



**Industry Observations – December 31, 2018** 

**Building Products Industry** 

## Select Building Products Public Company Industry Data As of December 31, 2018

(USD in millions, except per share data)

			Market Data					LTM (	Forward Estimates			
Company Name	Ticker		Price at 12/31/18	% of 52 Week High	Equity Value	Enterprise Value	Debt / Total Capital	Total Assets	LTM Revenue	LTM EBITDA	CY 2018 Revenue Estimate	CY 2018 EBITDA Estimate
Lumber, Millwork, Plyw	ood and	Structural Wood										
American Woodmark												
Corporation	AMWD	NasdaqGS:AMWD	\$55.68	37.5%	\$961.24	\$1,976.37	54.0%	\$1,577.12	\$1,552.52	\$219.58	\$1,717.40	\$261.89
Fortune Brands Home & Security, Inc.	FBHS	NYSE:FBHS	\$37.99	51.6%	\$5,371.97	\$8,781.15	51.7%	\$5,964.60	\$5,485.10	\$851.50	\$5,833.09	\$929.27
					4-7	4-7		*-/	1-7		*-/	
Trex Company, Inc.	TREX	NYSE:TREX	\$59.36	65.4%	\$3,487.65	\$4,457.89	0.0%	\$434.91	\$666.49	\$188.08	\$743.76	\$218.19
Builders FirstSource, Inc.	BLDR	NasdaqGS:BLDR	\$10.91	46.9%	\$1,251.65	\$3,362.81	77.4%	\$3,193.59	\$7,687.73	\$437.98	\$7,628.25	\$480.23
Universal Forest Products,												
Inc.	UFPI	NasdaqGS:UFPI	\$25.96	65.9%	\$1,600.59	\$2,145.77	16.6%	\$1,677.17	\$4,467.09	\$253.46	\$4,733.88	\$294.64
Refrigeration and Heati	ng Equij	pment										
AAON, Inc.	AAON	NasdaqGS:AAON	\$35.06	78.1%	\$1,826.43	\$2,027.78	0.0%	\$314.02	<b>\$</b> 425.77	\$74.46	\$500.45	\$115.95
mort, me.	HON	rvasuaqO5.221O1V	¥33.00	70.170	\$1,020.45	42,027.70	0.070	<b>\$314.02</b>	g123.77	\$74.40	¥300.43	ψ113.73
Lennox International Inc.	LII	NYSE:LII	\$218.86	94.9%	\$8,816.40	\$10,846.68	116.8%	\$1,817.20	\$3,883.90	\$564.10	\$3,904.39	\$738.56
Masco Corporation	MAS	NYSE:MAS	\$29.24	63.0%	\$8,932.77	\$13,549.23	97.7%	\$5,393.00	\$8,359.00	\$1,393.00	\$8,628.76	\$1,455.82
A. O. Smith Corporation	AOS	NYSE:AOS	\$42.70	62.4%	\$7,256.91	\$8,315.28	11.4%	\$3,071.50	\$3,187.90	\$623.60	\$3,229.76	\$661.26
Roofing, Siding and Isu	lation											
Owens Corning	ос	NYSE:OC	\$43.98	45.6%	<b>\$</b> 4,807.88	\$9,481.17	46.6%	\$10,046.00	\$6,939.00	\$1,117.00	\$7,232.26	\$1,379.41
Armstrong World			4.0.70	,	* 1,001100	47,102121	101071	410,01010	40,000,000	41,111110	ų.,ueu.ue	41,0
Industries, Inc.	AWI	NYSE:AWI	\$58.21	79.3%	\$2,885.25	\$3,938.31	71.4%	\$2,002.50	\$950.70	\$268.50	\$1,046.19	\$387.27
USG Corporation	USG	NYSE:USG	\$42.66	98.1%	\$5,961.98	\$6,722.26	36.0%	\$3,842.00	\$3,336.00	\$377.00	\$3,570.50	\$649.27
Windows and Doors												
Griffon Corporation	GFF	NYSE:GFF	\$10.45	44.4%	\$455.45	\$1,894.14	71.0%	\$2,074.79	\$2,051.14	\$173.83	\$2,213.61	\$190.29
PGT Innovations, Inc.	PGTI	NYSE:PGTI	<b>\$</b> 15.85	60.0%	\$918.35	\$1,371.00	49.9%	\$860.54	\$642.71	\$113.81	\$813.07	\$164.18
Masonite International	1011	NISEIGH	¥15.05	00.070	ψ210.55	\$1,571.00	47.770	¥000.51	g012.71	\$115.01	ψ013.07	ψ101.10
Corporation		NYSE:DOOR	\$44.83	59.6%	\$1,188.92	\$2,120.73	53.1%	\$1,851.49	\$2,150.25	\$258.07	\$2,283.77	\$293.10
Quanex Building Products Corporation	NX	NYSE:NX	\$13.59	57.6%	\$453.08	\$744.98	34.8%	\$741.85	\$889.79	\$89.68	\$930.40	\$101.87
Building Products - Other												
Gibraltar Industries, Inc.	ROCK	NasdaqGS:ROCK	\$35.59	72.5%	\$1,129.77	\$1,162.82	26.5%	\$1,053.79	\$1,019.57	\$123.60	\$1,054.80	\$134.50
Total Allertin T			604.00	EE E6/	846672	6407.70	0.007	6244 42	6450.50	#F2.07	6402.44	854.00
Insteel Industries, Inc. Simpson Manufacturing	IIIN	NasdaqGS:IIIN	\$24.28	55.5%	\$466.72	\$407.79	0.0%	\$311.43	\$459.59	\$53.27	\$483.41	\$51.02
Co., Inc.	SSD	NYSE:SSD	\$54.13	69.1%	\$2,488.24	\$2,591.49	0.2%	\$1,021.65	\$1,078.81	\$211.04	\$1,144.53	\$240.32

 $Notes: LTM\ (latest\ twelve\ months); Enterprise\ Value\ (market\ capitalization\ less\ total\ cash\ and\ short-term\ investments\ plus\ short-term\ borrowings\ and\ total\ long-term\ debt); less than the capitalization\ less\ total\ cash\ and\ short-term\ investments\ plus\ short-term\ borrowings\ and\ total\ long-term\ debt); less\ capitalization\ less\ total\ cash\ and\ short-term\ investments\ plus\ short-term\ borrowings\ and\ total\ long-term\ debt); less\ capitalization\ less\ total\ cash\ and\ short-term\ investments\ plus\ short-term\ borrowings\ and\ total\ long-term\ debt); less\ capitalization\ capitalization\ capitalization\ capitalization\ capitalization\ ca$ 

 $EBITDA\ (earnings\ before\ interest,\ taxes,\ depreciation\ and\ amortization)$ 

Source: Capital IQ

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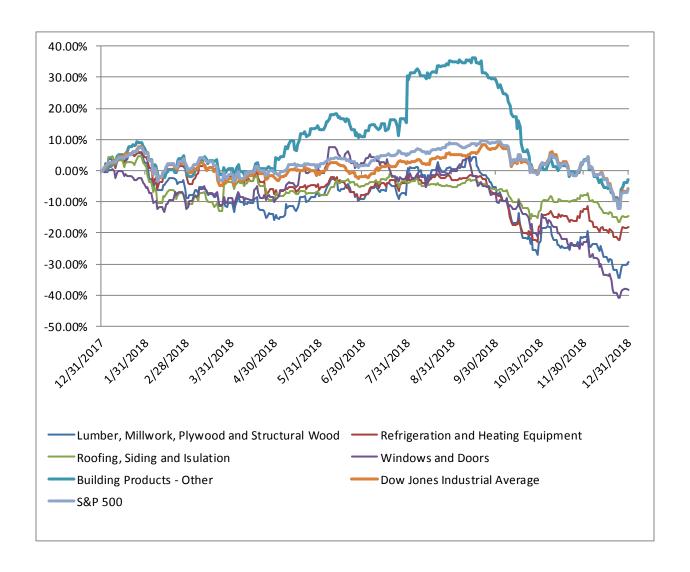
## Select Building Products Public Company Valuation Metrics As of December 31, 2018

(USD in millions, except per share data)

Return   R		LTM Operating Statistics											
Campany Name   Ticker   Asset   Equity   Capital   Growth   Sarpita   Growth   Sarpita   Growth   Sarpita   Sarpit			Return			-			TEV/		_	TEV/	
Lumber, Milwork, Plywood and Structural Wood   Marcina Mood milk   Marcina Mood milk			On	On	On	Revenue	<b>EBITDA</b>	<b>EBITDA</b>	LTM	CY 2018	LTM	CY 2018	
American Woodmark Corporation ANVD 8.6% 13.0% 10.3% 46.5% 72.9% 14.1% 1.x 1.x 2x 9.0% 7.5x Fortune Bands Home & Security, Inc. FIFHS 7.7% 16.3% 10.3% 3.8% 0.0% 15.5% 16.0x 15.x 10.3x 9.4x Trex Company, Inc. FIREX 28.5% 47.3% 39.4% 23.8% 23.4% 28.2% 6.7x 6.0x 23.7% 20.4x Banders FairsSource, Inc. BLDR 6.8% 23.2% 9.2% 13.0% 18.0% 5.7% 0.4x 0.4x 7.7x 7.0x Universal Forest Products, Inc. Home UPPI 7.7% 15.1% 10.0% 16.5% 11.0% 5.7% 0.5x 0.5x 8.5x 7.3x Metan 17.9% 23.0% 15.8% 20.7% 23.1% 13.5% 12.x 19.x 11.8x 10.3x Metan 7.7% 16.3% 10.3% 16.5% 18.0% 17.7% 13.5% 23.1% 12.x 19.x 11.8x 10.3x Metan 7.7% 16.3% 10.3% 16.5% 18.0% 17.4% 13.7% 2.2x 19.x 12.x 19.x 11.8x 10.3x Refrigeration and Heating Equipment  AAON, Inc. AAON 11.7% 19.1% 15.0% 8.4% 17.4% 17.9% 48x 41x 27.2x 17.5x Lemnox International Inc. LII 16.8% N/A 32.0% 12.9% 24.5% 14.9% 28.0 2.8x 28.x 19.2x 14.7x Masco Cooporation MAS 14.2% 622.2% 24.5% 9.49% 7.6% 16.7% 16.7% 16.x 16.x 9.7x 9.5x A.O. Smith Corporation AOS 11.0% 26.4% 17.3% 6.4% 5.6% 19.6% 26.x 26.x 13.3x 12.6x Metan 13.4% 222.2.6% 22.2% 6.3% 0.4% 17.1% 2.2x 2.7x 2.7x 16.3x 13.5x Metan 14.2% 22.2.6% 22.2.7% 0.4% 0.4% 17.1% 2.2x 2.7x 2.7x 16.3x 13.5x Metan 14.2% 63.4% 20.9% 7.4% 0.4% 17.1% 2.2x 2.7x 2.7x 16.3x 13.5x Metan 14.2% 10.3% 10.4% 63.9% 10.4% 10.4% 13.7% 12.6x 2.2x 2.7x 16.3x 13.5x 12.6x Modian 44.2% 26.4% 20.9% 7.4% 30.0% 16.1% 12.6% 22.2% 11.3% 12.6x 2.2x 2.7x 16.3x 13.5x 12.6x Modian 4.2% 30.4% 22.6% 22.7% 3.3% 10.4% 12.6% 22.2% 12.7% 22.7x 2.7x 16.3x 13.5x 12.6x Modian 4.7% 10.3% 61.0% 12.6% 3.2% 16.1% 12.6% 22.2x 12.x 1.7x 12.0x 8.4x Modian 4.7% 10.3% 61.0% 12.6% 3.3.2% 16.1% 12.0% 10.0x 0.9x 9.6x 7.5x  Windows and Doors  Windows and Doors  Windows and Doors  Geff 3.4% 4.2% 4.4% 27.4% 3.6% 4.7% 12.0% 10.0x 0.9x 9.6x 7.5x  Metan 5.4% 14.7% 6.6% 3.8% 2.7% 3.0% 10.1% 0.0x 0.9x 9.6x 7.5x  Modian 4.9% 14.7% 6.6% 13.8% 2.7% 3.0% 10.1% 0.0x 0.9x 9.6x 7.5x  Modian 4.9% 14.7% 6.6% 13.8% 2.7% 3.0% 10.1% 0.0x 0.9x 9.6x 7.5x  Windows and Doors  Geff 3.4% 4.2% 4.4% 12.5% 10.4% 12.6% 13.0% 10.1% 0.0x 0.9	Company Name	Ticker	Assets	Equity	Capital	Growth	Growth	Margin	Revenue	Revenue	<b>EBITDA</b>	<b>EBITDA</b>	
Carponation   AAIWD   8 %   13 0%   103 %   46 5%   12 9%   14 1%   1.3x   1.2x   9 0x   7.5x	Lumber, Millwork, Plywo	od and Str	uctural Woo	1									
Fortuse Branch Home & Security, Inc.   FBHS   7.7%   16.3%   10.3%   3.8%   0.0%   15.5%   1.6x   1.5x   10.3x   9.4x	American Woodmark												
Secunty, Inc.   FBHS   7,7%   16.3%   10.3%   3.8%   0.0%   15.5%   1.6x   1.5x   10.3x   9.4x	Corporation	AMWD	8.6%	13.0%	10.3%	46.5%	72.9%	14.1%	1.3x	1.2x	9.0x	7.5x	
Balders FirstSource, Inc.   TREX   28.5%   47.3%   39.4%   23.8%   23.4%   28.2%   6.7%   6.0%   23.7%   20.4%	Fortune Brands Home &												
Balder FirstSource, Inc.   BLDR   6.8%   23.2%   9.2%   13.0%   18.0%   5.7%   0.4%   0.4%   7.7%   7.0%   7.0%   1.0%	Security, Inc.	FBHS	7.7%	16.3%	10.3%	3.8%	0.0%	15.5%	1.6x	1.5x	10.3x	9.4x	
Balder FirstSource, Inc.   BLDR   6.8%   23.2%   9.2%   13.0%   18.0%   5.7%   0.4%   0.4%   7.7%   7.0%   1.0%													
Carresta Forest Products,   Inc.   LiP   7.7%   15.1%   10.0%   16.5%   11.0%   5.7%   0.5x   0.5x   8.5x   7.3x   10.3x   1.18x   10.3x   1.2x   9.0x   7.5x   16.3%   10.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x   7.5x   16.3%   10.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x   7.5x   16.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x	Trex Company, Inc.	TREX	28.5%	47.3%	39.4%	23.8%	23.4%	28.2%	6.7x	6.0x	23.7x	20.4x	
Carresta Forest Products,   Inc.   LiP   7.7%   15.1%   10.0%   16.5%   11.0%   5.7%   0.5x   0.5x   8.5x   7.3x   10.3x   1.18x   10.3x   1.2x   9.0x   7.5x   16.3%   10.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x   7.5x   16.3%   10.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x   7.5x   16.3%   10.3%   16.5%   18.0%   14.1%   13.x   1.2x   9.0x   7.5x	D.74 D. 10	DIDD		22.22/	0.00/	42.00/	40.00/	5.70/	0.4	0.4		7.0	
Inc.   UFP		BLDR	6.8%	23.2%	9.2%	13.0%	18.0%	5.7%	0.4x	0.4x	/./x	7.0x	
Mean   119%   230%   158%   207%   251%   139%   21x   19x   118x   103x   12x   9.0x   7.5x		LIEDI	7 70/	15 10/	10.09/	16 50/	11.00/	5 70/	0.5	0.5**	0 5	7 2	
Median   7.7%   16.3%   10.3%   16.5%   18.0%   14.1%   1.3x   1.2x   9.0x   7.5x	inc.												
Refrigeration and Heating Equipment													
AAON, Inc.   AAON   11.7%   19.1%   15.0%   8.4%   -17.1%   17.5%   4.8x   4.1x   27.2x   17.5x		Median	1.170	10.570	10.570	10.570	10.070	14.170	1.3X	1.ZX	9.0X	7.5X	
Lennox International Inc.   LII	Refrigeration and Heatin	g Equipme	nt										
Lennox International Inc	AAON Ing	AAONT	11 70/	10 10/	1 F O 0 /	0.407	17.10/	17 50/	4.0	A 4	07.0	17.5	
Masco Corporation MAS 14.2% 622.2% 24.5% 9.4% 7.6% 16.7% 16.8 1.6x 9.7x 9.3x  A. O. Smith Corporation AOS 11.0% 26.4% 17.3% 6.4% 5.6% 19.6% 26.8 2.6x 13.3x 12.6x  Mean 13.4% 222.6% 22.2% 6.3% -0.4% 17.1% 2.9x 2.7x 17.4x 13.5x  Median 14.2% 26.4% 20.9% 7.4% 4.0% 17.1% 2.7x 2.7x 16.3x 13.6x  Roofing, Siding and Isulation  Ovens Corning OC 4.7% 9.0% 6.1% 12.6% -3.2% 16.1% 1.4x 1.3x 8.5x 6.9x  Amstrong World  Industries, Inc. AWI 6.5% 73.8% 10.4% 63.9% 16.7% 28.2% 4.1x 3.8x 14.7x 10.2x  Mean 5.0% 31.0% 7.1% 26.9% -3.2% 16.1% 2.0x 1.9x 17.8x 10.4x  Mean 5.0% 31.0% 7.1% 26.9% -3.2% 16.1% 2.0x 1.9x 17.8x 10.4x  Median 4.7% 10.3% 6.1% 12.6% -3.2% 16.1% 2.0x 1.9x 14.7x 10.2x  Windows and Doors  Griffon Corporation GFF 3.4% 4.2% 4.4% 27.4% 36.0% 8.5% 0.9x 0.9x 10.9x 14.7x 10.2x  Windows and Doors  Griffon Corporation DOOR 6.3% 22.8% 7.9% 7.2% 13.0% 12.0% 10.0x 0.9x 8.2x 7.2x  Quanter Building Products  Corporation NX 3.1% 6.6% 3.8% 2.7% -3.0% 10.1% 0.8x 0.8x 8.3x 7.3x  Mean 5.4% 14.7% 6.6% 3.8% 2.7% -3.0% 10.1% 0.8x 0.8x 8.3x 7.3x  Median 4.9% 14.7% 6.6% 17.4% 24.7% 12.1% 1.1x 1.1x 9.4x 8.6x  Building Products - Other  Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 12.1% 1.1x 1.1x 9.4x 8.6x  Instel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x  Instel Industries, Inc. IIIN 8.5% 14.1% 11.0% 12.0% 12.2% 19.6% 2.4x 2.3x 12.3x 10.8x  Mean 8.4% 14.3% 10.0% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x	AAON, IIIC.	AAUN	11./%	19.1%	13.0%	8.4%	-1/.1%	1/.5%	4.8X	4.1X	27.2x	1 / . X	
A O. Smith Corporation AOS 11.0% 26.4% 17.3% 6.4% 5.6% 19.6% 2.6x 2.6x 13.3x 12.6x Mean 13.4% 222.6% 22.2% 6.3% -0.4% 17.1% 2.9x 2.7x 17.4x 13.5x Median 14.2% 26.4% 20.9% 7.4% 4.0% 17.1% 2.9x 2.7x 17.4x 13.5x 13.6x Roofing, Siding and Isulation    Common	Lennox International Inc.	LII	16.8%	N/A	32.0%	1.2%	2.5%	14.5%	2.8x	2.8x	19.2x	14.7x	
A O. Smith Corporation AOS 11.0% 26.4% 17.3% 6.4% 5.6% 19.6% 2.6x 2.6x 13.3x 12.6x Mean 13.4% 222.6% 22.2% 6.3% -0.4% 17.1% 2.9x 2.7x 17.4x 13.5x Median 14.2% 26.4% 20.9% 7.4% 4.0% 17.1% 2.9x 2.7x 17.4x 13.5x 13.6x Roofing, Siding and Isulation    Common		2516		(00.00:	0.50		= ***	4					
Mean   13.4%   222.6%   22.2%   6.3%   -0.4%   17.1%   2.9x   2.7x   17.4x   13.5x   Median   14.2%   26.4%   20.9%   7.4%   4.0%   17.1%   2.7x   2.7x   16.3x   13.6x   13	Masco Corporation	MAS	14.2%	622.2%	24.5%	9.4%	7.6%	16.7%	1.6x	1.6x	9.7x	9.3x	
Mean   13.4%   222.6%   22.2%   6.3%   -0.4%   17.1%   2.9x   2.7x   17.4x   13.5x   Median   14.2%   26.4%   20.9%   7.4%   4.0%   17.1%   2.7x   2.7x   16.3x   13.6x   13	A. O. Smith Corporation	AOS	11.0%	26.4%	17.3%	6.4%	5.6%	19.6%	2.6x	2.6x	13.3x	12.6x	
Composition	·	Mean							2.9x				
Owens Coming		Median	14.2%	26.4%	20.9%	7.4%	4.0%	17.1%	2.7x	2.7x	16.3x	13.6x	
Amstrong World   Industries, Inc.   AWT   6.5%   73.8%   10.4%   63.9%   16.7%   28.2%   4.1x   3.8x   14.7x   10.2x	Roofing, Siding and Isula	ıtion											
Amstrong World   Industries, Inc.   AWT   6.5%   73.8%   10.4%   63.9%   16.7%   28.2%   4.1x   3.8x   14.7x   10.2x													
Industries, Inc.   AWI   6.5%   73.8%   10.4%   63.9%   16.7%   28.2%   4.1x   3.8x   14.7x   10.2x		OC	4.7%	9.0%	6.1%	12.6%	-3.2%	16.1%	1.4x	1.3x	8.5x	6.9x	
USG Corporation USG 3.7% 10.3% 4.8% 4.1% -24.4% 11.3% 2.0x 1.9x 17.8x 10.4x Mean 5.0% 31.0% 7.1% 26.9% -3.7% 18.5% 2.5x 2.3x 13.7x 9.1x Median 4.7% 10.3% 6.1% 12.6% -3.2% 16.1% 2.0x 1.9x 14.7x 10.2x    Windows and Doors  Windows and Doors  Giffon Corporation GFF 3.4% 4.2% 4.4% 27.4% 36.0% 8.5% 0.9x 0.9x 10.9x 10.0x 10.0x    PGT Innovations, Inc. PGTI 8.9% 24.0% 10.4% 32.1% 52.7% 17.7% 2.1x 1.7x 12.0x 8.4x    Masonite International Corporation DOOR 6.3% 22.8% 7.9% 7.2% 13.0% 12.0% 1.0x 0.9x 8.2x 7.2x    Quanex Building Products    Corporation NX 3.1% 6.6% 3.8% 2.7% -3.0% 10.1% 0.8x 0.8x 8.3x 7.3x    Mean 5.4% 14.4% 6.6% 17.4% 24.7% 12.1% 1.2x 1.1x 9.9x 8.2x    Median 4.9% 14.7% 6.2% 17.3% 24.5% 11.0% 1.0x 0.9x 9.6x 7.8x    Building Products - Other  Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 12.1% 1.1x 1.1x 9.4x 8.6x    Insteel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x    Simpson Manufacturing Co., Inc. SSD 10.5% 14.9% 12.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 14.4x 9.8x 9.1x    Mascard State St	~	A XV/T	€ E0/	72 00/	10.49/	63.09/	16 70/	20.20/	11	2 0	147	10.2	
Mean	industries, inc.	AWI	0.5%	/3.070	10.470	03.970	10.770	20.270	4.1X	3.0X	14./X	10.2X	
Mean	USG Corporation	USG	3 7%	10.3%	4.8%	4 1%	-24 4%	11.3%	2.0x	1 9x	17.8x	10 4x	
Windows and Doors         Windows and Doors           Griffon Corporation         GFF         3.4%         4.2%         4.4%         27.4%         36.0%         8.5%         0.9x         0.9x         10.9x         10.0x           PGT Innovations, Inc.         PGTI         8.9%         24.0%         10.4%         32.1%         52.7%         17.7%         2.1x         1.7x         12.0x         8.4x           Masonite International         Corporation         DOOR         6.3%         22.8%         7.9%         7.2%         13.0%         12.0%         1.0x         0.9x         8.2x         7.2x           Quanex Building Products         Corporation         NX         3.1%         6.6%         3.8%         2.7%         -3.0%         10.1%         0.8x         0.8x         8.3x         7.3x           Quanex Building Products         Corporation         NX         3.1%         6.6%         3.8%         2.7%         -3.0%         10.1%         0.8x         0.8x         8.3x         7.3x           Mean         5.4%         14.4%         6.6%         17.4%         24.7%         12.1%         1.2x         1.1x         9.9x         9.6x         7.8x <td rowspan<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td>	<td></td>												
Griffon Corporation         GFF         3.4%         4.2%         4.4%         27.4%         36.0%         8.5%         0.9x         0.9x         10.9x         10.0x           PGT Innovations, Inc.         PGTI         8.9%         24.0%         10.4%         32.1%         52.7%         17.7%         2.1x         1.7x         12.0x         8.4x           Masonite International         Corporation         DOOR         6.3%         22.8%         7.9%         7.2%         13.0%         12.0%         1.0x         0.9x         8.2x         7.2x           Quanex Building Products         Corporation         NX         3.1%         6.6%         3.8%         2.7%         -3.0%         10.1%         0.8x         0.8x         8.3x         7.3x           Mean         5.4%         14.4%         6.6%         17.4%         24.7%         12.1%         1.2x         1.1x         9.9x         8.2x           Building Products - Other           Gibraltar Industries, Inc.         ROCK         6.3%         13.9%         8.5%         6.1%         6.1%         12.1%         1.1x         1.1x         9.4x         8.6x           Insteel Industries, Inc.         IIIN													
Griffon Corporation         GFF         3.4%         4.2%         4.4%         27.4%         36.0%         8.5%         0.9x         0.9x         10.9x         10.0x           PGT Innovations, Inc.         PGTI         8.9%         24.0%         10.4%         32.1%         52.7%         17.7%         2.1x         1.7x         12.0x         8.4x           Masonite International         Corporation         DOOR         6.3%         22.8%         7.9%         7.2%         13.0%         12.0%         1.0x         0.9x         8.2x         7.2x           Quanex Building Products         Corporation         NX         3.1%         6.6%         3.8%         2.7%         -3.0%         10.1%         0.8x         0.8x         8.3x         7.3x           Mean         5.4%         14.4%         6.6%         17.4%         24.7%         12.1%         1.2x         1.1x         9.9x         8.2x           Building Products - Other           Gibraltar Industries, Inc.         ROCK         6.3%         13.9%         8.5%         6.1%         6.1%         12.1%         1.1x         1.1x         9.4x         8.6x           Insteel Industries, Inc.         IIIN	W. I I I												
PGT Innovations, Inc. PGTI 8.9% 24.0% 10.4% 32.1% 52.7% 17.7% 2.1x 1.7x 12.0x 8.4x Masonite International  Corporation DOOR 6.3% 22.8% 7.9% 7.2% 13.0% 12.0% 1.0x 0.9x 8.2x 7.2x Quanex Building Products  Corporation NX 3.1% 6.6% 3.8% 2.7% -3.0% 10.1% 0.8x 0.8x 8.3x 7.3x Mean 5.4% 14.4% 6.6% 17.4% 24.7% 12.1% 1.2x 1.1x 9.9x 8.2x Median 4.9% 14.7% 6.2% 17.3% 24.5% 11.0% 1.0x 0.9x 9.6x 7.8x   Building Products - Other  Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 12.1% 11.1x 1.1x 9.4x 8.6x Insteel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x Simpson Manufacturing Co., Inc. SSD 10.5% 14.9% 12.3% 10.6% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x	Windows and Doors												
Masonite International   Corporation   DOOR   6.3%   22.8%   7.9%   7.2%   13.0%   12.0%   1.0x   0.9x   8.2x   7.2x	Griffon Corporation	GFF	3.4%	4.2%	4.4%	27.4%	36.0%	8.5%	0.9x	0.9x	10.9x	10.0x	
Masonite International   Corporation   DOOR   6.3%   22.8%   7.9%   7.2%   13.0%   12.0%   1.0x   0.9x   8.2x   7.2x	PCT Innovations Inc	DCTI	Q 00/ <sub>-</sub>	24.0%	10.4%	32 10/-	52 70/	17 70/	2.1-	1 7e	12.0	Q /1vr	
Corporation		rGII	0.970	24.070	10.470	32.170	32.170	17.770	Z.1X	1./X	12.0X	0.4%	
Quanex Building Products           Corporation         NX         3.1%         6.6%         3.8%         2.7%         -3.0%         10.1%         0.8x         0.8x         8.3x         7.3x           Mean         5.4%         14.4%         6.6%         17.4%         24.7%         12.1%         1.2x         1.1x         9.9x         8.2x           Median         4.9%         14.7%         6.2%         17.3%         24.5%         11.0%         1.0x         0.9x         9.6x         7.8x           Building Products - Other           Gibraltar Industries, Inc.         ROCK         6.3%         13.9%         8.5%         6.1%         6.1%         12.1%         1.1x         1.1x         9.4x         8.6x           Insteel Industries, Inc.         IIIN         8.5%         14.1%         11.0%         17.8%         11.6%         0.9x         0.8x         7.7x         8.0x           Simpson Manufacturing           Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%<		DOOR	6.3%	22.8%	7 9%	7 2%	13.0%	12.0%	1.0x	0.9x	8.2x	7.2x	
Corporation         NX         3.1% 6.6% 3.8% 2.7% -3.0% 10.1% 0.8x 0.8x 0.8x 8.3x 7.3x           Mean 5.4% 14.4% 6.6% 17.4% 24.7% 12.1% 1.2x 1.1x 9.9x 8.2x Median 4.9% 14.7% 6.2% 17.3% 24.5% 11.0% 1.0x 0.9x 9.6x 7.8x           Building Products - Other           Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 6.1% 12.1% 1.1x 1.1x 9.4x 8.6x           Insteel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x           Simpson Manufacturing Co., Inc. SSD 10.5% 14.9% 12.3% 10.6% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x		DOOR	0.570	22.070	1.270	7.270	15.070	12.070	1.04	0.71	0.24	7.2A	
Mean         5.4%         14.4%         6.6%         17.4%         24.7%         12.1%         1.2x         1.1x         9.9x         8.2x           Median         4.9%         14.7%         6.2%         17.3%         24.5%         11.0%         1.0x         0.9x         9.6x         7.8x           Building Products - Other           Gibraltar Industries, Inc.         ROCK         6.3%         13.9%         8.5%         6.1%         6.1%         12.1%         1.1x         1.1x         9.4x         8.6x           Insteel Industries, Inc.         IIIN         8.5%         14.1%         11.0%         17.0%         17.8%         11.6%         0.9x         0.8x         7.7x         8.0x           Simpson Manufacturing         20.7         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x	-	NX	3.1%	6.6%	3.8%	2.7%	-3.0%	10.1%	0.8x	0.8x	8.3x	7.3x	
Median         4.9%         14.7%         6.2%         17.3%         24.5%         11.0%         1.0x         0.9x         9.6x         7.8x           Building Products - Other           Gibraltar Industries, Inc.         ROCK         6.3%         13.9%         8.5%         6.1%         6.1%         12.1%         1.1x         1.1x         9.4x         8.6x           Insteel Industries, Inc.         IIIN         8.5%         14.1%         11.0%         17.0%         17.8%         11.6%         0.9x         0.8x         7.7x         8.0x           Simpson Manufacturing         Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x	<b>-</b>												
Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 12.1% 1.1x 1.1x 9.4x 8.6x  Insteel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x  Simpson Manufacturing  Co., Inc. SSD 10.5% 14.9% 12.3% 10.4% 22.2% 19.6% 2.4x 2.3x 12.3x 10.8x  Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x													
Gibraltar Industries, Inc. ROCK 6.3% 13.9% 8.5% 6.1% 6.1% 12.1% 1.1x 1.1x 9.4x 8.6x  Insteel Industries, Inc. IIIN 8.5% 14.1% 11.0% 17.0% 17.8% 11.6% 0.9x 0.8x 7.7x 8.0x  Simpson Manufacturing  Co., Inc. SSD 10.5% 14.9% 12.3% 10.4% 22.2% 19.6% 2.4x 2.3x 12.3x 10.8x  Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x													
Insteel Industries, Inc.         IIIN         8.5%         14.1%         11.0%         17.0%         17.8%         11.6%         0.9x         0.8x         7.7x         8.0x           Simpson Manufacturing         Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x	Building Products - Othe	ſ											
Simpson Manufacturing         Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x	Gibraltar Industries, Inc.	ROCK	6.3%	13.9%	8.5%	6.1%	6.1%	12.1%	1.1x	1.1x	9.4x	8.6x	
Simpson Manufacturing         Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x	Insteel Industries, Inc	IIIN	8.5%	14 1%	11 0%	17.0%	17.8%	11.6%	0.9v	0.85	7 7 <b>v</b>	8 Ov	
Co., Inc.         SSD         10.5%         14.9%         12.3%         10.4%         22.2%         19.6%         2.4x         2.3x         12.3x         10.8x           Mean         8.4%         14.3%         10.6%         11.2%         15.4%         14.4%         1.5x         1.4x         9.8x         9.1x			0.070	- 1.270		17.070	17.570	-2.0/0	U.7A	U.5A	,.,A	0.0A	
Mean 8.4% 14.3% 10.6% 11.2% 15.4% 14.4% 1.5x 1.4x 9.8x 9.1x		SSD	10.5%	14.9%	12.3%	10.4%	22.2%	19.6%	2.4x	2.3x	12.3x	10.8x	
			8.5%	14.1%	11.0%	10.4%		12.1%	1.1x				

Notes: LTM (latest twelve months); NTM (next twelve months); EBITDA (earnings before interest, taxes, depreciation and amortization); TEV (total enterprise value) Source: Capital IQ

### Building Products Public Company LTM Equity Performance As of December 31, 2018



Note: The indices are derived from the equity performance of the previously listed companies. Source: Capital IQ

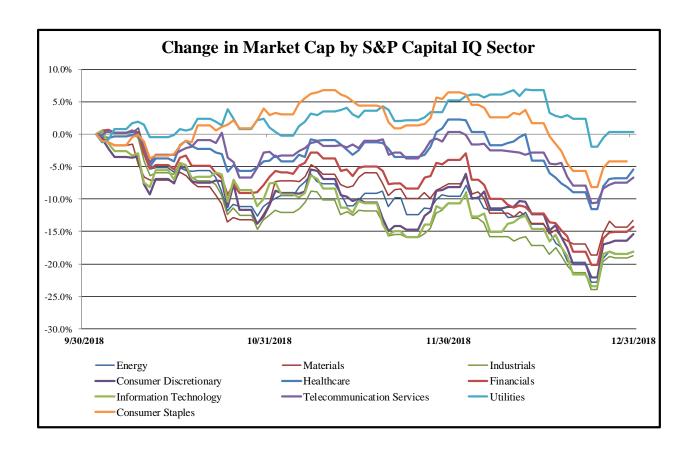
# Recent M&A Activity in the Building Products Industry December 31, 2017 to December 31, 2018

(USD in millions)

			Target Company Primary	Implied
Close Date	Target	Acquirer	Industry	Enterprise Value
11/16/2018	Ply Gem Parent, LLC	NCI Building Systems, Inc.	Building Products	\$3,606.47
6/20/2018	Ash Grove Cement Company	CRH plc	Construction Materials	\$3,500.00
4/12/2018	Ply Gem Midco, Inc.	Clayton, Dubilier & Rice, Inc.	Building Products	\$2,260.61
4/27/2018	Bluegrass Materials Company, LLC	Martin Marietta Materials, Inc.	Construction Materials	\$1,625.00
12/13/2018	Plants & Paving Division of The Lane Construction Corporation	Eurovia (SA)	Construction Materials	\$555.00
8/13/2018	WWS Acquisition, LLC	PGT Innovations, Inc.	Building Products	\$360.00
12/5/2018	ACG Materials, LLC	Arcosa, Inc.	Construction Materials	\$315.00
3/29/2018	Lehigh White Cement Company	CEMEX, Inc.; Aalborg Cement Company Inc.	Construction Materials	\$275.69
10/15/2018	Silver Line Division of Andersen Corporation	Ply Gem Midco, Inc.	Building Products	\$190.00
6/4/2018	CornellCookson, Inc.	Clopay Building Products Company, Inc.	Building Products	\$180.00
7/2/2018	ATCO Rubber Products, Inc.	Mueller Industries, Inc.	Building Products	\$162.80
7/2/2018	US Concrete & Quarries Business of Boral Limited	Brannan Sand and Gravel Company, LLC	Construction Materials	\$127.00
6/24/2018	Ready Mix Concrete Operations and Transportation Assets of	CRH plc	Construction Materials	\$118.50
11/23/2018	Glen-Gery Corporation	Brickworks Limited	Construction Materials	\$110.00
6/24/2018	Trident Cement Plant in Three Forks, Montana	Grupo Cementos de Chihuahua, S.A.B. de C.V.	Construction Materials	\$107.42
3/15/2018	Ashland Products Inc.	Amesbury Group Inc.	Building Products	\$101.00
12/31/2018	Armstrong Wood Products, Inc.	American Industrial Partners	Building Products	\$100.00
5/21/2018	Four Asphalt Terminal Assets and 50% Interest in the Paramount-	Andeavor	Construction Materials	\$75.00
12/3/2018	Arran Isle, Inc.	Patrick Industries, Inc.	Building Products	\$54.00
9/5/2018	North American Business of Uponor Infra Oy	Wynnchurch Capital, LLC	Building Products	\$47.36
9/3/2018	Concrete Specialties, Inc.	Oldcastle Infrastructure	Construction Materials	\$46.60
3/30/2018	FlyAsh Beneficiation and Mineral Grinding Technologies of SCB	Charah Solutions, Inc.	Construction Materials	\$35.00
1/2/2018	Blue Diamond Industries, LLC	Hexatronic Group AB (publ)	Building Products	\$23.00
5/4/2018	Certain Assets of Popple Construction, Inc. and Pioneer	New Enterprise Stone & Lime Co., Inc.	Construction Materials	\$22.30
12/19/2018	Wolf Paving & Excavating Of Madison, Inc.	N/A	Building Products	NA
12/18/2018	Independence Materials Group/KBH Management Software	Groundworks Companies	Building Products	NA NA
12/17/2018	Avanti Industries, LLC	Pella Corporation	Building Products	NA NA
12/17/2018	Noke, Inc./ Active Supply and Design (CDM) Ltd	•		NA NA
		Janus International Group, LLC	Building Products	
12/3/2018	Brooks Products, Inc.	Jensen Enterprises, Inc.	Building Products	NA NA
11/21/2018	Valley Precast, Inc.	Oldcastle Infrastructure	Construction Materials	NA NA
11/19/2018	Tri County Concrete, LLC	Sunroc Corporation	Construction Materials	NA NA
11/15/2018	Washtenaw Door & Trim, Inc.	Mans Lumber and Millwork	Building Products	NA NA
6/30/2018	Willow Oak Stone Quarry (nka:Luck Stone Kershaw Plant)	Luck Stone Corporation	Construction Materials	NA NA
11/9/2018	Northeast Building Products Corporation	Harvey Industries, Inc.	Building Products	NA
11/6/2018	Concrete Fibers Business of Propex Holding, LLC	Sika AG	Construction Materials	NA
11/6/2018	HomeRight, Inc.	Wagner SprayTech Corp.	Building Products	NA
11/6/2018	Rillito River Solar, LLC	Esdec B.V.	Building Products	NA
10/31/2018	Gyford Productions, LLC	Rowmark, LLC	Building Products	NA
10/25/2018	Superior Mason Products LLC	Latium USA Trading, Inc.	Building Products	NA
10/22/2018	Custom Glass Solutions LLC	Stellex Capital Management LP	Construction Materials	NA
10/18/2018	Dan Copp Crushing Corp./Karandan Enterprises Inc.	North American Recycling and Crushing, LLC	Construction Materials	NA
10/19/2018	Truss Systems, Inc. (nka:Drexel Truss Systems)	Drexel Building Supply, Inc.	Building Products	NA
10/16/2018	Woon-Tech, Inc.	Hoskin & Muir, Inc.	Construction Materials	NA
10/11/2018	Indiana Limestone Company, Inc.	Polycor Inc.	Construction Materials	NA
10/8/2018	Shur-Line LLC/Bulldog Hardware LLC	World and Main, LLC	Building Products	NA
10/5/2018	Lewis Cabinet Specialties Group, LLC	LongWater Opportunities LLC; LongWater Fund II,	Building Products	NA
10/3/2018	Pebble Technology, Inc.	Graycliff Partners	Building Products	NA
10/2/2018	Eggers Industries, Inc.	VT Industries, Inc.	Building Products	NA
10/2/2018	HomeGuard Building Products, Inc.	Ox Engineered Products, LLC	Building Products	NA

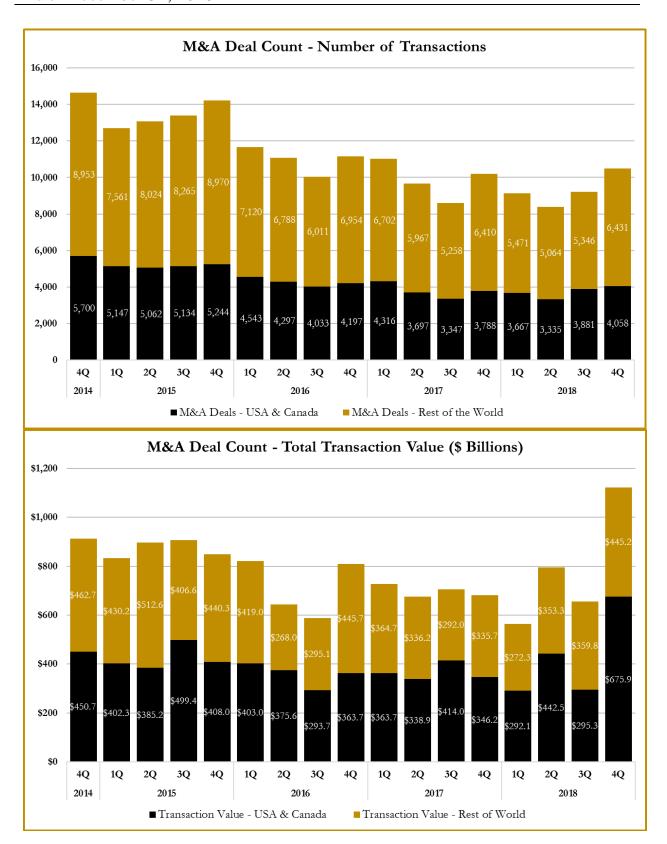
Source: Capital IQ

## S&P Capital IQ - Sector Last 3 Month Equity Performance As of December 31, 2018

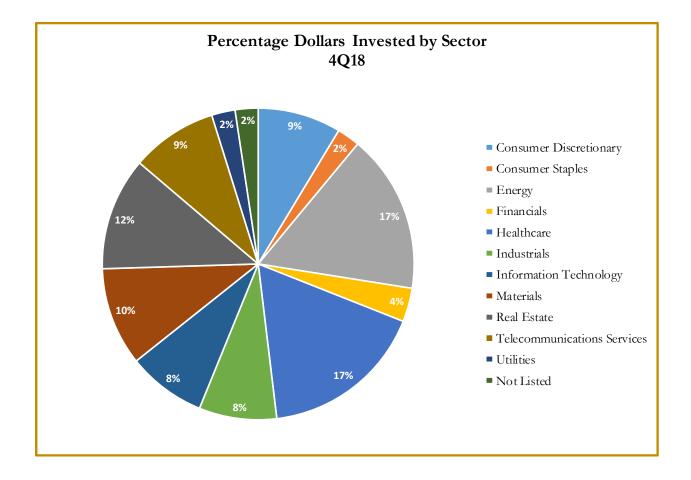


Note: The indices are derived from the equity performance of the S&P Capital IQ Sectors. Source: Capital IQ

## M&A Deal Flow Statistics by S&P Capital IQ Sector As of December 31, 2018



# M&A Deal Flow Statistics by S&P Capital IQ Sector As of December 31, 2018





#### About Us

Houlihan Capital is a leading, solutions-driven valuation, financial advisory and boutique investment banking firm. We pride ourselves on being thought leaders in an ever-changing landscape.

Houlihan Capital is SOC-compliant, a FINRA and SIPC member and committed to the highest levels of professional ethics and standards.

#### Valuation & Financial Advisory

We provide an array of services that include enterprise valuations, portfolio valuation, valuation of carried interest, transaction opinions, tax and financial reporting compliance, purchase price allocations, and a wide variety of consulting services through our Financial Advisory Group.

### **Investment Banking**

Through our Investment Banking Group, we offer sell side/buy side advisory and capital raises. Through our Special Situations desk, we provide services that fit outside the archetypal verticals, including liquidity solutions, transactional advisory, and secondary market advisory and trading.

#### Litigation Support

Our team provides support for a wide variety of situations including commercial and shareholder disputes, derivatives and structured finance litigation, and fraudulent conveyance.

> For additional information about our industry expertise and services, visit:

> > www.houlihancapital.com

**Andrew Smith** asmith@houlihancapital.com 312.450.8610

Paul Clark pclark@houlihancapital.com 312.450.8656

Michael Norton 312.450.8628

Monica Blocker mnorton@houlihancapital.com mblocker@houlihancapital.com 312.450.8699