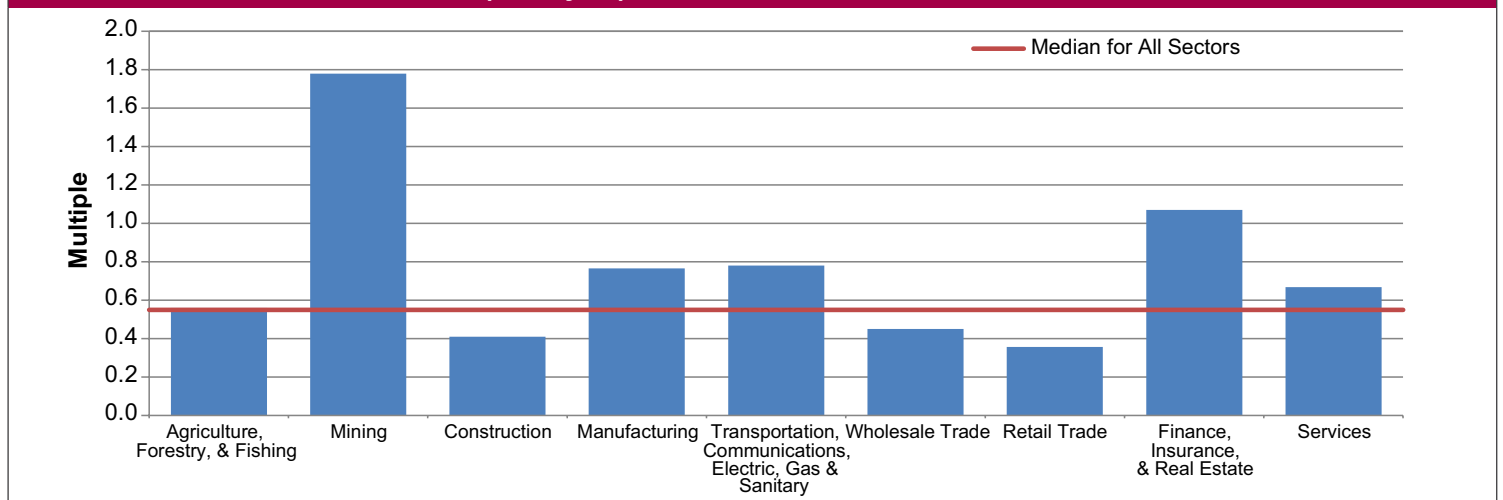


Exhibit 21B: Median MVIC/Gross Profit (All Buyers)

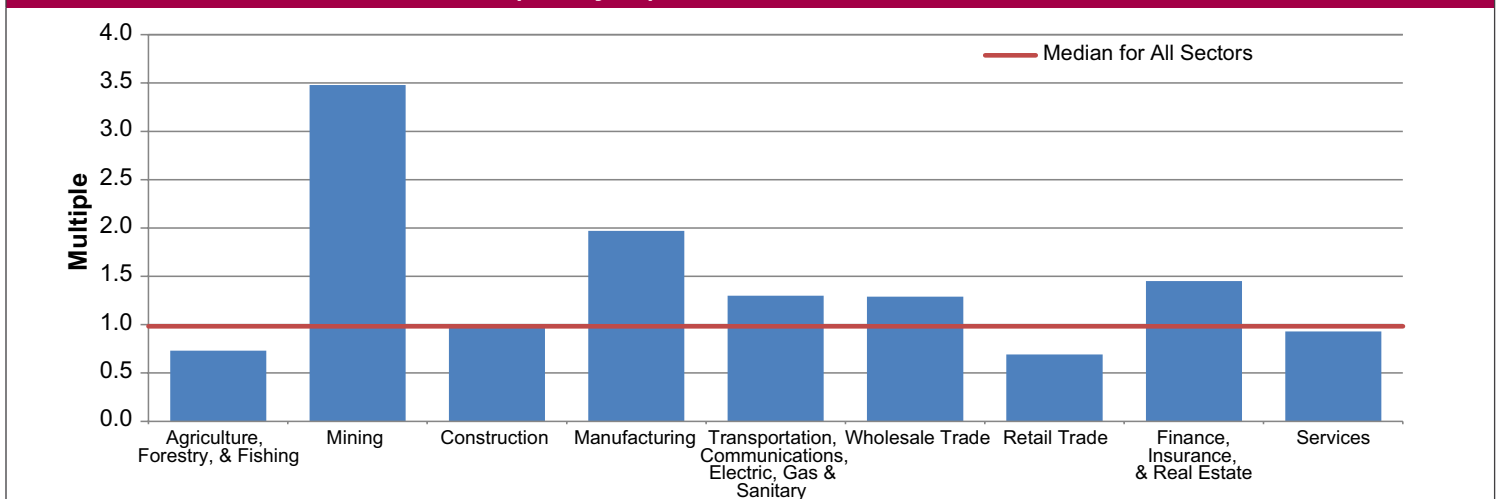


Exhibit 21C: Median MVIC/EBIT (All Buyers)

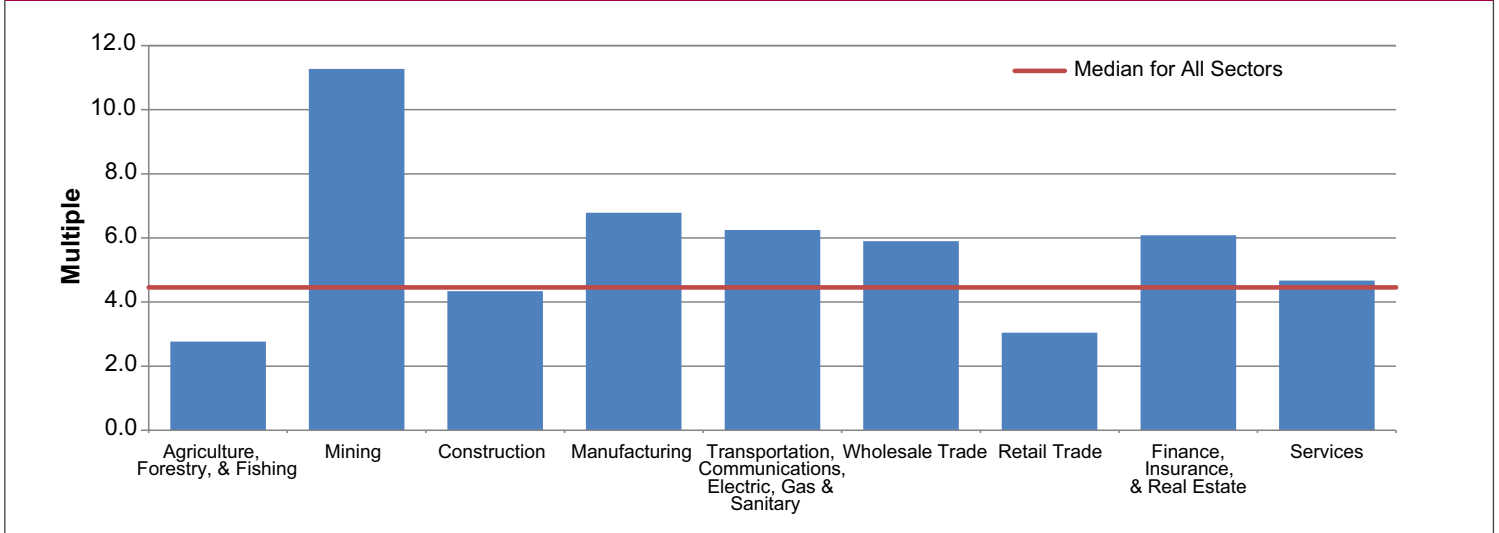


Exhibit 21D: Median MVIC/EBITDA (All Buyers)

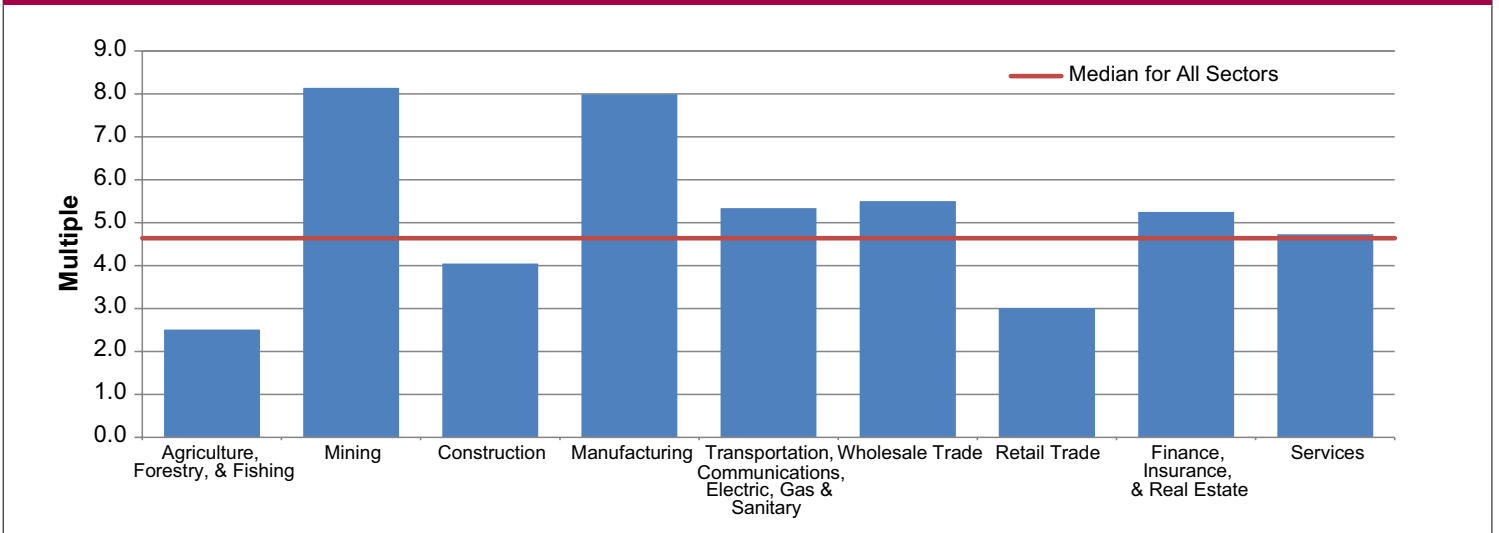


Exhibit 21E: Median MVIC/SDE (All Buyers)

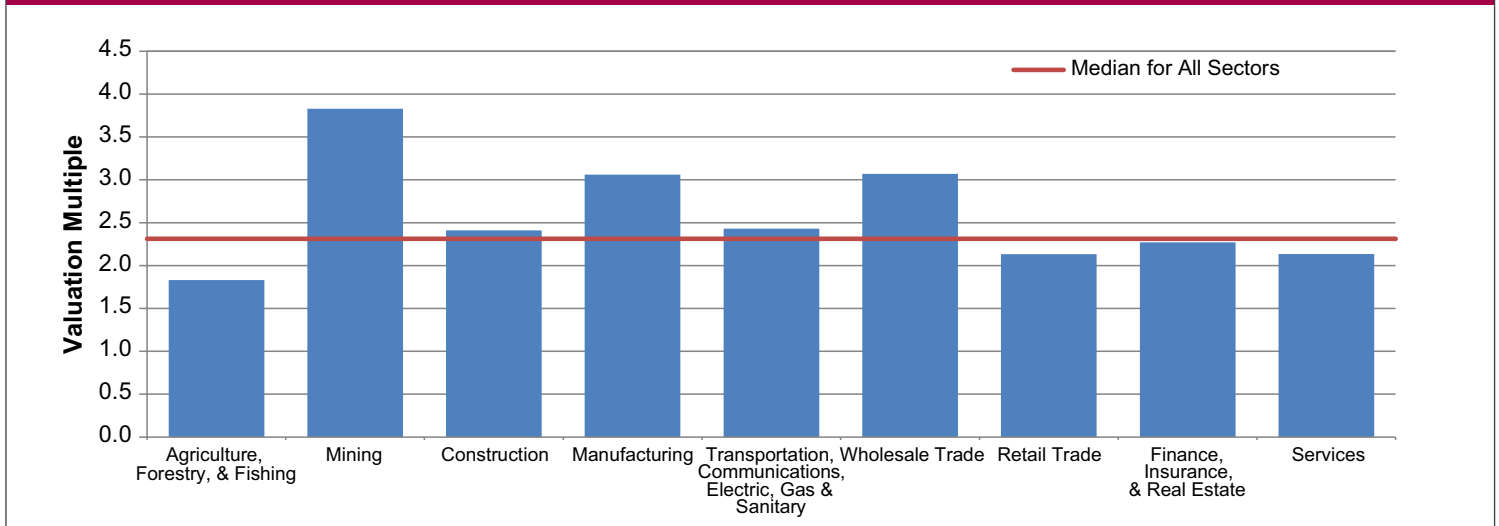


Exhibit 22: Median Profit Margins by Sector (All Buyers)

SIC	Sector	Gross Profit Margin	Operating Profit Margin	Net Profit Margin
0111-0971	Agriculture, Forestry, & Fishing	85%	18%	17%
1011-1499	Mining	52%	12%	8%
1521-1799	Construction	43%	9%	9%
2011-3999	Manufacturing	42%	7%	5%
4011-4971	Transportation, Communications, Electric, Gas & Sanitary	61%	9%	6%
5012-5199	Wholesale Trade	36%	6%	5%
5211-5999	Retail Trade	60%	9%	8%
6011-6799	Finance, Insurance, & Real Estate	99%	15%	11%
7011-9999	Services	80%	9%	7%
0139-9999	All Industries	60%	9%	7%

Exhibit 22A: Median Gross Profit Margin (All Buyers)

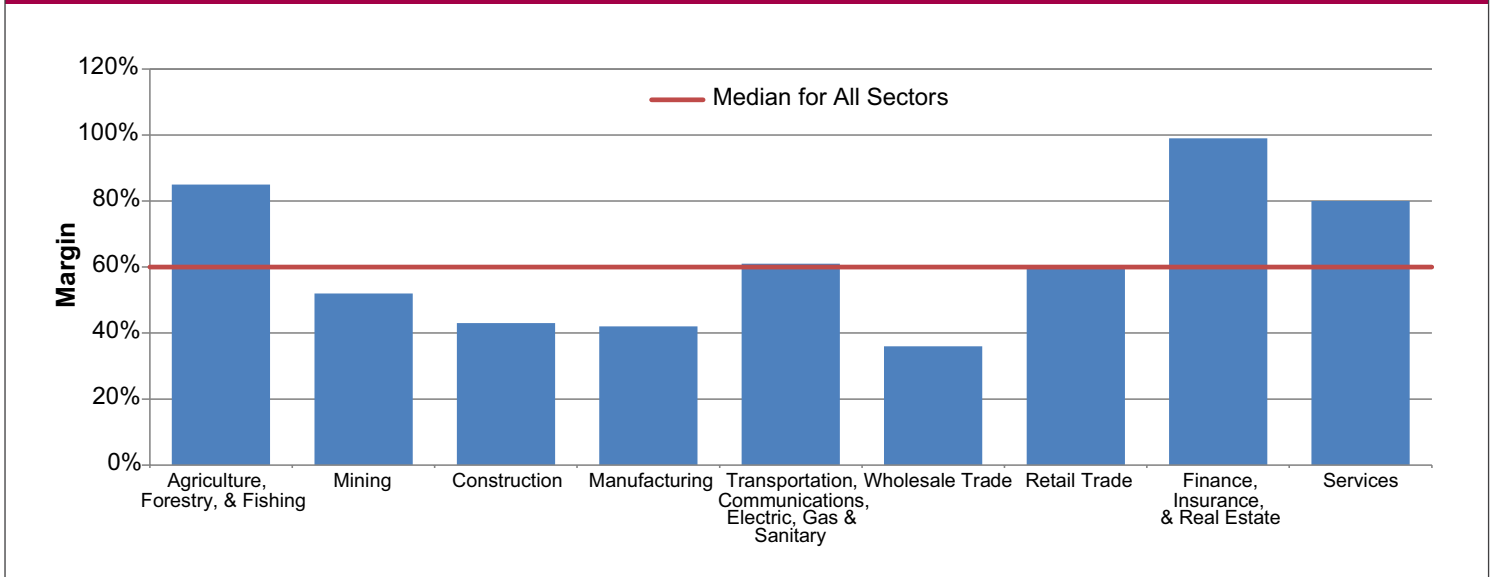


Exhibit 22B: Median Operating Profit Margin (All Buyers)

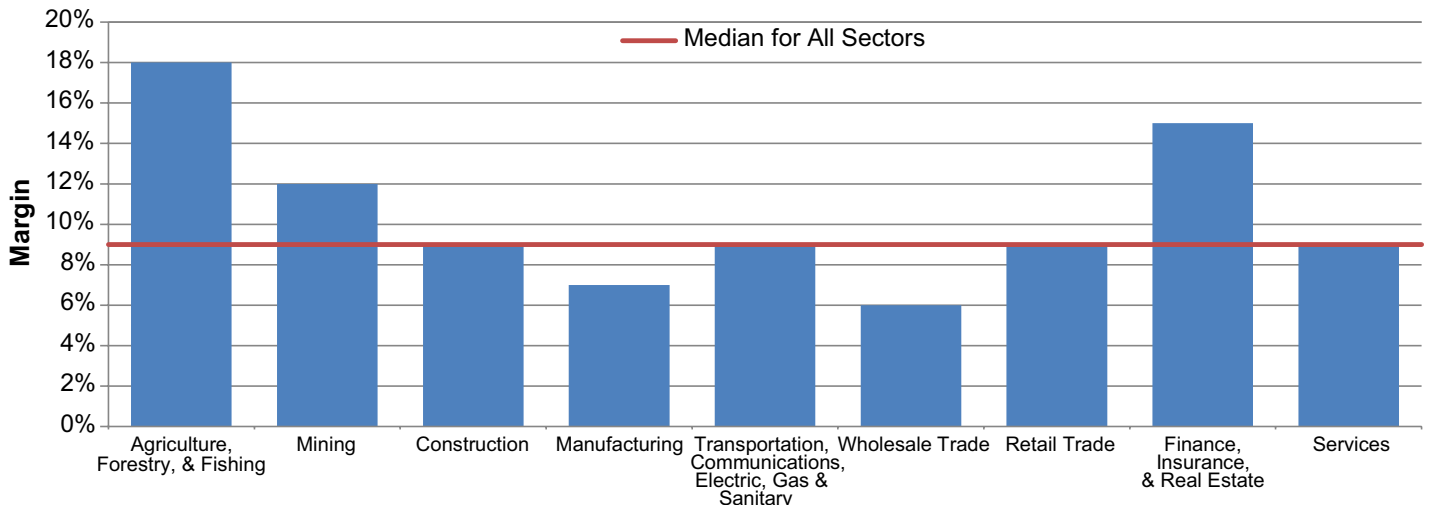
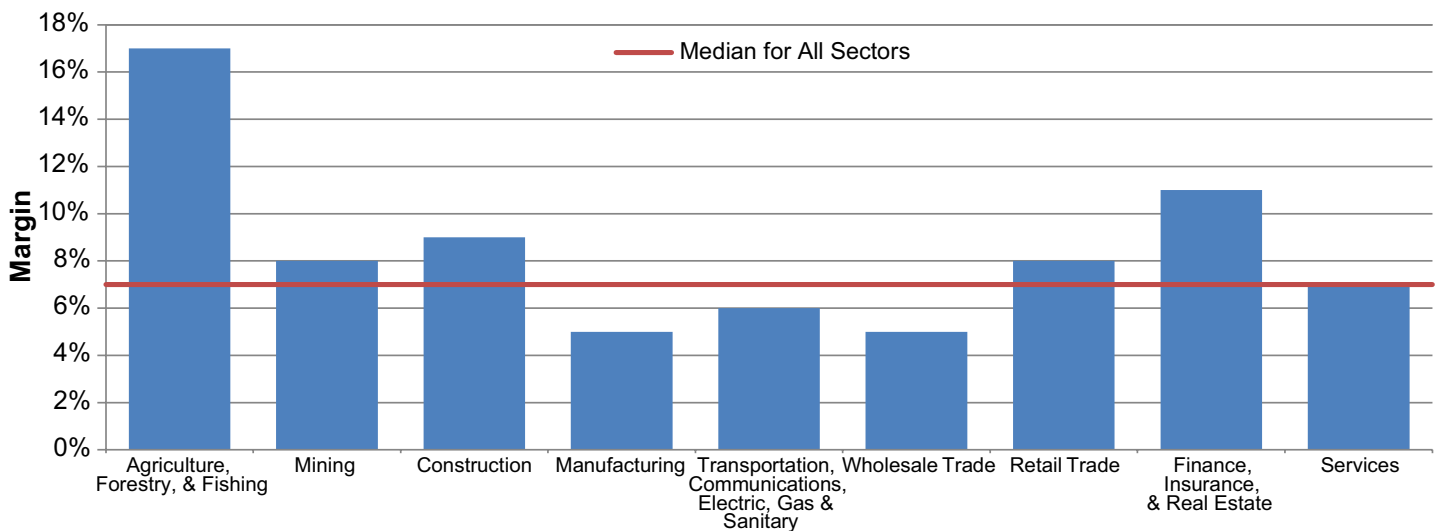


Exhibit 22C: Median Net Profit Margin (All Buyers)



ECONOMIC OUTLOOK³

The most recent release of The Livingston Survey (the Survey) predicts slightly lower growth for the second half of 2016 than had been predicted in its prior survey. The Survey, conducted by the Federal Reserve Bank of Philadelphia, is the oldest continuous survey of economists' expectations. It summarizes the forecasts of economists from industry, government, banking, and academia. The participants project real GDP to grow at an annual rate of 2.4% in the second half of 2016 and 2.1% in the first half of 2017. They believe GDP will grow 2.2% annually over the next 10 years.

The Survey forecasted the unemployment rate to be 4.7% in December 2016 and remain at 4.7% into June 2017.

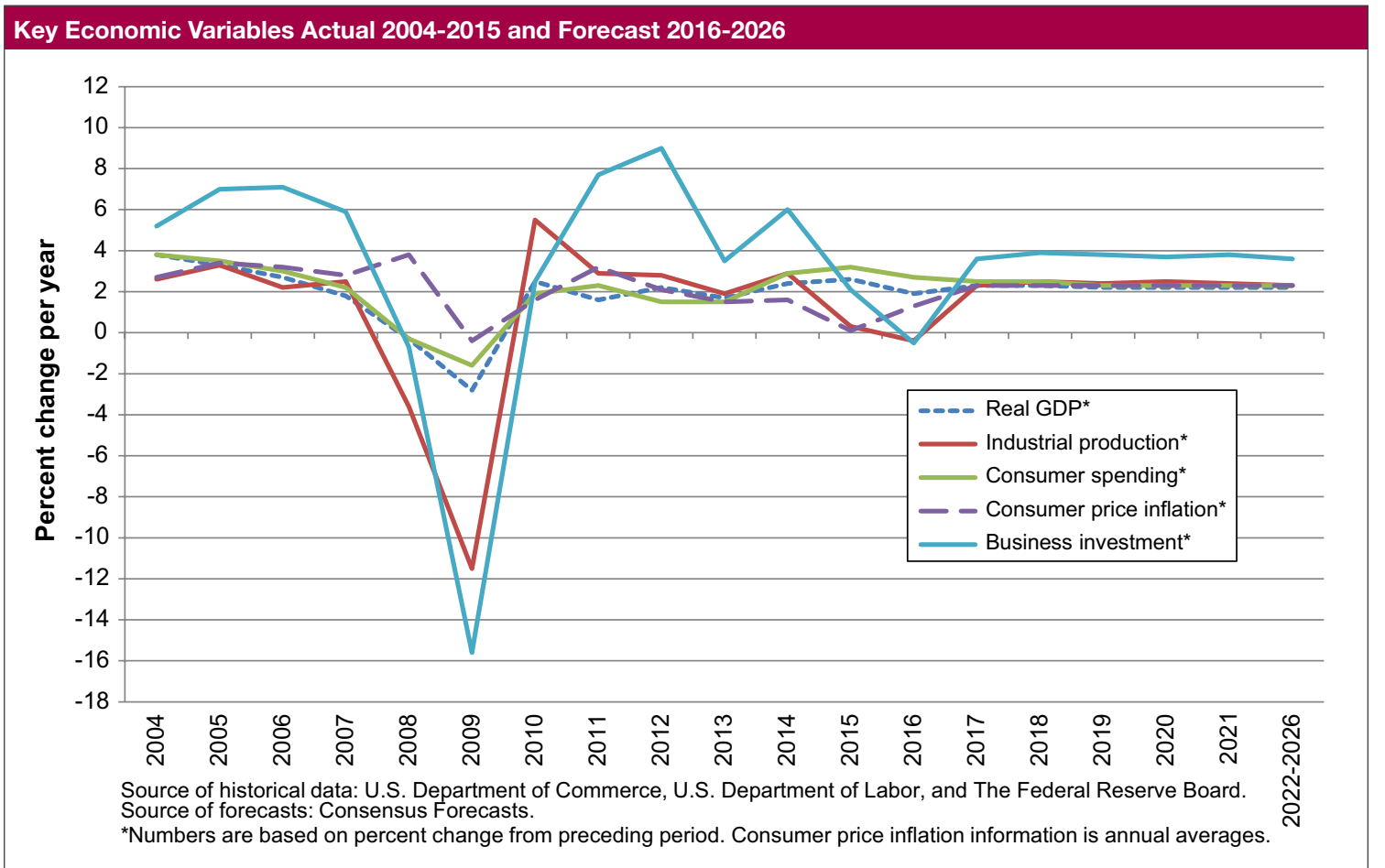
3. This excerpt is from the *Economic Outlook Update*, a monthly and quarterly economic publication published by Business Valuation Resources, which provides details on the state of the U.S. economy and provides an outlook for future quarters. The *Economic Outlook Update* covers everything from general economic conditions and energy prices to stock and bond markets. To purchase a current or historic issue of the *Economic Outlook Update*, or to view a sample issue, visit BVMarketData.com.

The forecasters in the Survey expect consumer price inflation (CPI) to be 1.3% in 2016 and 2.1% in 2017. The Survey expects CPI to average 2.3% over the next 10 years. The Survey expects producer price inflation (PPI) to be -1.4% in 2016 and 2.3% in 2017.

The Survey predicts the interest rate on three-month Treasury bills will be 0.75% at the end of December 2016. From there, the forecasters predict that the rate will increase to 1.12% in June 2017 and 1.55% in December 2017. They predict the interest rate on 10-year Treasury bonds will reach 2.25% at the end of December 2016. According to the Survey, the rate will then rise to 2.45% in June 2017 and to 2.60% in December 2017.

The forecasters from the Survey have decreased their previous projections for future S&P 500 values. They expect the S&P 500 will sit at 2,140.0 by the end of December 2016, 2,167.8 at the end of June 2017, and 2,200.6 at the end of December 2017.

The Energy Information Administration predicts that the West Texas Intermediate crude oil spot price will average



approximately \$42.78 per barrel in 2016 before rising to \$49.99 per barrel in 2017, compared with \$48.67 per barrel in 2015. The EIA expects retail prices for regular-grade gas to average \$2.12 per gallon in 2016 before increasing to \$2.26 per gallon in 2017, compared with \$2.43 per gallon in 2015.

The Energy Information Administration believes the Henry Hub natural gas spot price will average \$2.51 per million Btu (MMBtu) in 2016 and \$3.07 per MMBtu in 2017, compared with \$2.63 per MMBtu in 2015. The cost of coal delivered to electric generating plants, which averaged \$2.23 per MMBtu in 2015, is expected to average \$2.16 per MMBtu in 2016 and \$2.24 per MMBtu in 2017. Residential electric prices, which averaged 12.67 cents per kilowatt-hour (kWh) in 2015, are expected to average 12.54 cents per kWh in 2016 then rise to 12.95 cents per kWh in 2017. The airline ticket price index, which averaged 292.2 in 2015, is expected to be 287.3 in 2016 before rising to 301.8 in 2017.

The National Association of Realtors' Realtors Confidence Index for future conditions retreated slightly in September but remained generally optimistic. The RCI for the outlook of single-family homes edged down 1.0 point in September to 65.0 but remained up 3.0 points from one year ago (strong = 100; moderate = 50; weak = 0). The RCI for the outlook for townhomes slipped 1.0 point in September to a reading of 51.0, while the outlook for condos remained unchanged at 48.0. The RCI is a key indicator of housing market strength based on a monthly survey of over 50,000 real estate practitioners. Practitioners are asked about their expectations for home sales, prices, and market conditions.

NAR believes existing-home sales will be 5.358 million (+2.1%) in 2016 and 5.443 million (+1.6%) in 2017. It believes new single-family home sales will be 570,000 (+13.8%) in 2016, before increasing to 626,000 (+9.8%) in 2017. NAR believes the median existing-home price will be \$231,000 (+3.9%) in 2016, before increasing to \$238,500 (+3.7%) in 2017. NAR believes the median new-home price will increase to \$304,000 (+2.6%) in 2016, before rising to \$312,100 (+2.7%) in 2017. It expects housing starts to increase to 1,183,000 (+6.4%) in 2016, then to 1,260,000 (+6.5%) in 2017. NAR believes the 30-year fixed mortgage rate will average 3.6% in 2016, before rising to 4.0% in 2017, and the 5-1 hybrid adjustable rate mortgage will average 2.9% in 2016 and 3.1% in 2017.

The most recent three-year outlook from the Urban Land Institute (ULI) and Ernst & Young (EY) found that real estate economists and analysts believe the economy will continue to expand between 2016 and 2018, though at a somewhat slower pace than in the prior two years. The *ULI/EY Real Estate Consensus Forecast*, a semiannual publication, is based on a survey of 51 of the industry's top economists and analysts representing 37 of the country's leading real estate investment, advisory, and research firms and organizations. The forecast for each indicator is the median forecast from the 51 survey respondents. The key findings from the *Real Estate Consensus Forecast* include:

- Annual commercial property transaction volume is expected to decline over the three forecast years to \$428 billion in 2018, ending six years of growth. However, forecasted volume in 2016 and 2017 is only surpassed by that in 2007 and 2015, and forecasted volume in 2018 is also surpassed by that in 2006 and 2014.
- The issuance of commercial mortgage-backed securities (CMBS), a key source of financing for commercial real estate, is expected to decline in 2016 to \$70 billion before resuming growth in 2017 and reaching \$90 billion in 2018. Prior to 2016, CMBS issuances had been growing consistently from 2009 to 2015.
- Commercial real estate prices are projected to grow at slowing rates during the next three years, at 5.0% in 2016, 4.0% in 2017, and 2.5% in 2018. These are all below the long-term average growth rate of 5.7%.
- Institutional real estate assets are forecasted to provide total returns of 8.3% in 2016 before moderating to 7.0% in 2017 and 6.0% in 2018. By property type, 2016 returns are expected to range from 10.0% for industrial to 7.5% for office. Total returns in 2018 are expected to range from 7.0% for industrial to 5.6% for apartments.
- Both availability and vacancy rates for almost all property sectors are expected to continue to improve in 2016. The apartment vacancy rate, which is already near historic lows, is expected to remain stable in 2016 and, while staying below the long-term average, is expected to show the most change among the various sectors as it climbs in 2017 and 2018. The industrial and office sectors are expected

to plateau in 2017 and 2018, while the retail sector is expected to continue improving in 2017 before hitting a plateau in 2018. The hotel sector is expected to reverse direction very slightly starting in 2017.

- Commercial property rent is expected to continue to increase in the next three years across all sectors, although at somewhat lower rates than in recent years. In 2016, rent increases are expected in the four

major property types, which will range from 2.0% for retail to 4.7% for industrial. Rent increases in 2018 are forecast to range from 1.3% for retail to 2.9% for apartments. Hotel RevPAR is expected to increase by 4.0% in 2016 and 3.0% in 2018.

- Single-family housing starts are projected to increase from 714,500 units in 2015 to 875,000 units in 2018, remaining below the 20-year annual average.



Economic Outlook Update

Quarterly & Monthly - 16 issues a year!

Rely on the Economic Outlook Update for the data you need to complete your valuation report. The EOU is a review of the state of the U.S. economy and forecast.

Each report provides:

- An overview of selected economic factors that prevailed in the respective period
- A discussion of the factors that are crucial over an extended period of time
- Forecasts for the future

Download a Sample Report at:

www.BVResources.com/EOU