

PENDO ADVISORS, LLC

North American Industry Market Multiples – As of October 31, 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	9.3x	12.5x	1.94x	5.9x	5.8x	2.02x	20.4%	21.3%	22.3%	2.2%
Coal	5.4x	10.7x	4.17x	4.9x	4.9x	1.45x	14.9%	12.2%	0.2%	(10.9%)
Equipment & Services	13.6x	16.1x	0.90x	6.8x	6.3x	0.91x	11.3%	12.1%	10.8%	(1.9%)
Integrated Oil & Gas	11.1x	15.4x	4.35x	6.0x	6.1x	1.39x	20.4%	21.1%	32.8%	(12.5%)
Oil & Gas Exploration / Production	6.6x	10.3x	1.18x	4.0x	4.1x	2.57x	42.4%	51.0%	39.1%	2.4%
Oil & Gas Refining / Marketing	17.4x	12.5x	2.11x	9.5x	7.8x	0.50x	6.7%	2.0%	3.3%	(8.0%)
Oil & Gas Storage / Transportation	13.2x	12.5x	2.52x	11.0x	9.8x	4.19x	30.6%	30.2%	12.0%	7.7%
Industrials	18.9x	16.7x	1.38x	11.2x	9.5x	1.35x	9.8%	9.2%	8.1%	7.5%
Aerospace & Defense	22.1x	16.9x	1.65x	12.4x	11.8x	1.75x	13.0%	11.4%	8.1%	10.9%
Building Products	20.1x	17.7x	1.45x	10.4x	9.4x	1.30x	10.6%	10.4%	7.9%	5.3%
Commercial & Professional Services	19.0x	19.2x	1.36x	12.2x	10.0x	1.35x	9.6%	8.1%	7.2%	8.9%
Construction & Engineering	18.4x	16.0x	1.28x	10.0x	7.4x	0.71x	5.7%	5.9%	14.2%	11.3%
Machinery	21.0x	16.8x	1.57x	11.7x	10.5x	1.60x	11.8%	12.0%	8.8%	4.4%
Transportation	17.0x	14.8x	1.18x	8.0x	7.0x	1.42x	15.3%	13.2%	6.4%	3.2%
Materials	18.2x	15.3x	1.72x	8.9x	7.8x	2.04x	13.4%	13.0%	7.6%	2.4%
Chemicals	18.5x	15.4x	1.89x	9.4x	8.6x	2.04x	14.3%	13.3%	3.8%	(1.6%)
Construction Materials	19.2x	25.9x	1.56x	10.8x	10.3x	1.68x	19.8%	21.9%	6.2%	11.4%
Containers & Packaging	19.0x	14.8x	2.06x	9.4x	9.1x	1.37x	14.3%	14.5%	9.0%	5.7%
Metals & Mining	14.0x	14.6x	1.32x	8.0x	6.0x	2.55x	11.9%	10.8%	13.1%	5.7%
Paper & Forest Products	17.2x	18.5x	1.31x	8.9x	8.4x	0.99x	10.2%	11.1%	2.8%	(18.1%)
Consumer Discretionary	18.1x	15.2x	1.33x	11.4x	10.1x	1.28x	10.3%	8.4%	3.5%	3.3%
Automobile Manufacturers	17.7x	11.8x	0.81x	9.8x	8.6x	1.01x	9.1%	8.9%	8.7%	12.2%
Auto Parts & Equipment	12.2x	9.3x	1.05x	5.9x	5.9x	0.67x	10.1%	9.7%	3.8%	(5.9%)
Consumer Durables & Apparel	16.9x	13.6x	1.14x	11.2x	9.3x	1.12x	9.4%	7.8%	4.7%	9.8%
Hotels, Restaurants & Leisure	20.8x	18.2x	2.01x	12.1x	10.8x	2.59x	17.0%	16.2%	7.3%	3.8%
Media	13.0x	13.8x	1.51x	8.8x	7.7x	1.83x	18.3%	16.4%	4.1%	3.4%
Retailing	16.2x	13.2x	1.37x	11.1x	10.5x	0.87x	8.7%	6.0%	0.5%	1.8%
Consumer Staples	22.6x	20.7x	2.53x	13.1x	11.6x	1.70x	7.8%	5.7%	2.1%	5.0%
Beverages	28.9x	24.1x	1.57x	17.1x	16.0x	2.65x	12.3%	11.8%	6.8%	7.8%
Food Products	22.6x	21.1x	2.80x	14.5x	12.1x	1.60x	8.4%	7.7%	(0.1%)	1.4%
Food & Staples Retailing	21.8x	17.5x	2.35x	12.0x	10.9x	0.69x	4.9%	4.3%	2.3%	9.3%
Household & Personal Products	24.1x	18.4x	3.05x	12.9x	11.3x	2.99x	10.4%	5.2%	2.2%	4.8%
Healthcare	27.6x	22.5x	1.79x	15.1x	13.9x	5.64x	1.4%	(5.4%)	7.5%	8.8%
Biotechnology	17.3x	18.7x	0.97x	9.3x	15.8x	10.80x	(57.6%)	(54.3%)	12.6%	16.8%
Healthcare Equipment & Supplies	47.9x	30.3x	2.07x	21.6x	18.7x	4.65x	(2.7%)	0.8%	9.0%	9.1%
Healthcare Services	24.0x	24.5x	1.68x	13.2x	12.0x	2.05x	7.1%	5.1%	6.1%	14.4%
Pharmaceuticals	15.0x	16.1x	1.13x	10.3x	11.1x	7.69x	(1.7%)	(41.1%)	5.0%	9.6%
Information Technology	28.5x	23.0x	1.59x	15.0x	13.8x	2.62x	4.9%	3.9%	10.6%	6.7%
Communications Equipment	28.6x	17.6x	1.55x	14.2x	10.0x	1.24x	4.4%	3.2%	2.6%	5.3%
Hardware, Storage & Peripherals	19.2x	10.3x	1.17x	9.7x	7.4x	1.17x	5.1%	5.0%	(0.7%)	6.9%
Internet Software & Services	38.9x	27.2x	1.83x	17.5x	16.3x	4.31x	2.0%	0.8%	12.3%	11.1%
IT Services	30.2x	19.8x	1.63x	14.7x	12.1x	2.36x	10.0%	8.4%	8.0%	7.9%
Semiconductors	30.7x	28.2x	1.47x	20.0x	18.4x	4.17x	14.5%	10.0%	10.7%	(11.3%)
Software	47.2x	36.0x	1.99x	29.2x	23.0x	5.16x	(7.2%)	(6.1%)	16.1%	14.6%
Technology Hardware & Equipment	22.7x	18.5x	1.27x	12.1x	10.0x	1.26x	4.7%	4.0%	7.4%	6.0%
Telecommunications	18.1x	17.6x	1.34x	10.4x	9.1x	2.43x	14.9%	10.6%	4.3%	4.8%
Alternative Carriers	69.7x	46.2x	0.93x	18.0x	14.7x	5.34x	16.1%	13.9%	9.0%	4.9%
Integrated Telecommunication Services	13.2x	13.8x	2.87x	7.6x	7.7x	1.84x	25.0%	23.5%	3.2%	3.3%
Wireless Telecommunication Services	21.4x	26.9x	3.69x	7.7x	6.5x	1.84x	20.8%	19.8%	9.7%	0.3%
Utilities	23.4x	21.9x	3.72x	13.7x	11.8x	4.74x	31.0%	32.7%	4.3%	7.4%
Electric Utilities	23.3x	21.0x	3.86x	13.1x	11.8x	4.50x	30.7%	32.6%	2.9%	7.6%
Gas Utilities	24.3x	22.5x	3.51x	12.4x	12.6x	3.08x	24.1%	21.1%	5.7%	6.0%
Water Utilities	41.6x	34.8x	4.55x	20.1x	18.2x	8.63x	42.8%	36.6%	0.4%	7.7%
	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	12.9x	12.1x	1.41x		1.17x	1.30x	18.4%	24.2%	8.3%	9.7%
Commercial Banks	11.2x	10.7x	1.93x		1.42x	1.83x	27.3%	30.2%	13.0%	12.7%
Investment Banking & Brokerage	11.9x	12.2x	1.50x		1.62x	2.03x	5.4%	8.4%	7.3%	9.6%
Insurance	15.2x	12.3x	1.35x		1.25x	1.42x	6.9%	5.9%	8.9%	7.5%

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PENDO ADVISORS, LLC

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

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Stock Price / LTM EPS: October 2018 to October 2019

	Year-Over-Year		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
	Delta	% Delta													
Energy	(4.8x)	(33.9%)	14.1x	12.8x	10.7x	11.6x	12.9x	12.8x	13.0x	12.4x	12.8x	12.5x	9.4x	10.0x	9.3x
Industrials	1.4x	8.0%	17.5x	17.3x	15.7x	17.8x	19.0x	18.7x	19.5x	17.4x	18.5x	18.4x	17.9x	18.9x	18.9x
Materials	4.2x	30.0%	14.0x	13.0x	12.6x	14.4x	16.1x	16.2x	16.8x	15.9x	17.2x	17.1x	17.1x	17.7x	18.2x
Consumer Discretionary	0.7x	4.0%	17.4x	16.9x	14.8x	16.6x	17.4x	17.2x	18.7x	17.2x	17.6x	18.3x	17.4x	17.4x	18.1x
Consumer Staples	2.1x	10.2%	20.5x	20.9x	19.5x	20.1x	21.6x	23.6x	24.1x	22.8x	23.6x	24.1x	23.3x	23.6x	22.6x
Healthcare	(1.3x)	(4.5%)	28.9x	31.9x	26.9x	29.4x	28.3x	28.9x	28.1x	30.0x	30.7x	30.9x	29.0x	27.3x	27.6x
Information Technology	0.8x	2.9%	27.7x	27.6x	25.7x	26.2x	26.4x	27.6x	29.6x	26.2x	27.5x	28.5x	27.7x	28.5x	28.5x
Telecommunications	2.4x	15.3%	15.7x	15.4x	14.0x	15.6x	18.2x	19.6x	20.6x	21.2x	20.4x	19.0x	19.3x	19.4x	18.1x
Utilities	2.4x	11.4%	21.0x	20.5x	19.6x	20.1x	22.0x	22.7x	22.5x	21.5x	22.4x	22.7x	22.7x	23.5x	23.4x
Financials	(2.7x)	(17.3%)	15.6x	15.4x	14.0x	13.4x	13.7x	13.2x	13.2x	12.8x	13.0x	13.1x	12.6x	13.0x	12.9x

Stock Price / NTM EPS: October 2018 to October 2019

	Year-Over-Year		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
	Delta	% Delta													
Energy	(1.1x)	(8.1%)	13.6x	12.4x	11.4x	14.5x	15.1x	15.0x	14.7x	12.2x	12.3x	12.3x	12.7x	12.8x	12.5x
Industrials	1.5x	9.9%	15.2x	15.4x	13.4x	14.9x	15.9x	15.4x	15.9x	14.7x	15.9x	16.1x	15.2x	15.9x	16.7x
Materials	3.2x	26.4%	12.1x	12.0x	11.3x	13.2x	14.0x	13.4x	13.5x	12.0x	14.2x	14.4x	13.8x	14.5x	15.3x
Consumer Discretionary	(0.1x)	(0.7%)	15.3x	15.2x	13.9x	14.9x	16.3x	15.9x	16.5x	15.0x	15.3x	15.5x	14.4x	15.0x	15.2x
Consumer Staples	0.7x	3.5%	20.0x	20.4x	18.8x	20.5x	19.3x	20.0x	20.4x	20.7x	21.8x	21.7x	20.6x	20.8x	20.7x
Healthcare	0.7x	3.2%	21.8x	23.5x	21.9x	23.4x	24.4x	24.0x	23.6x	24.8x	25.1x	25.7x	23.8x	22.7x	22.5x
Information Technology	3.7x	19.2%	19.3x	19.7x	18.2x	19.5x	22.3x	22.8x	23.8x	21.3x	22.2x	22.2x	21.4x	21.9x	23.0x
Telecommunications	(0.4x)	(2.2%)	18.0x	17.9x	16.7x	18.1x	17.0x	18.0x	18.7x	17.7x	17.9x	17.8x	16.8x	17.6x	17.6x
Utilities	2.9x	15.3%	19.0x	19.1x	18.5x	19.3x	20.1x	20.8x	20.8x	19.6x	20.9x	21.4x	21.6x	22.1x	21.9x
Financials	0.1x	0.8%	12.0x	12.2x	10.6x	11.6x	12.1x	11.4x	11.7x	11.2x	11.6x	11.8x	11.3x	11.9x	12.1x

Enterprise Value / LTM EBITDA: October 2018 to October 2019

	Year-Over-Year		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
	Delta	% Delta													
Energy	(3.1x)	(34.0%)	9.0x	8.1x	7.1x	7.6x	7.6x	6.9x	6.8x	6.9x	7.1x	6.9x	6.1x	6.1x	5.9x
Industrials	0.6x	5.7%	10.6x	10.5x	9.7x	10.4x	10.7x	10.6x	11.0x	10.7x	11.4x	11.5x	10.9x	11.2x	11.2x
Materials	1.0x	13.2%	7.8x	7.5x	7.1x	7.9x	8.1x	8.3x	8.5x	7.9x	8.4x	8.8x	8.6x	8.8x	8.9x
Consumer Discretionary	1.5x	14.9%	9.9x	9.9x	8.9x	9.5x	9.6x	9.8x	10.1x	10.5x	11.2x	11.3x	10.8x	11.2x	11.4x
Consumer Staples	0.9x	7.4%	12.2x	12.2x	11.6x	12.2x	12.7x	12.5x	12.1x	12.6x	12.8x	13.1x	13.0x	13.5x	13.1x
Healthcare	(0.4x)	(2.6%)	15.5x	16.3x	14.3x	15.2x	15.6x	15.7x	16.1x	16.2x	15.5x	15.1x	15.8x	15.4x	15.1x
Information Technology	0.8x	5.6%	14.2x	14.1x	12.8x	13.5x	15.1x	14.5x	15.6x	14.4x	14.9x	15.2x	14.5x	14.7x	15.0x
Telecommunications	0.6x	6.6%	9.8x	9.8x	9.0x	9.7x	9.5x	9.8x	10.0x	10.3x	10.6x	11.1x	10.2x	10.3x	10.4x
Utilities	2.0x	17.1%	11.7x	11.8x	11.6x	12.0x	12.6x	12.8x	12.8x	12.4x	13.0x	13.2x	13.5x	13.8x	13.7x

Enterprise Value / NTM EBITDA: October 2018 to October 2019

	Year-Over-Year		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
	Delta	% Delta													
Energy	(0.3x)	(5.1%)	6.1x	5.9x	5.4x	6.2x	6.5x	6.3x	6.2x	5.8x	5.9x	5.9x	5.6x	5.7x	5.8x
Industrials	0.6x	7.3%	8.9x	8.9x	8.1x	8.6x	9.1x	8.9x	9.2x	9.1x	9.5x	9.4x	8.9x	9.2x	9.5x
Materials	1.1x	16.2%	6.7x	6.4x	6.3x	6.9x	7.4x	7.0x	7.0x	6.8x	7.5x	7.7x	7.3x	7.6x	7.8x
Consumer Discretionary	1.7x	20.5%	8.4x	8.6x	7.7x	8.4x	8.5x	8.5x	9.0x	9.3x	9.8x	9.9x	9.6x	10.0x	10.1x
Consumer Staples	(0.2x)	(1.7%)	11.8x	11.4x	10.5x	11.2x	11.5x	11.7x	11.9x	11.8x	12.0x	12.0x	11.8x	11.9x	11.6x
Healthcare	0.2x	1.5%	13.7x	14.1x	13.0x	14.1x	14.4x	14.7x	15.1x	13.8x	15.4x	15.4x	14.7x	14.2x	13.9x
Information Technology	2.2x	19.0%	11.6x	11.6x	10.5x	11.4x	12.7x	12.6x	13.0x	12.4x	12.9x	12.9x	12.4x	13.0x	13.8x
Telecommunications	0.1x	1.2%	9.0x	9.0x	8.1x	9.1x	9.4x	9.4x	9.8x	9.7x	9.6x	9.6x	8.9x	8.9x	9.1x
Utilities	1.0x	9.3%	10.8x	10.8x	10.5x	10.6x	11.0x	11.7x	11.6x	11.4x	11.8x	12.3x	12.0x	12.1x	11.8x

Enterprise Value / LTM Revenue: October 2018 to October 2019

	Year-Over-Year		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
	Delta	% Delta													
Energy	(0.77x)	(27.6%)	2.79x	2.57x	2.24x	2.42x	2.42x	2.42x	2.45x	2.28x	2.22x	2.17x	2.03x	2.15x	2.02x
Industrials	0.01x	0.7%	1.34x	1.34x	1.21x	1.29x	1.35x	1.28x	1.34x	1.29x	1.36x	1.40x	1.35x	1.35x	1.35x
Materials	0.44x	27.5%	1.60x	1.61x	1.62x	1.74x	1.77x	1.78x	1.75x	1.67x	1.83x	2.00x	1.98x	1.94x	2.04x
Consumer Discretionary	0.10x	8.5%	1.18x	1.21x	1.10x	1.21x	1.14x	1.15x	1.18x	1.28x	1.31x	1.29x	1.20x	1.26x	1.28x
Consumer Staples	(0.35x)	(17.1%)	2.05x	2.01x	1.88x	1.96x	1.90x	1.97x	1.91x	1.95x	1.89x	1.99x	1.81x	1.83x	1.70x
Healthcare	(0.16x)	(2.8%)	5.80x	5.96x	5.40x	5.95x	6.32x	6.37x	6.39x	6.39x	6.76x	6.55x	6.13x	6.02x	5.64x
Information Technology	0.24x	10.1%	2.38x	2.32x	2.12x	2.31x	2.53x	2.45x	2.66x	2.53x	2.63x	2.62x	2.63x	2.56x	2.62x
Telecommunications	(0.24x)	(9.0%)	2.67x	2.57x	2.25x	2.47x	2.53x	2.63x	2.65x	2.77x	2.58x	2.55x	2.44x	2.41x	2.43x
Utilities	0.63x	15.3%	4.11x	4.06x	3.96x	4.22x	4.31x	4.36x	4.28x	4.22x	4.46x	4.44x	4.62x	4.72x	4.74x

Merger & Acquisition Advisory
Fairness & Solvency Opinions

Private Placements
Restructuring Advisory

Business & Asset Valuation
ESOP / ERISA Advisory