

PENDO ADVISORS, LLC

North American Industry Market Multiples – As of November 30, 2019

www.pendoadvisors.com

Source: CapitalIQ

Median Values

	Stock Price Multiples			Enterprise Value Multiples			EBITDA Margin		EBITDA Growth	
	LTM P/E	NTM P/E	PEG	LTM EBITDA	NTM EBITDA	LTM Revenue	3-yr avg.	LTM	3-yr CAGR	NTM
Energy	9.2x	12.5x	1.82x	6.0x	5.8x	2.09x	20.4%	22.1%	26.9%	0.9%
Coal	4.6x	11.8x	1.76x	4.2x	4.9x	1.56x	14.9%	10.1%	(1.1%)	(12.0%)
Equipment & Services	14.8x	19.9x	1.10x	7.0x	6.4x	0.90x	11.7%	11.2%	21.2%	(4.6%)
Integrated Oil & Gas	16.9x	17.4x	2.28x	6.8x	6.5x	1.44x	20.4%	20.3%	33.4%	(13.8%)
Oil & Gas Exploration / Production	6.7x	9.7x	1.31x	4.1x	4.0x	2.66x	43.9%	50.3%	46.5%	0.9%
Oil & Gas Refining / Marketing	17.7x	10.5x	2.19x	9.4x	7.9x	0.49x	6.7%	1.4%	5.5%	(11.9%)
Oil & Gas Storage / Transportation	12.3x	12.4x	2.37x	10.5x	9.4x	4.25x	31.6%	31.7%	13.5%	9.3%
Industrials	20.0x	17.5x	1.49x	11.4x	9.7x	1.40x	9.8%	9.1%	8.5%	6.6%
Aerospace & Defense	23.9x	17.7x	1.76x	12.7x	11.7x	1.73x	13.2%	11.4%	9.3%	13.2%
Building Products	20.9x	19.2x	1.61x	10.9x	10.2x	1.21x	10.6%	11.2%	7.5%	4.1%
Commercial & Professional Services	21.0x	21.2x	1.44x	12.6x	10.1x	1.38x	9.1%	8.3%	7.1%	8.3%
Construction & Engineering	18.2x	15.4x	1.15x	9.8x	7.2x	0.68x	5.7%	5.9%	12.6%	12.0%
Machinery	22.6x	18.1x	1.53x	11.8x	11.1x	1.84x	11.8%	12.1%	9.4%	4.5%
Transportation	17.3x	16.4x	1.11x	8.1x	7.2x	1.40x	15.3%	12.9%	6.9%	2.5%
Materials	17.8x	15.3x	1.73x	9.1x	7.9x	1.91x	13.3%	12.4%	6.3%	1.6%
Chemicals	18.4x	15.9x	2.11x	9.7x	9.2x	2.00x	13.8%	12.2%	3.8%	(1.5%)
Construction Materials	17.2x	24.9x	1.41x	10.9x	10.2x	1.73x	19.8%	21.6%	5.4%	12.3%
Containers & Packaging	19.4x	14.0x	1.87x	10.0x	9.0x	1.41x	14.3%	14.2%	9.0%	5.8%
Metals & Mining	15.4x	14.0x	1.34x	8.0x	6.6x	2.30x	11.8%	11.1%	10.9%	5.9%
Paper & Forest Products	17.0x	19.4x	1.57x	10.6x	8.5x	0.98x	10.2%	9.2%	(2.0%)	(18.0%)
Consumer Discretionary	19.1x	15.6x	1.29x	11.5x	10.2x	1.27x	10.3%	8.4%	3.1%	3.5%
Automobile Manufacturers	18.2x	11.5x	0.76x	10.2x	7.6x	1.01x	9.1%	8.9%	8.7%	20.5%
Auto Parts & Equipment	12.8x	9.9x	1.13x	5.7x	5.9x	0.79x	10.1%	10.0%	2.9%	(8.6%)
Consumer Durables & Apparel	17.8x	14.1x	1.06x	11.4x	9.2x	1.11x	9.5%	8.2%	2.6%	9.8%
Hotels, Restaurants & Leisure	21.8x	19.9x	1.98x	12.7x	11.1x	2.52x	17.7%	16.3%	6.1%	3.9%
Media	15.0x	13.8x	1.20x	9.5x	8.3x	2.18x	19.4%	16.4%	2.7%	1.5%
Retailing	17.8x	14.0x	1.44x	11.2x	10.9x	0.88x	8.7%	6.0%	0.9%	2.1%
Consumer Staples	23.4x	21.4x	2.61x	13.2x	11.8x	1.80x	7.8%	6.0%	2.2%	5.2%
Beverages	28.9x	24.0x	1.90x	17.0x	16.0x	2.50x	12.5%	12.2%	6.8%	6.5%
Food Products	24.9x	21.6x	2.86x	14.5x	12.6x	1.74x	8.4%	7.5%	(1.7%)	3.2%
Food & Staples Retailing	21.7x	17.6x	2.62x	12.3x	11.4x	0.66x	4.9%	4.3%	2.6%	8.5%
Household & Personal Products	23.3x	17.4x	2.61x	12.4x	11.4x	3.06x	11.0%	6.4%	3.5%	3.9%
Healthcare	30.2x	24.2x	1.90x	16.6x	15.1x	5.75x	1.6%	(5.7%)	7.5%	8.1%
Biotechnology	19.9x	19.2x	1.14x	10.4x	17.6x	11.20x	(57.6%)	(49.8%)	7.5%	18.3%
Healthcare Equipment & Supplies	46.4x	34.7x	2.26x	21.6x	19.3x	4.83x	(2.4%)	1.0%	8.6%	8.9%
Healthcare Services	25.7x	25.1x	1.91x	14.5x	11.8x	1.93x	7.2%	5.8%	6.9%	12.7%
Pharmaceuticals	16.6x	18.3x	1.33x	12.3x	10.8x	6.94x	(1.7%)	(45.4%)	5.0%	4.4%
Information Technology	28.8x	22.6x	1.71x	16.0x	13.6x	2.73x	5.1%	3.8%	10.1%	7.3%
Communications Equipment	24.0x	16.0x	1.31x	14.8x	10.7x	1.40x	4.5%	2.6%	4.2%	2.9%
Hardware, Storage & Peripherals	19.1x	13.2x	1.24x	10.8x	7.9x	1.16x	5.4%	5.2%	0.1%	5.6%
Internet Software & Services	35.4x	28.7x	2.02x	18.6x	17.3x	4.43x	2.0%	0.4%	11.6%	10.1%
IT Services	31.1x	20.7x	1.74x	14.9x	11.9x	2.48x	9.9%	8.4%	8.8%	7.4%
Semiconductors	31.2x	25.0x	1.66x	19.9x	15.6x	4.14x	14.5%	9.7%	9.3%	(1.6%)
Software	45.8x	36.0x	2.26x	27.2x	24.2x	5.25x	(7.4%)	(6.5%)	13.9%	11.9%
Technology Hardware & Equipment	21.7x	18.7x	1.32x	13.1x	10.2x	1.39x	4.9%	4.0%	6.4%	7.3%
Telecommunications	16.8x	17.1x	1.36x	10.5x	9.0x	2.36x	15.4%	11.1%	4.0%	2.9%
Alternative Carriers	55.8x	46.1x	3.84x	18.0x	13.7x	4.77x	16.1%	16.8%	10.3%	5.5%
Integrated Telecommunication Services	13.7x	14.4x	2.78x	7.0x	8.0x	1.88x	25.0%	24.2%	2.0%	3.2%
Wireless Telecommunication Services	22.1x	26.3x	3.84x	8.3x	7.1x	1.86x	20.8%	20.4%	7.7%	(3.9%)
Utilities	22.1x	21.2x	3.68x	13.6x	11.9x	4.66x	31.0%	32.1%	3.3%	7.9%
Electric Utilities	22.5x	21.0x	3.68x	12.8x	12.0x	4.47x	30.7%	32.9%	2.6%	7.4%
Gas Utilities	22.8x	20.4x	3.25x	13.8x	12.3x	3.13x	24.1%	21.8%	4.5%	10.4%
Water Utilities	37.8x	32.5x	4.14x	19.7x	17.8x	8.21x	42.8%	36.3%	1.3%	7.8%
	Price / Earnings Multiples			Price / BV Multiples			Net Income Margin		Return on Equity	
	LTM P/E	NTM P/E	PEG	Book Value		Tangible BV	3-yr avg.	LTM	3-yr avg.	LTM
Financials	13.2x	12.4x	1.40x		1.20x	1.32x	18.6%	24.2%	8.3%	9.7%
Commercial Banks	11.5x	11.0x	2.03x		1.40x	1.87x	27.3%	30.0%	13.0%	12.8%
Investment Banking & Brokerage	13.2x	12.3x	1.60x		1.98x	2.26x	4.1%	7.1%	8.4%	10.0%
Insurance	16.0x	13.0x	1.60x		1.27x	1.42x	7.3%	5.4%	8.9%	7.1%

Merger & Acquisition Advisory
Fairness & Solvency Opinions

Private Placements
Restructuring Advisory

Business & Asset Valuation
ESOP / ERISA Advisory

PENDO ADVISORS, LLC

Year-Over-Year Trend Analysis: November 2018 to November 2019

www.pendoadvisors.com

Stock Price / LTM EPS: November 2018 to November 2019

	Year-Over-Year		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
	Delta	% Delta													
Energy	(3.6x)	(28.2%)	12.8x	10.7x	11.6x	12.9x	12.8x	13.0x	12.4x	12.8x	12.5x	9.4x	10.0x	9.3x	9.2x
Industrials	2.7x	15.6%	17.3x	15.7x	17.8x	19.0x	18.7x	19.5x	17.4x	18.5x	18.4x	17.9x	18.9x	18.9x	20.0x
Materials	4.8x	36.9%	13.0x	12.6x	14.4x	16.1x	16.2x	16.8x	15.9x	17.2x	17.1x	17.1x	17.7x	18.2x	17.8x
Consumer Discretionary	2.2x	13.0%	16.9x	14.8x	16.6x	17.4x	17.2x	18.7x	17.2x	17.6x	18.3x	17.4x	17.4x	18.1x	19.1x
Consumer Staples	2.5x	12.0%	20.9x	19.5x	20.1x	21.6x	23.6x	24.1x	22.8x	23.6x	24.1x	23.3x	23.6x	22.6x	23.4x
Healthcare	(1.7x)	(5.3%)	31.9x	26.9x	29.4x	28.3x	28.9x	28.1x	30.0x	30.7x	30.9x	29.0x	27.3x	27.6x	30.2x
Information Technology	1.2x	4.3%	27.6x	25.7x	26.2x	26.4x	27.6x	29.6x	26.2x	27.5x	28.5x	27.7x	28.5x	28.5x	28.8x
Telecommunications	1.4x	9.1%	15.4x	14.0x	15.6x	18.2x	19.6x	20.6x	21.2x	20.4x	19.0x	19.3x	19.4x	18.1x	16.8x
Utilities	1.6x	7.8%	20.5x	19.6x	20.1x	22.0x	22.7x	22.5x	21.5x	22.4x	22.7x	22.7x	23.5x	23.4x	22.1x
Financials	(2.2x)	(14.3%)	15.4x	14.0x	13.4x	13.7x	13.2x	13.2x	12.8x	13.0x	13.1x	12.6x	13.0x	12.9x	13.2x

Stock Price / NTM EPS: November 2018 to November 2019

	Year-Over-Year		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
	Delta	% Delta													
Energy	0.1x	0.8%	12.4x	11.4x	14.5x	15.1x	15.0x	14.7x	12.2x	12.3x	12.3x	12.7x	12.8x	12.5x	12.5x
Industrials	2.1x	13.6%	15.4x	13.4x	14.9x	15.9x	15.4x	15.9x	14.7x	15.9x	16.1x	15.2x	15.9x	16.7x	17.5x
Materials	3.3x	27.5%	12.0x	11.3x	13.2x	14.0x	13.4x	13.5x	12.0x	14.2x	14.4x	13.8x	14.5x	15.3x	15.3x
Consumer Discretionary	0.4x	2.6%	15.2x	13.9x	14.9x	16.3x	15.9x	16.5x	15.0x	15.3x	15.5x	14.4x	15.0x	15.2x	15.6x
Consumer Staples	1.0x	4.9%	20.4x	18.8x	20.5x	19.3x	20.0x	20.4x	20.7x	21.8x	21.7x	20.6x	20.8x	20.7x	21.4x
Healthcare	0.7x	3.0%	23.5x	21.9x	23.4x	24.4x	24.0x	23.6x	24.8x	25.1x	25.7x	23.8x	22.7x	22.5x	24.2x
Information Technology	2.9x	14.7%	19.7x	18.2x	19.5x	22.3x	22.8x	23.8x	21.3x	22.2x	22.2x	21.4x	21.9x	23.0x	22.6x
Telecommunications	(0.8x)	(4.5%)	17.9x	16.7x	18.1x	17.0x	18.0x	18.7x	17.7x	17.9x	17.8x	16.8x	17.6x	17.6x	17.1x
Utilities	2.1x	11.0%	19.1x	18.5x	19.3x	20.1x	20.8x	20.8x	19.6x	20.9x	21.4x	21.6x	22.1x	21.9x	21.2x
Financials	0.2x	1.6%	12.2x	10.6x	11.6x	12.1x	11.4x	11.7x	11.2x	11.6x	11.8x	11.3x	11.9x	12.1x	12.4x

Enterprise Value / LTM EBITDA: November 2018 to November 2019

	Year-Over-Year		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
	Delta	% Delta													
Energy	(2.2x)	(26.6%)	8.1x	7.1x	7.6x	7.6x	6.9x	6.8x	6.9x	7.1x	6.9x	6.1x	6.1x	5.9x	6.0x
Industrials	0.9x	8.6%	10.5x	9.7x	10.4x	10.7x	10.6x	11.0x	10.7x	11.4x	11.5x	10.9x	11.2x	11.2x	11.4x
Materials	1.6x	20.7%	7.5x	7.1x	7.9x	8.1x	8.3x	8.5x	7.9x	8.4x	8.8x	8.6x	8.8x	8.9x	9.1x
Consumer Discretionary	1.7x	16.8%	9.9x	8.9x	9.5x	9.6x	9.8x	10.1x	10.5x	11.2x	11.3x	10.8x	11.2x	11.4x	11.5x
Consumer Staples	1.0x	8.2%	12.2x	11.6x	12.2x	12.7x	12.5x	12.1x	12.6x	12.8x	13.1x	13.0x	13.5x	13.1x	13.2x
Healthcare	0.3x	1.8%	16.3x	14.3x	15.2x	15.6x	15.7x	16.1x	16.2x	15.5x	15.1x	15.8x	15.4x	15.1x	16.6x
Information Technology	1.9x	13.5%	14.1x	12.8x	13.5x	15.1x	14.5x	15.6x	14.4x	14.9x	15.2x	14.5x	14.7x	15.0x	16.0x
Telecommunications	0.7x	6.9%	9.8x	9.0x	9.7x	9.5x	9.8x	10.0x	10.3x	10.6x	11.1x	10.2x	10.3x	10.4x	10.5x
Utilities	1.8x	15.3%	11.8x	11.6x	12.0x	12.6x	12.8x	12.8x	12.4x	13.0x	13.2x	13.5x	13.8x	13.7x	13.6x

Enterprise Value / NTM EBITDA: November 2018 to November 2019

	Year-Over-Year		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
	Delta	% Delta													
Energy	(0.0x)	(0.9%)	5.9x	5.4x	6.2x	6.5x	6.3x	6.2x	5.8x	5.9x	5.9x	5.6x	5.7x	5.8x	5.8x
Industrials	0.8x	8.4%	8.9x	8.1x	8.6x	9.1x	8.9x	9.2x	9.1x	9.5x	9.4x	8.9x	9.2x	9.5x	9.7x
Materials	1.5x	24.0%	6.4x	6.3x	6.9x	7.4x	7.0x	7.0x	6.8x	7.5x	7.7x	7.3x	7.6x	7.8x	7.9x
Consumer Discretionary	1.6x	18.7%	8.6x	7.7x	8.4x	8.5x	8.5x	9.0x	9.3x	9.8x	9.9x	9.6x	10.0x	10.1x	10.2x
Consumer Staples	0.4x	3.5%	11.4x	10.5x	11.2x	11.5x	11.7x	11.9x	11.8x	12.0x	12.0x	11.8x	11.9x	11.6x	11.8x
Healthcare	1.0x	7.1%	14.1x	13.0x	14.1x	14.4x	14.7x	15.1x	13.8x	15.4x	15.4x	14.7x	14.2x	13.9x	15.1x
Information Technology	2.0x	17.2%	11.6x	10.5x	11.4x	12.7x	12.6x	13.0x	12.4x	12.9x	12.9x	12.4x	13.0x	13.8x	13.6x
Telecommunications	0.0x	0.0%	9.0x	8.1x	9.1x	9.4x	9.4x	9.8x	9.7x	9.6x	9.6x	8.9x	8.9x	9.1x	9.0x
Utilities	1.1x	10.2%	10.8x	10.5x	10.6x	11.0x	11.7x	11.6x	11.4x	11.8x	12.3x	12.0x	12.1x	11.8x	11.9x

Enterprise Value / LTM Revenue: November 2018 to November 2019

	Year-Over-Year		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
	Delta	% Delta													
Energy	(0.48x)	(18.7%)	2.57x	2.24x	2.42x	2.42x	2.42x	2.45x	2.28x	2.22x	2.17x	2.03x	2.15x	2.02x	2.09x
Industrials	0.06x	4.5%	1.34x	1.21x	1.29x	1.35x	1.28x	1.34x	1.29x	1.36x	1.40x	1.35x	1.35x	1.35x	1.40x
Materials	0.30x	18.6%	1.61x	1.62x	1.74x	1.77x	1.78x	1.75x	1.67x	1.83x	2.00x	1.98x	1.94x	2.04x	1.91x
Consumer Discretionary	0.06x	5.0%	1.21x	1.10x	1.21x	1.14x	1.15x	1.18x	1.28x	1.31x	1.29x	1.20x	1.26x	1.28x	1.27x
Consumer Staples	(0.21x)	(10.4%)	2.01x	1.88x	1.96x	1.90x	1.97x	1.91x	1.95x	1.89x	1.99x	1.81x	1.83x	1.70x	1.80x
Healthcare	(0.21x)	(3.5%)	5.96x	5.40x	5.95x	6.32x	6.37x	6.39x	6.39x	6.76x	6.55x	6.13x	6.02x	5.64x	5.75x
Information Technology	0.41x	17.7%	2.32x	2.12x	2.31x	2.53x	2.45x	2.66x	2.53x	2.63x	2.62x	2.63x	2.56x	2.62x	2.73x
Telecommunications	(0.21x)	(8.2%)	2.57x	2.25x	2.47x	2.53x	2.63x	2.65x	2.77x	2.58x	2.55x	2.44x	2.41x	2.43x	2.36x
Utilities	0.60x	14.8%	4.06x	3.96x	4.22x	4.31x	4.36x	4.28x	4.22x	4.46x	4.44x	4.62x	4.72x	4.74x	4.66x

Merger & Acquisition Advisory
Fairness & Solvency Opinions

Private Placements
Restructuring Advisory

Business & Asset Valuation
ESOP / ERISA Advisory