



DUFF & PHELPS

Protect, Restore and Maximize Value

INDUSTRY INSIGHTS

Building Products and Materials

Summer 2018

Highlights

Housing activity was up in the first half of 2018 but is beginning to show signs of a potential slowdown.

Despite a strong job market and demand from maturing millennials, existing home sales, which make up about 90% of all home sales, fell for the third straight month in June because of high home prices, rising mortgage rates and low supply.

Both housing starts and permits were up in the first half of 2018; however, the month of June displayed a 3.5% year-over-year (“y-o-y”) decline in housing starts.

Single-family starts were up 8.1% in the first half of 2018, while multi-family starts were up 7.3%.

Remodeling activity remains strong likely because of the upward trajectory of home prices, as well as strong consumer confidence and a robust economy with steady job growth.

Strong demand and low inventory levels continue to drive home prices higher in all markets, especially in western cities such as Denver, San Francisco and Seattle.

The stock performance of four subsectors of the industry have underperformed the S&P 500 Index over the past 12 months, while two subsectors (Building Products Distributors and Lumber and Wood Products Manufacturers) have outperformed.

1 H 2018 BY THE NUMBERS



6.5% y-o-y increase in the U.S. National Home Price Index



5.7% and 7.8% increase in building permits and housing starts, respectively



4.3 months' supply of existing homes



New home sales are up 6.9%, while existing home sales have been down for three straight months



18% increase in Duff & Phelps' index of building products distributors over the past 12 months

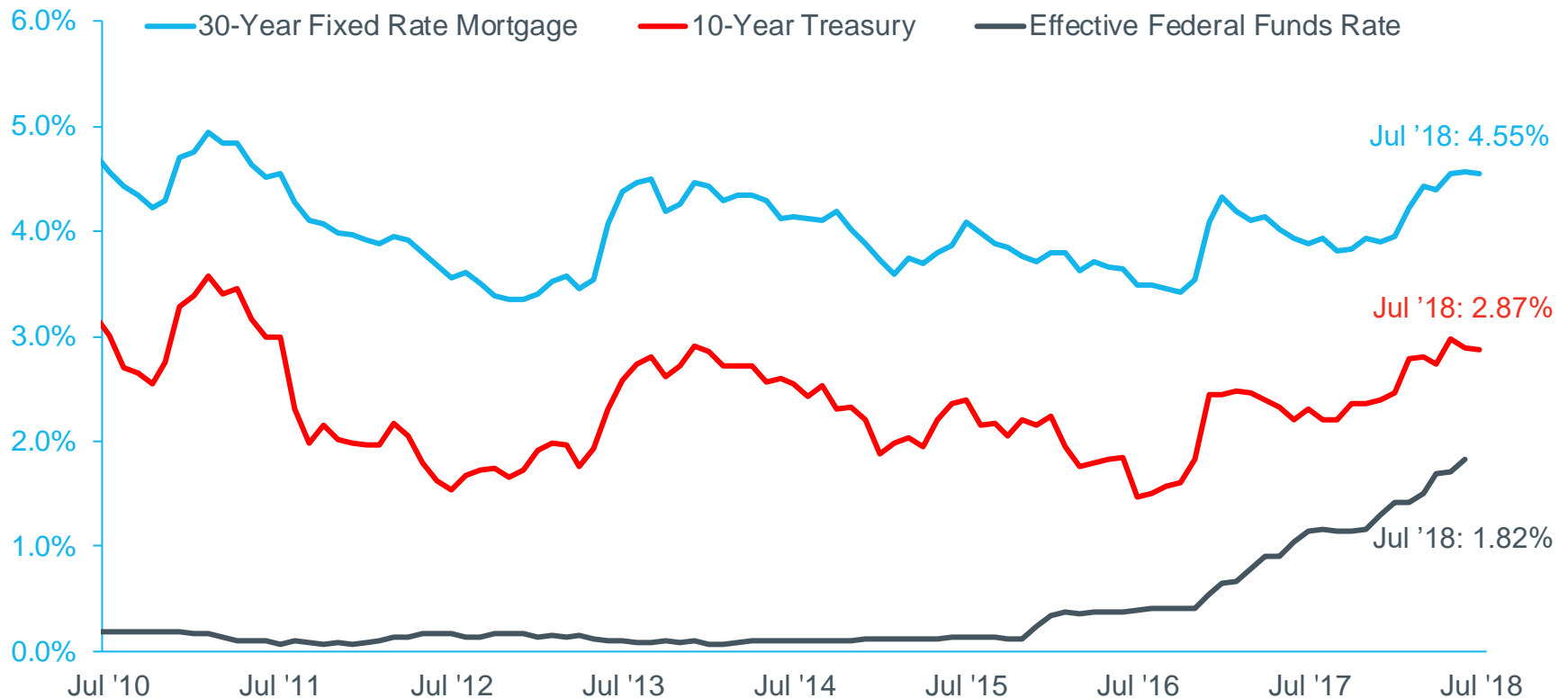
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Housing Indicators.

After dipping to 3.90% in December 2017, the 30-year mortgage rate increased steadily during the first half of 2018 and has remained at or above 4.50% since May. Mortgage rates and the yield on the 10-year Treasury have moved in tandem, and both have been affected by the increase in the federal funds rate. Despite the rise in mortgage rates, refinancing activity was up 1.84% in the first half of 2018 as compared to the second half of 2017.

Key Interest Rates

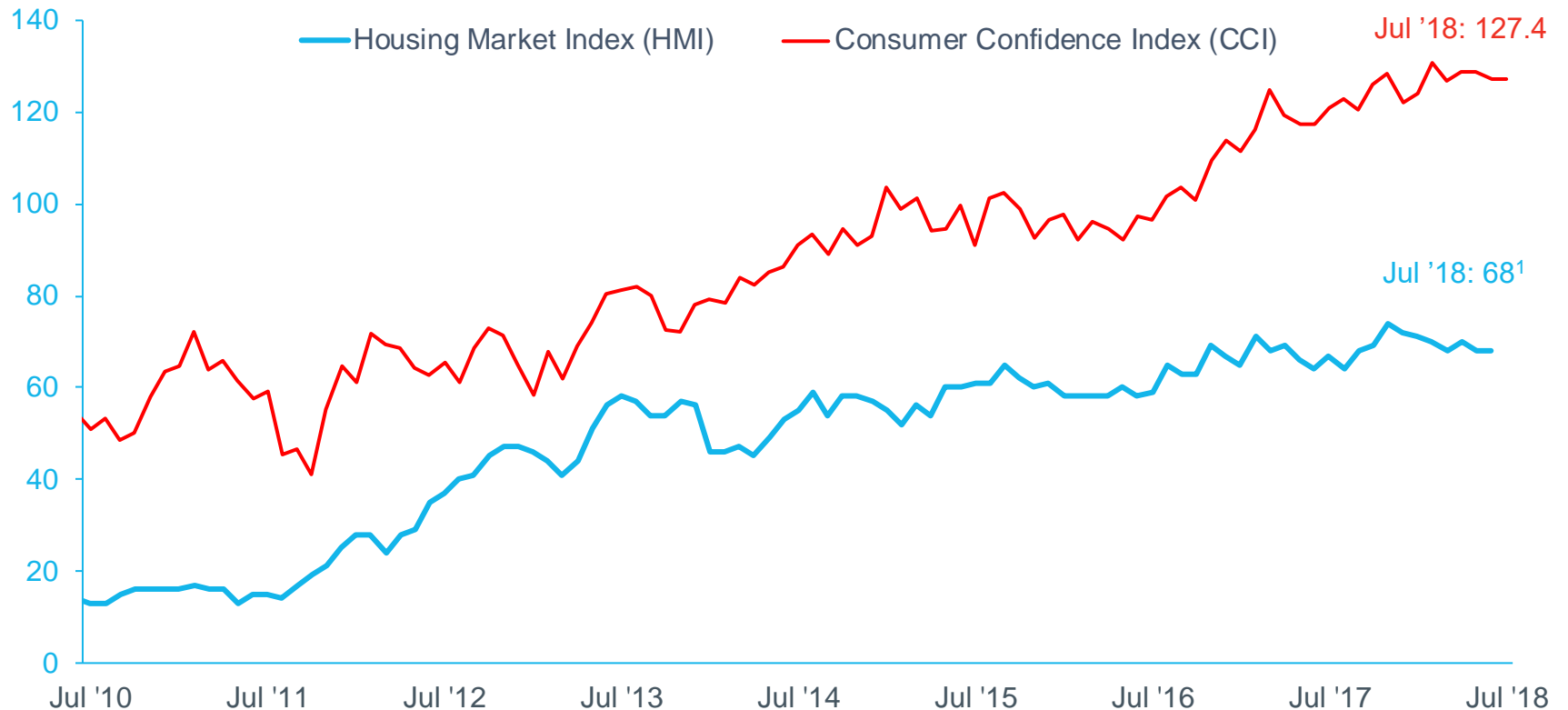


Housing Indicators

In May 2018, the Consumer Confidence Index (CCI) climbed to its highest level since 2001 before declining slightly to 127.4 in July. Despite the slight drop, the July CCI is up 5.2% from a year ago. Confidence has soared because of low unemployment, rising wages and high stock prices.

The Housing Market Index (HMI), a measure of builder confidence, increased to 68 in July 2018, up from 64 a year ago. Builder's confidence has remained strong for over four years. The HMI has been above 50 for 49 consecutive months, indicating that builders are optimistic about the future of the housing market.

Key Housing Indicators



(1) Index values greater than 50 indicate a positive view by builders

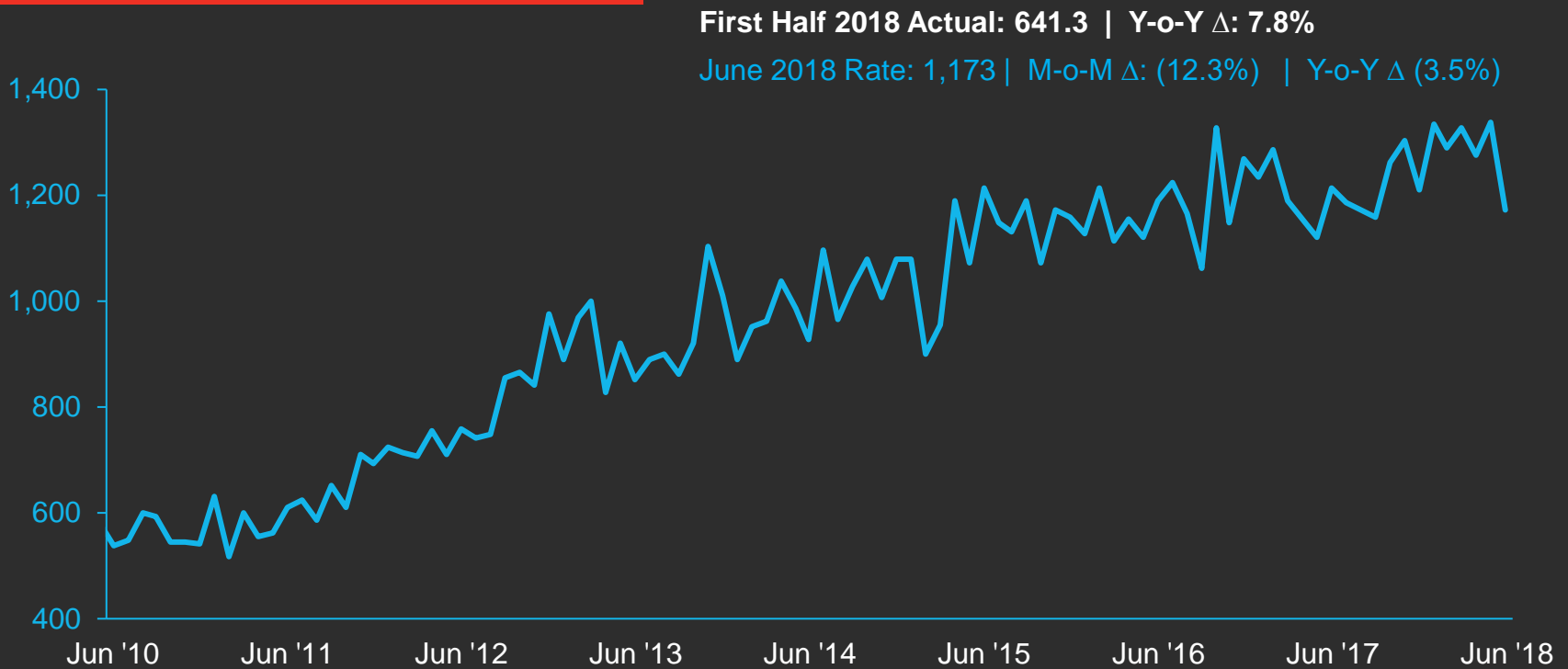
Housing Starts Continue on an Upward Trend ●●

Housing starts continued to rise in the first half of 2018, albeit at a slower pace than 2017. Housing starts increased by 7.8% in the first half of 2018 and have remained above the million mark for 39 consecutive months.

While starts were up during the first half of the year, they were down 12.3% in June compared to May and down 3.5% from the same period a year ago. The drop in activity is due to a continuation of labor and land shortages throughout the country.

Single-family starts were up 8.1% in the first half of 2018 compared to multi-family starts, which were up 7.3%.

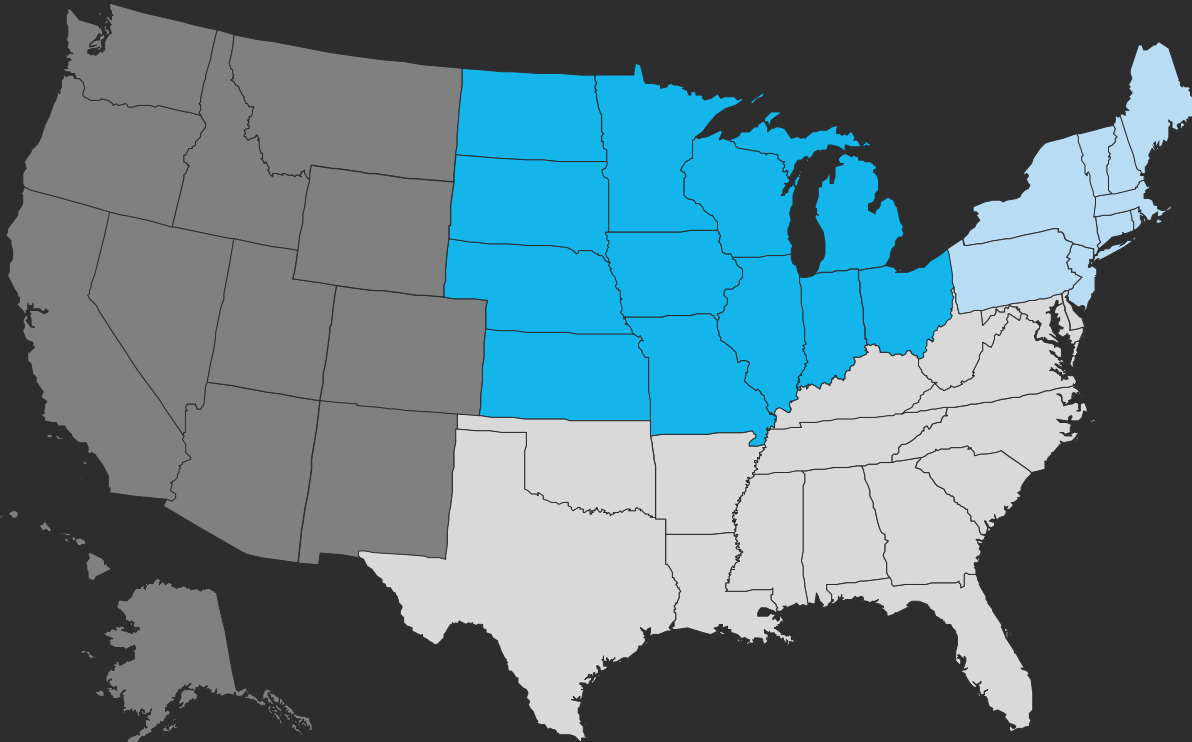
National Housing Starts (thousands)



Housing Starts Continue on an Upward Trend ●●

In the first half of 2018, the West was the strongest performer, with a 17.7% increase in housing starts, with single-family starts growing by 17.2% and multi-family starts growing by 18.7%. Housing starts in the South also increased in the first half of 2018, recording a 7.8% increase from the previous year. Housing starts in both the Northeast and Midwest decreased in the first half of 2018 compared to the previous year.

Regional Housing Starts (thousands)



- **Northeast Region**
1H 2018 Housing Starts: 52.3
Y-o-Y Δ: (2.8%)
- **Midwest Region**
1H 2018 Housing Starts: 83.3
Y-o-Y Δ: (2.9%)
- **West Region**
1H 2018 Housing Starts: 179.8
Y-o-Y Δ: 17.7%
- **South Region**
1H 2018 Housing Starts: 326.0
Y-o-Y Δ: 7.8%

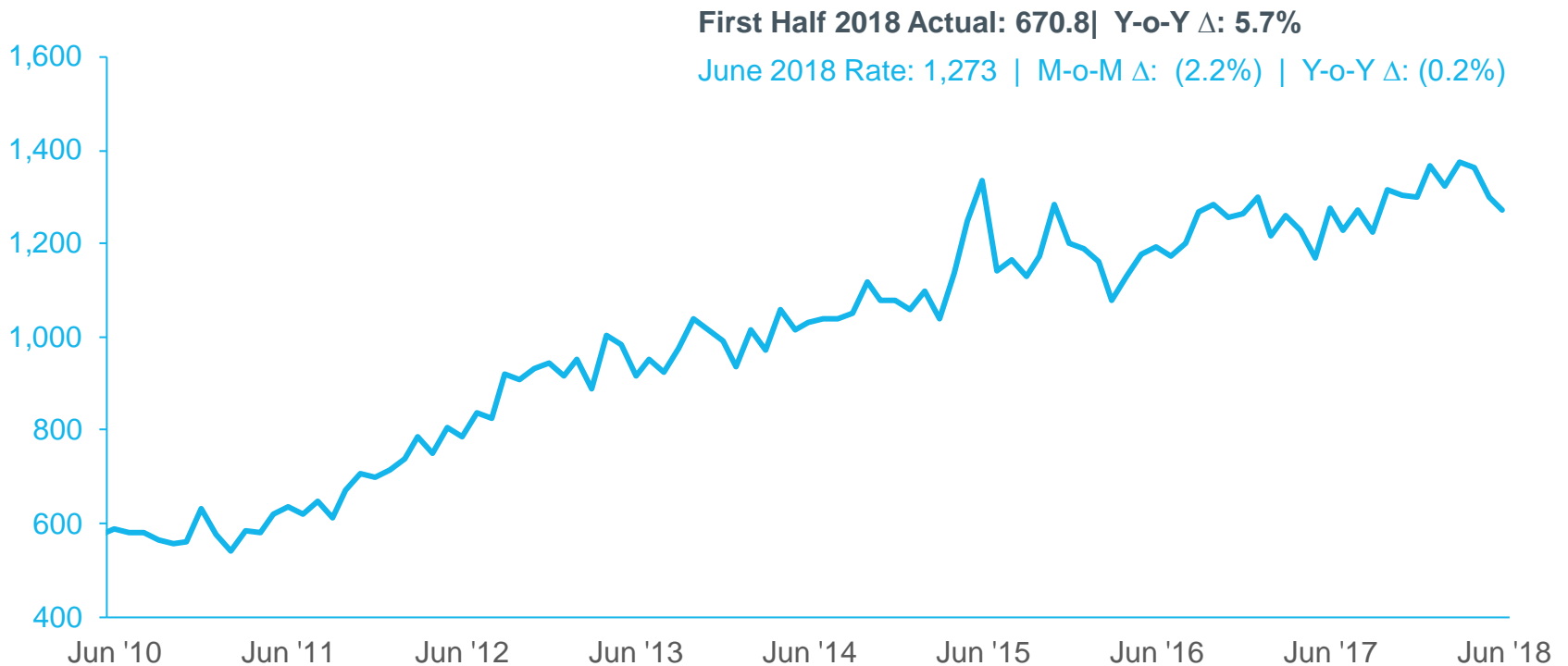
Building Permits Keep Pace with Housing Starts

New applications for building permits, a bellwether for future construction, fell 2.2% month-over-month (“m-o-m”) in June and were down 0.2% from the year prior to a seasonally adjusted annual rate of 1,273,000.

Building permits slightly outpaced housing starts in the first half of 2018. In total, an estimated 670,800 housing units were authorized by building permits in the first half of 2018, representing a 5.7% increase from the year prior, relative to 641,300 housing starts.

Permits for single-family homes rose 6.6% in the first half of 2018 compared to the year prior, and permits for multi-family homes increased 3.9%.

National Building Permits (thousands)



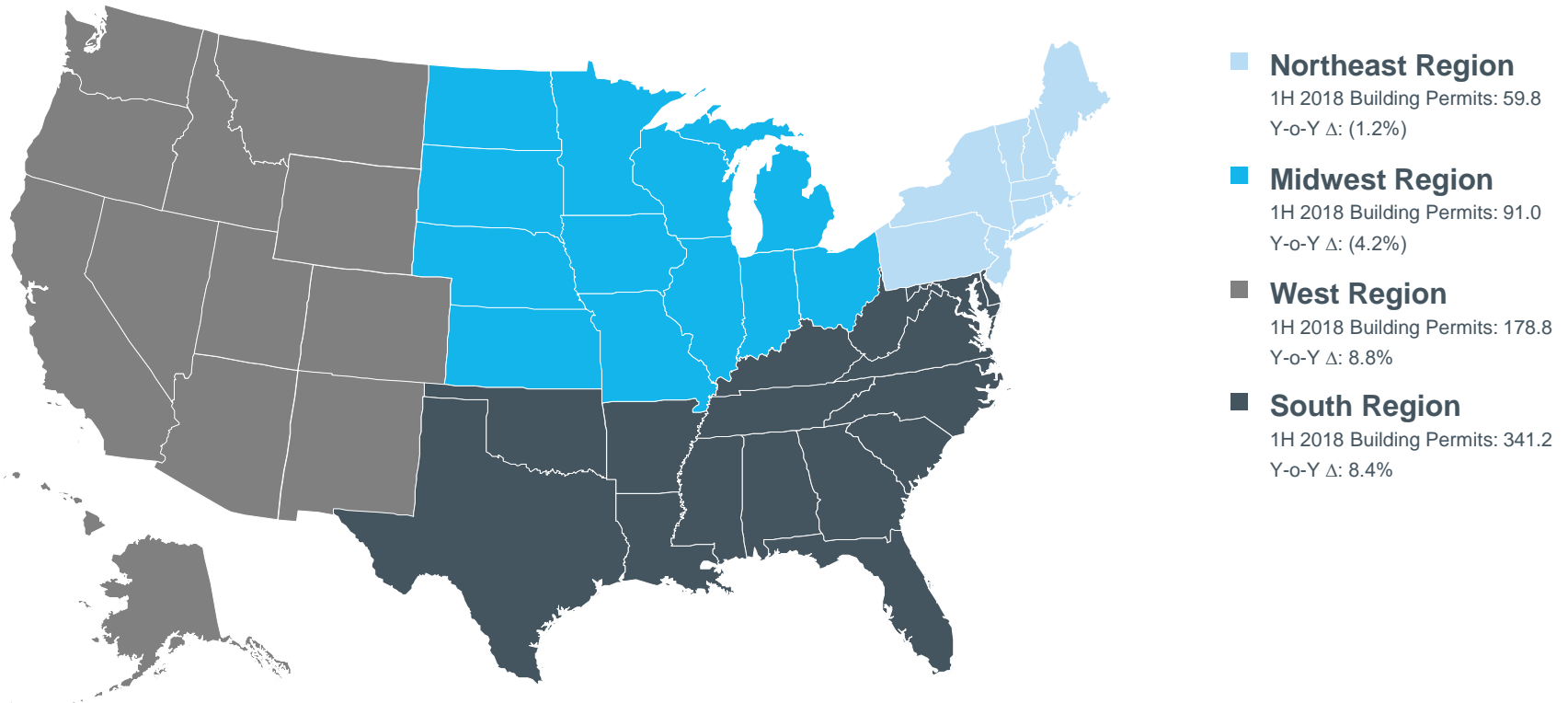
Building Permits Keep Pace with Housing Starts

The West and South regions witnessed strong building permit activity in the first half of 2018 and drove growth in the United States.

The West and South regions recorded 8.8% and 8.4% increases, respectively, while the Northeast and Midwest saw decreases of 1.2% and 4.2%, respectively.

Single-family permits led the growth in the West region with 13.1% growth in the first half of 2018, while multi-family permits drove growth in the South at 12.4%.

Regional Building Permits (thousands)



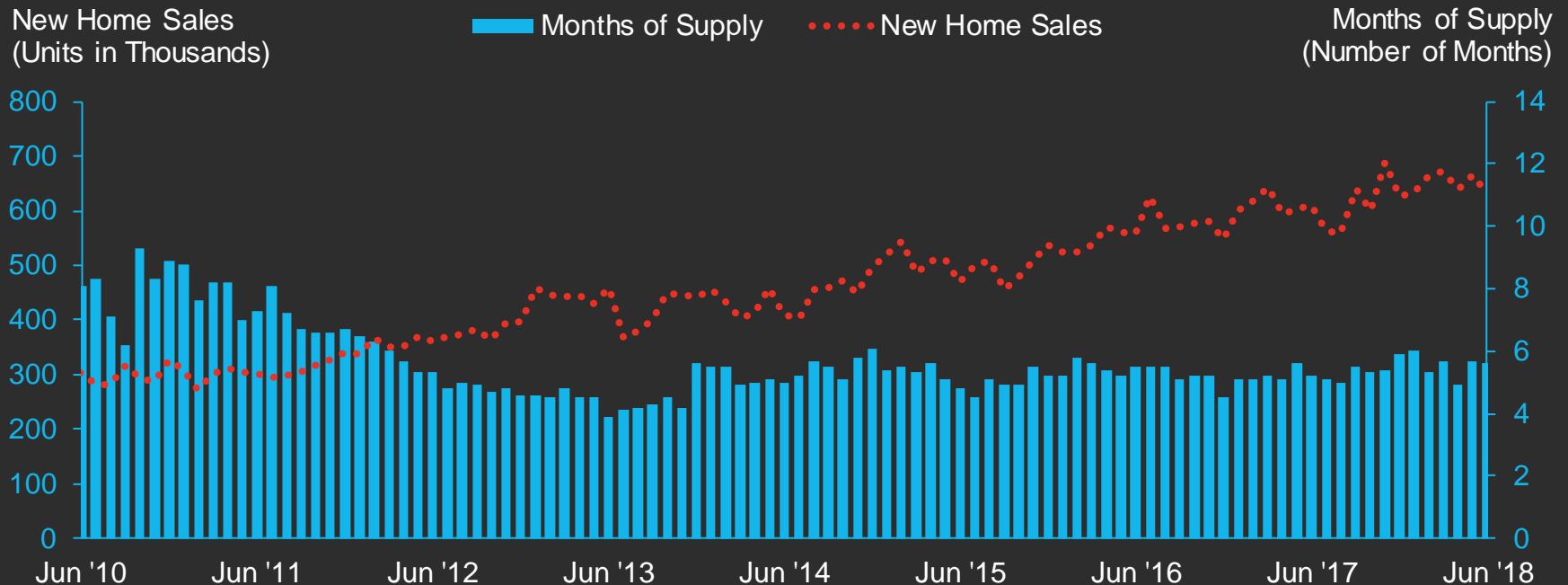
New and Existing Home Sales Remain Strong

An estimated 349,000 new homes were sold in the first half of 2018, representing a 6.9% increase from the same period a year ago. The increase was driven by faster household formations and millennials beginning to enter the housing market.

The seasonally adjusted annual rate of new home sales in June was 631,000, which was 3.4% higher and 5.3% lower than June 2017 and May 2018, respectively.

The seasonally adjusted estimate of new homes for sale at the end of June was 301,000, up 10.3% from a year ago. The supply is 5.7 months at the current sales rate, which is up from the 5.4 months of supply from a year ago.

New Home Sales and Supply



New and Existing Home Sales Remain Strong.

Existing home sales reached a seasonally adjusted annual rate of 5,380,000 in June 2018. In June, sales decreased by 0.6% from the prior month because of low inventory levels, rising prices and higher mortgage rates. June marks the third straight month of month-over-month declines in existing home sales, signaling that buyer fatigue is building despite a strong jobs market and demand from maturing millennials.

The inventory of existing homes increased to 4.3 months in June, up 4.9% from May 2018 and flat relative to June 2017.

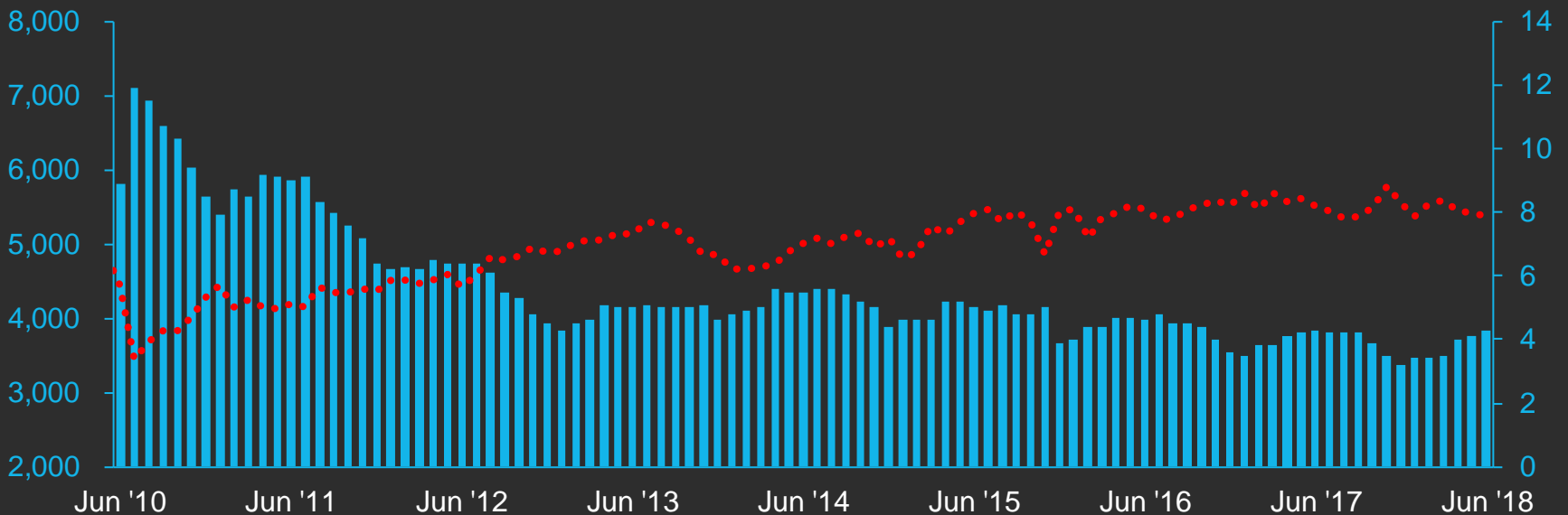
Existing Home Sales and Supply

Existing Home Sales
(Units in Thousands)

Months of Supply

Existing Home Sales

Months of Supply
(Number of Months)

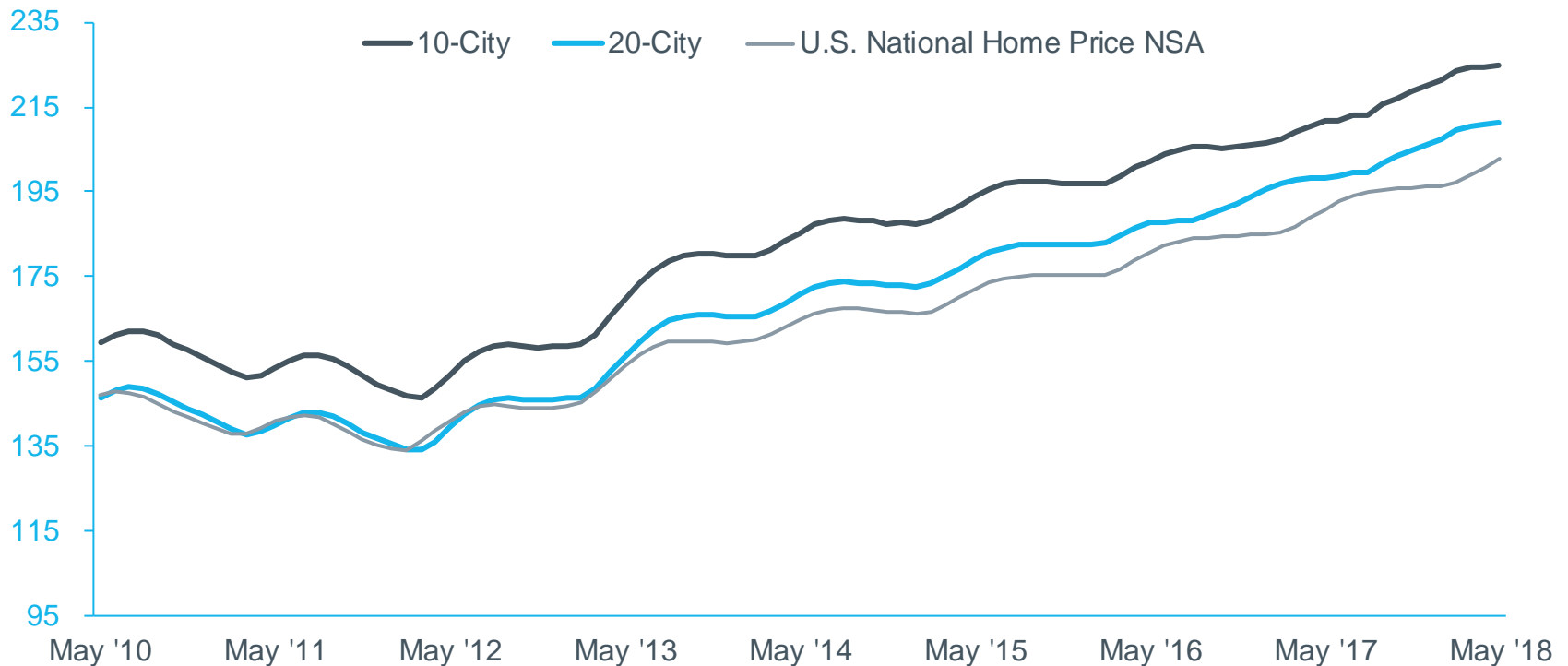


U.S. Home Prices Continue to Hit Record Highs.

The 10-city home price index was up 6.1% in May relative to a year ago, while the 20-city home price index was up 6.5%.

May results reflect a steady upward trend in home prices that started at the beginning of 2012. Increases in both indexes have been boosted by a shortage of existing homes for sale and increasing housing demand from millennials.

S&P CoreLogic/Case-Shiller Home Price Indexes*



*The S&P CoreLogic/Case-Shiller Home Price Indexes are calculated monthly using a 3-month moving average and published with a 2-month lag. Monthly, Indexed to January 2000
Source: S&P Dow Jones Indexes LLC

U.S. Home Prices Continue to Hit Record Highs

Seattle, Las Vegas and San Francisco experienced the biggest year-over-year appreciation in home prices, with increases of 13.6%, 12.6% and 10.9%, respectively.

The cities reporting the largest month-over-month increases in May were Seattle, Cleveland, Chicago and Las Vegas with increases of 2.2%, 1.4%, 1.3% and 1.3% respectively.

While New York, Chicago and Washington, D.C. had the weakest performance of all the cities, all three of these cities showed year-over-year price increases. No metropolitan area experienced a year-over-year price decrease.

Regional Home Price Indexes*

May 2018 – Composite 10		
Metropolitan Area	M-o-M % Δ	Y-o-Y % Δ
Las Vegas	1.3%	12.6%
San Francisco	1.1%	10.9%
Denver	0.9%	8.5%
Los Angeles	0.5%	7.6%
San Diego	0.6%	7.3%
Boston	0.8%	7.0%
Miami	0.8%	5.0%
New York	(0.1%)	4.2%
Chicago	1.3%	3.3%
Washington, D.C.	0.6%	3.1%
Composite-10	0.1%	6.1%

May 2018 – Composite 20		
Metropolitan Area	M-o-M % Δ	Y-o-Y % Δ
Seattle	2.2%	13.6%
Las Vegas	1.3%	12.6%
San Francisco	1.1%	10.9%
Denver	0.9%	8.5%
Los Angeles	0.5%	7.6%
San Diego	0.6%	7.3%
Phoenix	1.1%	7.3%
Detroit	0.8%	7.1%
Boston	0.8%	7.0%
Tampa	0.5%	6.6%
Minneapolis	1.1%	6.4%
Charlotte	0.8%	6.0%
Portland	1.3%	6.0%
Atlanta	1.0%	5.6%
Dallas	0.6%	5.6%
Cleveland	1.4%	5.0%
Miami	0.8%	5.0%
New York	(0.1%)	4.2%
Chicago	1.3%	3.3%
Washington, D.C.	0.6%	3.1%
Composite-20	0.2%	6.5%

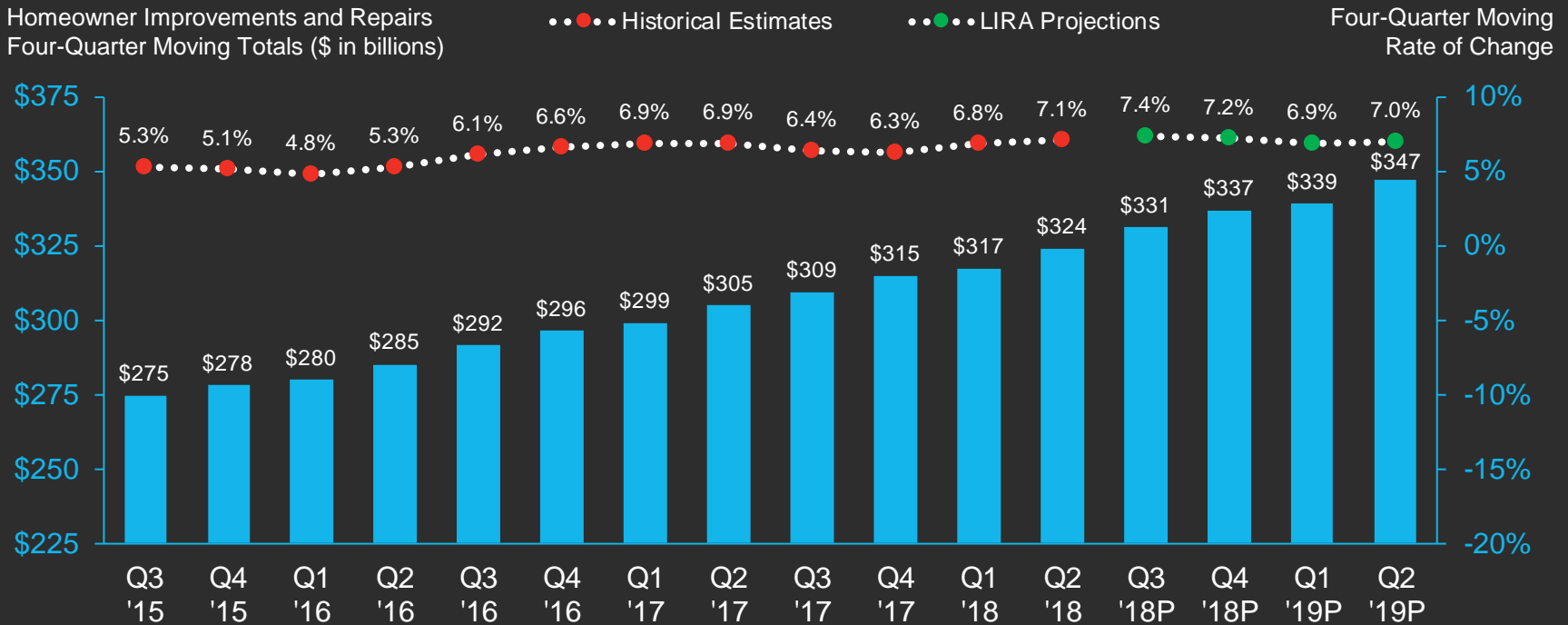
*The S&P CoreLogic/Case-Shiller Home Price Indexes are calculated monthly using a 3-month moving average and published with a 2-month lag. Source: S&P Dow Jones Indexes LLC

Busy Remodeling Activity Continues in 2018

Based on the Leading Indicator of Remodeling Activity (LIRA),* home improvement spending increased 7.1% in Q2 2018 and is expected to increase 7.4% in Q3 2018, according to the Joint Center for Housing Studies of Harvard University.

The expectation for another strong year for home improvements is likely due to the upward trajectory of home prices, strong consumer confidence and a robust economy with steady job growth and rising wages.

Leading Indicator of Remodeling Activity (LIRA)*



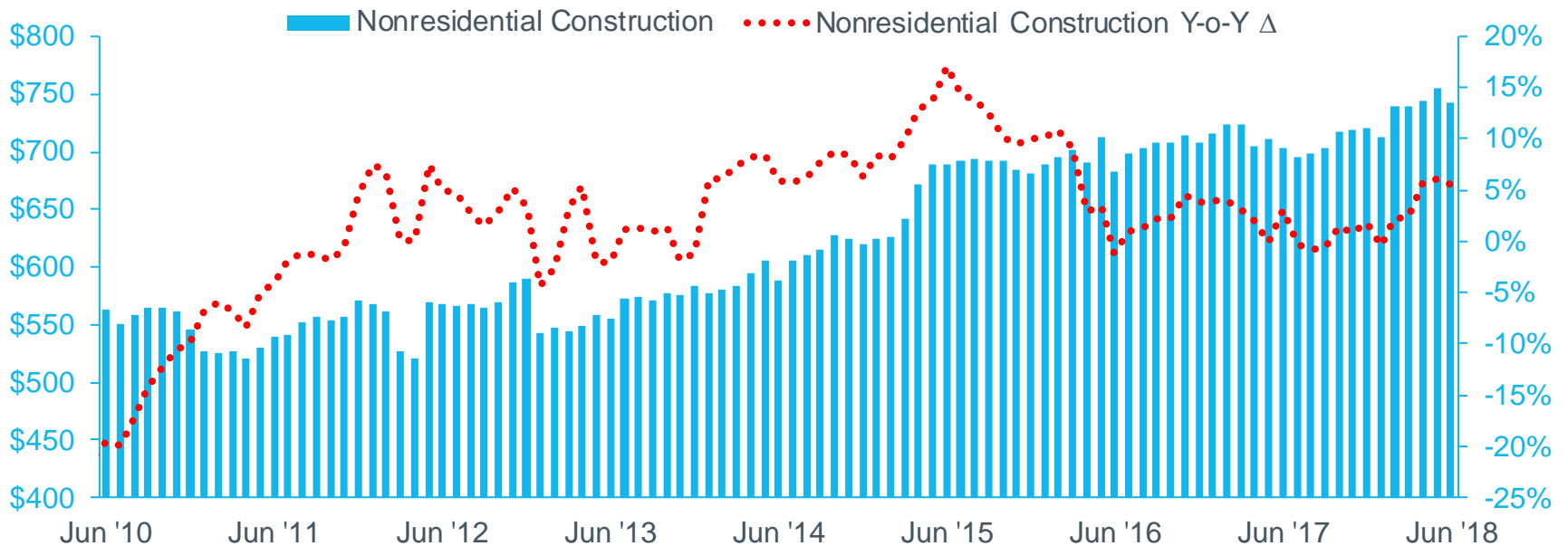
*The LIRA represents the estimated annual rate of change in spending for the current quarter and subsequent three quarters. This annual or moving four-quarter rate of change compares total spending in any given four-quarter period to the total spending that occurred in the four quarters prior to that period. As of April 21, 2016, the LIRA has undergone a major re-benchmarking and recalculation to better forecast a broader segment of the national residential remodeling market. Source: Joint Center for Housing Studies of Harvard University

Nonresidential Construction Picks Up

In the first half of 2018, nonresidential construction spending was \$350.2 billion, a 2.9% increase over the same time period a year ago. In June, seasonally adjusted nonresidential construction spending was up 5.6% over the same month a year ago.

The uptick in the first half of 2018 was driven by heavy spending in the lodging, public safety and transportation sectors, all of which posted above 10% growth when compared to the same period a year ago.

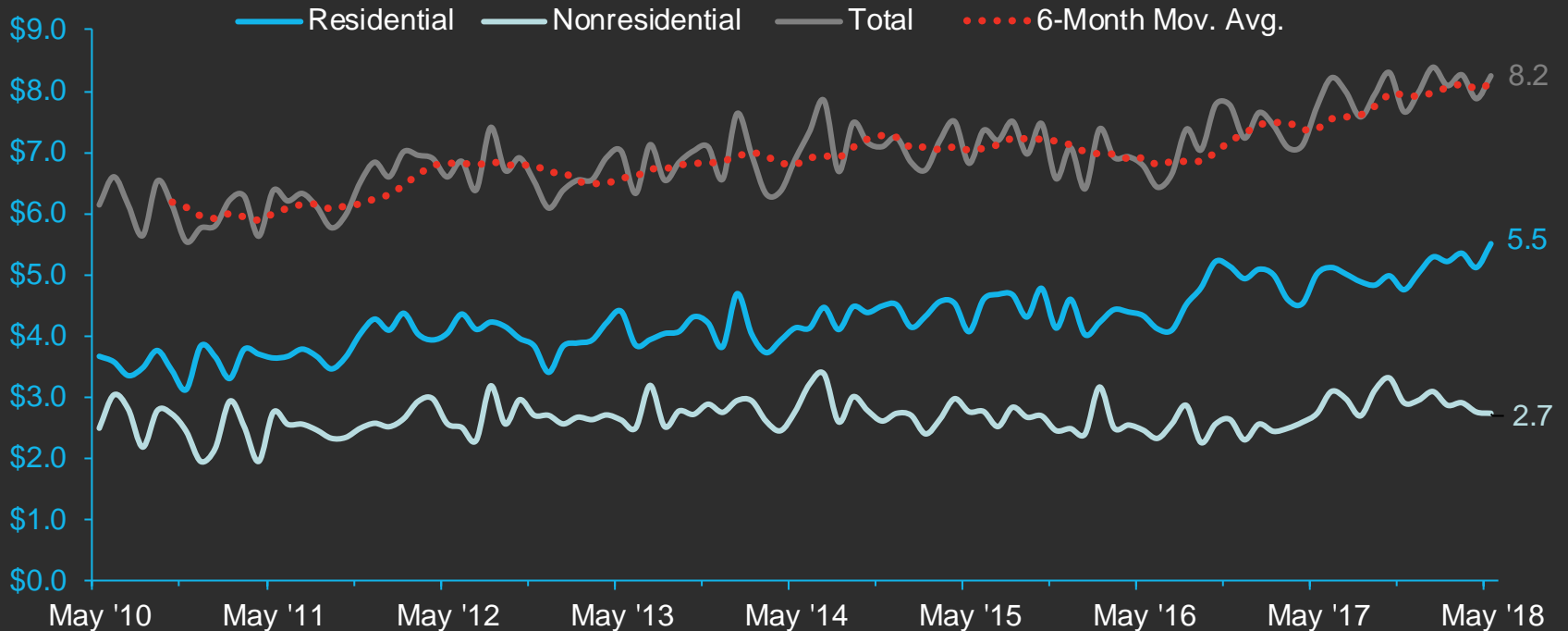
Nonresidential Construction Put in Place (\$ in billions)



Canadian Building Market – Permits

With an increase in seasonally adjusted new building permit applications in May 2018, the 6-month moving average in the number of building permits continues to rise (an average of 8.1 billion). This increase is predominately due to higher residential building permits over the past year as supply continues to struggle meeting the increasing demand in metropolitan areas such as Toronto and Vancouver. Nonresidential building permits saw a mild cool down, with permits for industrial, institutional and government buildings lower. Commercial building permits dipped during Q1 2018, but recovered later during the year, growing 12.9% over the same period last year.

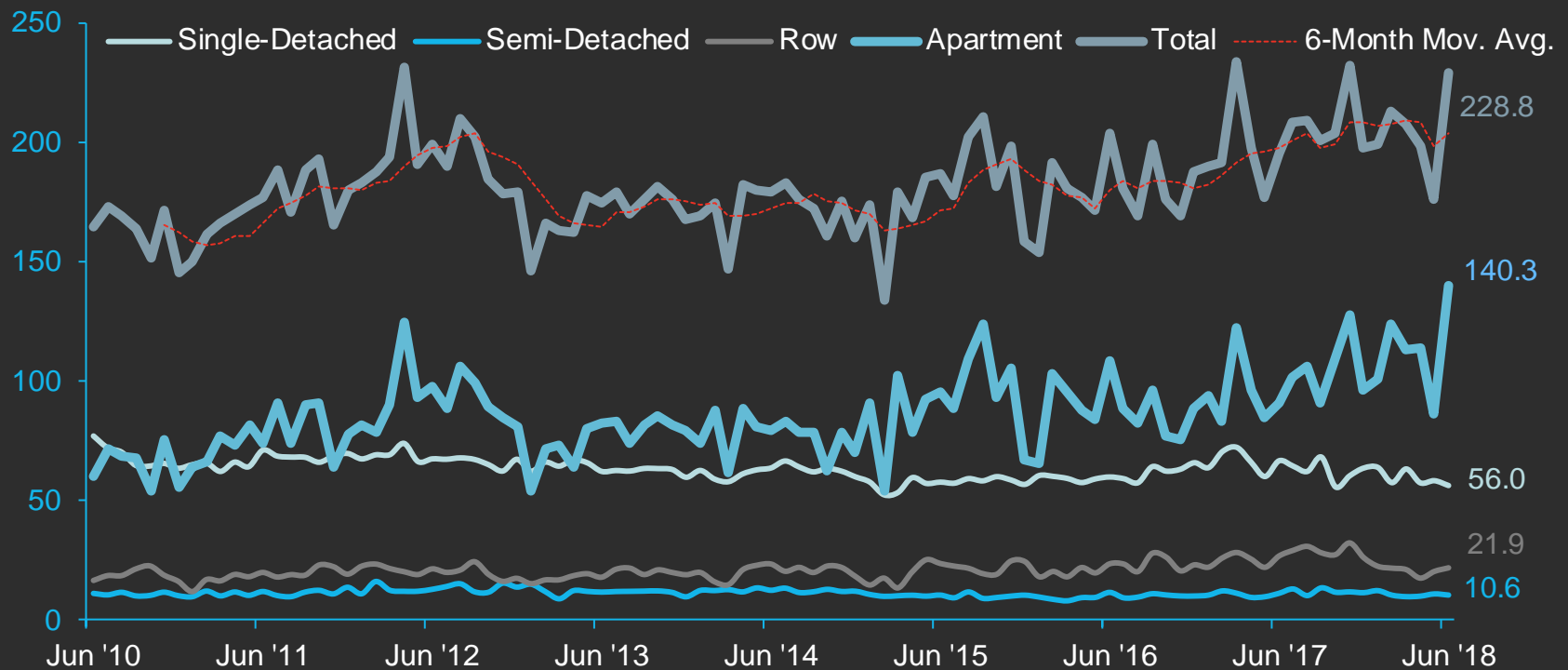
Authorized Building Permits (C\$ in billions)



Canadian Building Market – Starts ●●

Canadian housing starts have increased by 17.0% year-over-year, driven by a strong increase of 29.9% in the month of June 2018. The housing market experienced a mild cooling in Q1 2018, as the market adjusted to an increasing rate environment but has since recovered. Single-detached housing starts continued its decline, dropping 15.8% year over year, possibly because detached houses are becoming less affordable for first-time homeowners and new families. Row and semi-detached housing also saw declines of 18.6% and 6.6%, respectively. Apartment building starts increased by a whopping 54.6% year over year, effectively offsetting declines in all other structure types.

Housing Starts (Units in thousands)



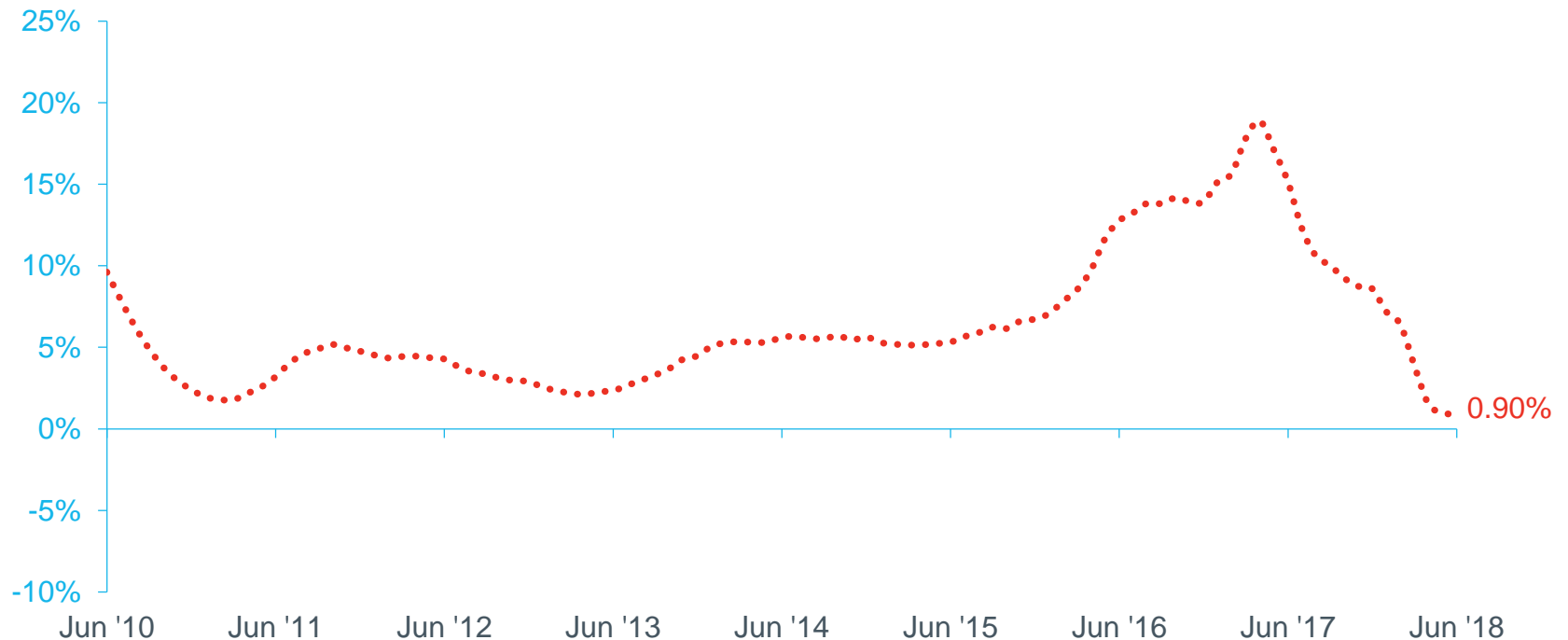
Seasonally adjusted annual rate, excluding rural dwellings
Source: Canada Mortgage and Housing Corporation

Canadian Housing Market – Existing Prices

After years of double-digit percentage price increases, the impact of the tapering policies is evident. Tougher mortgage stress-testing rules implemented by Canadian regulator, the Office of the Superintendent of Financial Institutions (OSFI) and a rising interest rate environment saw the Multiple Listing Service (MLS) HPI drop to essentially flat growth compared to the previous year.



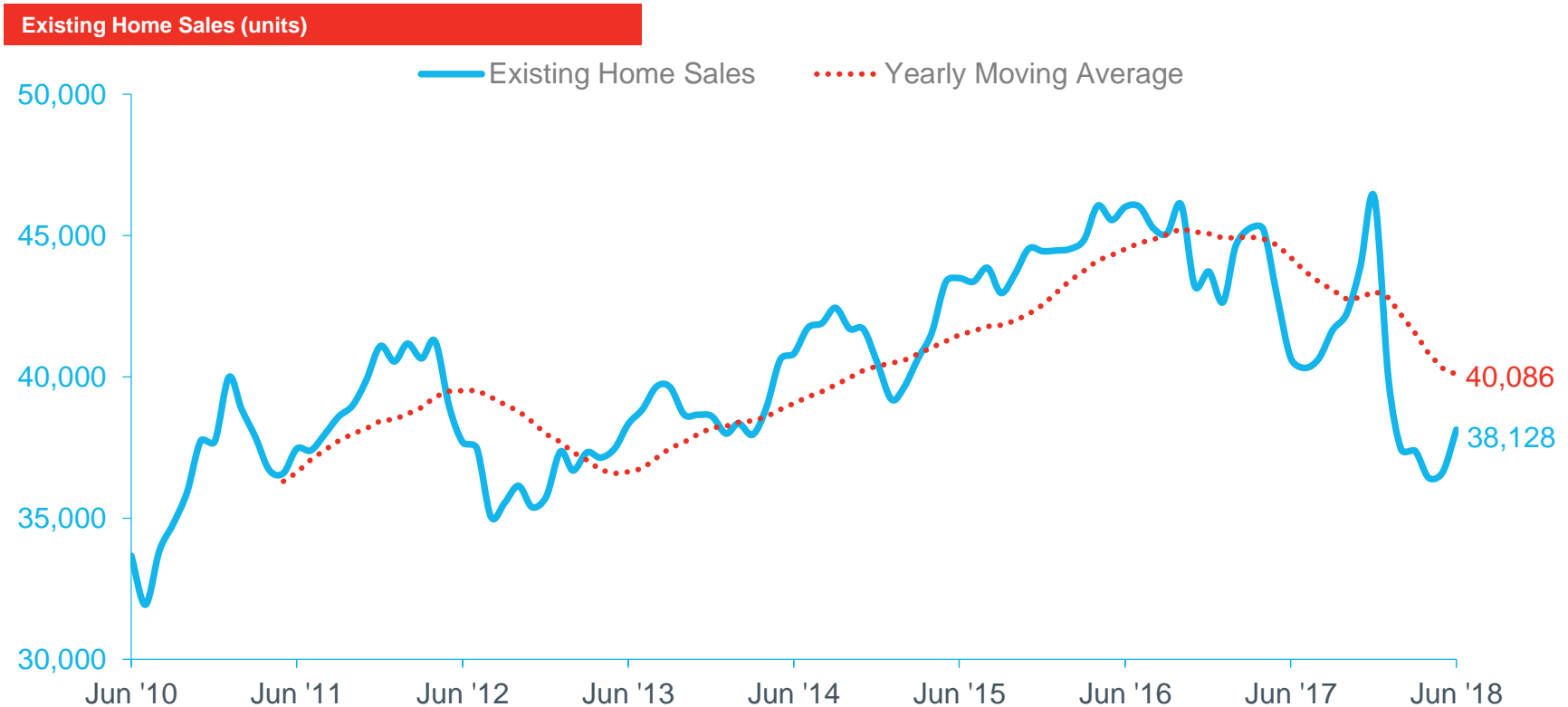
MLS HPI Benchmark Price (y-o-y % change)



Source: Canadian Real Estate Association(CREA)

Canadian Housing Market – Existing Home Sales

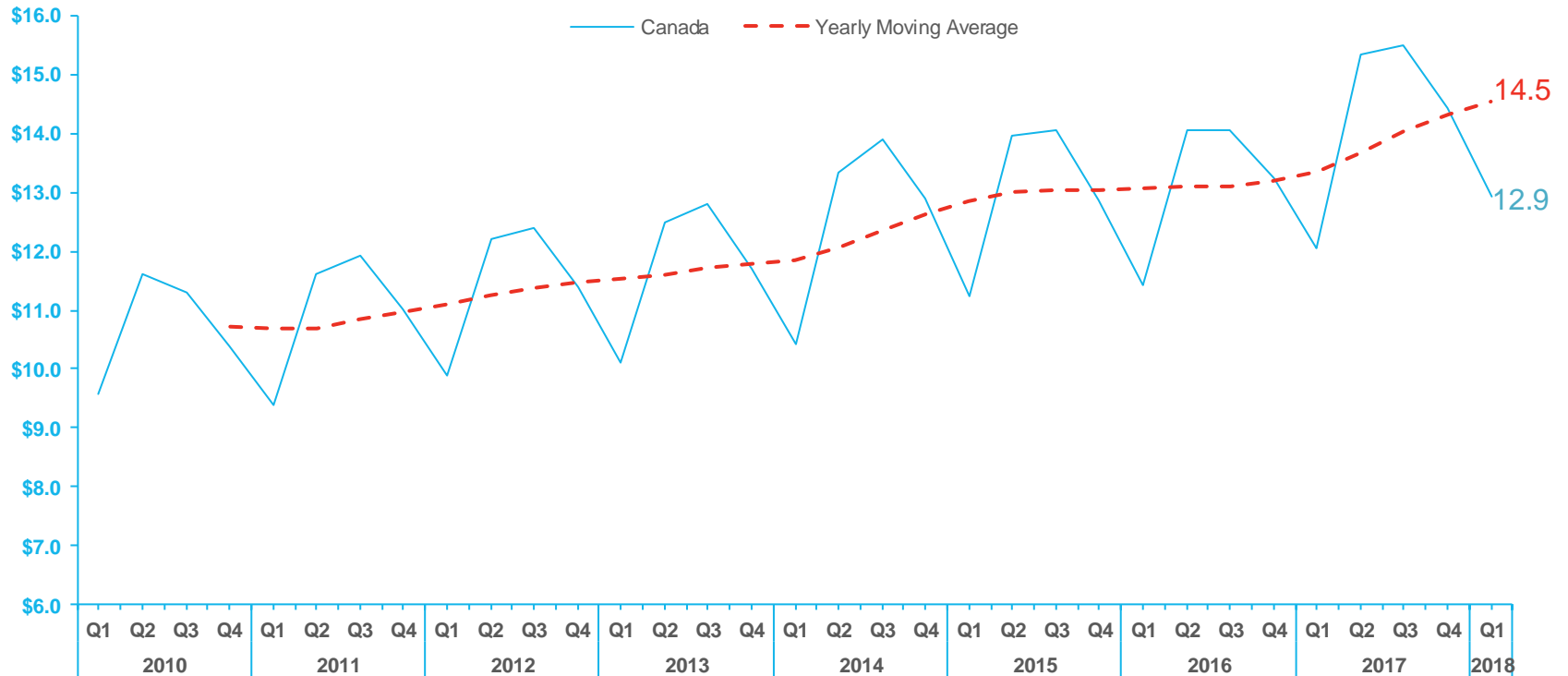
Sales activity in the existing housing market saw a significant decrease during the first half of 2018, dropping as much as 17.7%, as the market adjusted to OSFI’s new stern “Guideline B-20 – Residential Mortgage Underwriting Practices and Procedures.” The recent changes to the mortgage rules may make it harder to qualify for uninsured mortgages, driving demand for lower priced-homes and reducing the number of qualified buyers for more expensive properties.



Canadian Renovation Activity

Spending on renovations in Q1 2018 increased by 7.1% year over year, following the general trend, which has seen an increase in renovation spending over the past five years. As housing market prices continue to increase, more homeowners are likely to turn toward renovations of their current houses instead of purchasing in the current market conditions.

Renovation Spending (C\$ billions – Constant 2012 dollars)



Bifurcation in Public Valuations

Over the past 12 months, there has been a bifurcation in public valuations as some sectors have either outpaced or kept pace with the S&P 500, while others have underperformed. The index of Building Products Distributors posted the largest gain, followed by the index of Lumber and Wood Products Manufacturers. Both indexes are benefiting from the strong housing market, while Lumber and Wood Products Manufacturers are also benefiting from record-high lumber prices.

Equity Market Performance



Public Companies' Trading Statistics

(\$ in millions except share price data)

Company	Stock Price 8/7/18	% of 52-Wk High	Market Value	Enterprise Value	Enterprise Value as a Multiple of						LTM		
					Revenue			EBITDA			EBITDA Margin	Revenue Growth	
					LTM	2018P	2019P	LTM	2018P	2019P			
Building Products Manufacturers Large Cap. (EV>\$3.0B)													
Compagnie de Saint-Gobain S.A.	\$43.34	72.8%	\$23,772	\$34,988	0.73x	0.72x	0.69x	7.3x	6.9x	6.4x	10.0%	3.1%	
Masco Corporation	39.71	85.5%	12,210	14,958	1.87x	1.77x	1.67x	11.7x	10.4x	9.5x	16.0%	7.2%	
Owens Corning	61.79	64.0%	6,853	10,386	1.52x	1.44x	1.36x	9.8x	7.5x	6.7x	15.5%	14.2%	
Lennox International Inc.	219.90	98.6%	8,852	10,165	2.57x	2.58x	2.46x	17.3x	15.9x	14.6x	14.8%	4.0%	
Fortune Brands Home & Security, Inc.	57.25	77.8%	8,154	9,953	1.84x	1.78x	1.69x	11.7x	10.9x	9.9x	15.7%	5.5%	
James Hardie Industries plc	17.06	95.0%	7,532	8,114	3.95x	3.30x	2.92x	16.6x	14.0x	12.2x	23.8%	6.9%	
USG Corporation	43.25	99.7%	6,034	6,808	2.07x	1.99x	1.89x	14.4x	11.3x	9.8x	14.3%	6.9%	
Acuity Brands, Inc.	136.89	68.8%	5,442	5,706	1.60x	1.55x	1.51x	10.1x	9.4x	8.5x	15.9%	3.0%	
Trex Company, Inc.	79.22	98.8%	4,638	4,644	7.25x	6.73x	6.14x	25.8x	23.3x	20.6x	28.1%	27.0%	
Armstrong World Industries, Inc.	69.70	98.0%	3,601	4,307	4.66x	4.50x	4.22x	16.7x	12.2x	11.1x	27.9%	35.7%	
	Median	90.2%				1.97x	1.89x	1.79x	13.1x	11.1x	9.9x	15.8%	6.9%
	Mean	85.9%				2.81x	2.63x	2.46x	14.1x	12.2x	10.9x	18.2%	11.3%
Building Products Manufacturers Mid. Cap. (EV<\$3.0B)													
Simpson Manufacturing Co., Inc.	\$73.55	98.2%	\$3,407	\$3,255	3.11x	2.94x	2.72x	16.1x	14.0x	12.2x	19.3%	14.5%	
Masonite International Corporation	66.65	87.8%	1,839	2,440	1.18x	1.12x	1.06x	10.0x	8.5x	7.6x	11.9%	4.7%	
American Woodmark Corporation	85.40	57.5%	1,498	2,226	1.78x	1.33x	1.26x	13.3x	8.5x	7.8x	13.4%	21.4%	
Apogee Enterprises, Inc.	49.84	93.8%	1,409	1,600	1.15x	1.11x	1.05x	9.4x	8.8x	7.7x	12.2%	22.1%	
Gibraltar Industries, Inc.	44.75	101.0%	1,421	1,420	1.40x	1.38x	1.32x	11.1x	10.9x	9.9x	12.6%	5.8%	
NCI Building Systems, Inc.	15.15	64.9%	1,003	1,378	0.75x	0.70x	0.67x	8.5x	6.4x	6.1x	8.8%	4.7%	
Griffon Corporation	17.65	72.0%	749	1,817	0.98x	0.89x	0.83x	12.7x	10.5x	9.4x	7.7%	67.1%	
Quanex Building Products Corporation	17.00	69.1%	597	813	0.94x	0.90x	NA	8.7x	7.9x	NA	10.8%	(3.7%)	
	Median	79.9%				1.17x	1.11x	1.06x	10.5x	8.7x	7.8x	12.0%	10.2%
	Mean	80.5%				1.41x	1.30x	1.27x	11.2x	9.4x	8.7x	12.1%	17.1%

Public Companies' Trading Statistics

Company	Stock Price 8/7/18	% of 52-Wk High	Market Value	Enterprise Value	Enterprise Value as a Multiple of						LTM	
					Revenue			EBITDA			EBITDA Margin	Revenue Growth
					LTM	2018P	2019P	LTM	2018P	2019P		
Building Products Distributors												
Ferguson plc	\$79.05	96.7%	\$18,227	\$19,520	0.88x	0.93x	0.88x	11.4x	11.3x	10.4x	7.7%	34.0%
Pool Corporation	160.49	98.5%	6,480	7,092	2.45x	2.36x	2.19x	22.1x	20.3x	18.3x	11.1%	8.5%
Watsco, Inc.	172.53	89.4%	5,924	6,269	1.41x	1.37x	1.31x	16.4x	15.2x	14.3x	8.6%	3.5%
Beacon Roofing Supply, Inc.	42.48	63.9%	2,892	6,232	1.08x	0.84x	0.80x	15.2x	10.2x	9.1x	7.1%	35.5%
Builders FirstSource, Inc.	17.83	76.6%	2,044	3,974	0.53x	0.51x	0.48x	9.8x	8.0x	7.1x	5.5%	11.7%
BlueLinX Holdings Inc.	33.08	71.3%	305	747	0.41x	NA	NA	24.4x	NA	NA	1.7%	(0.6%)
CanWel Building Materials Group Ltd.	5.02	87.1%	390	671	0.69x	0.64x	0.62x	11.6x	10.5x	9.9x	6.0%	22.9%
Hardwoods Distribution Inc.	12.79	75.7%	275	363	0.45x	0.43x	0.41x	8.6x	8.1x	7.3x	5.2%	17.7%
Huttig Building Products, Inc.	5.11	65.9%	133	311	0.39x	0.38x	0.35x	NA	NA	NA	0.5%	9.4%
Taiga Building Products Ltd.	1.31	97.7%	153	271	0.23x	NA	NA	6.2x	NA	NA	3.7%	0.0%
Goodfellow Inc.	5.45	81.1%	46	109	0.28x	NA	NA	12.2x	NA	NA	2.3%	(7.8%)
	Median	81.1%			0.53x	0.74x	0.71x	11.9x	10.5x	9.9x	5.5%	9.4%
	Mean	82.2%			0.80x	0.93x	0.88x	13.8x	11.9x	10.9x	5.4%	12.2%
Building Materials Manufacturers												
LafargeHolcim Ltd	\$50.79	84.2%	\$30,334	\$49,710	1.86x	1.81x	1.73x	NA	8.2x	7.6x	4.8%	0.0%
CRH plc	33.40	87.1%	27,785	35,141	1.16x	1.12x	1.06x	9.3x	8.6x	7.7x	12.5%	1.7%
HeidelbergCement AG	83.66	75.2%	16,599	29,718	1.47x	1.45x	1.39x	9.3x	7.9x	7.3x	15.8%	0.9%
CEMEX, S.A.B. de C.V.	0.75	78.9%	11,277	22,701	1.67x	1.57x	1.50x	10.1x	8.5x	7.8x	16.5%	3.2%
Vulcan Materials Company	115.82	82.0%	15,319	18,401	4.46x	4.17x	3.81x	18.3x	15.7x	13.3x	24.3%	11.6%
Martin Marietta Materials, Inc.	208.54	86.4%	13,141	16,338	4.28x	3.69x	3.33x	15.7x	13.3x	11.7x	27.3%	2.6%
Eagle Materials Inc.	100.35	81.9%	4,795	5,432	3.84x	3.66x	3.36x	12.9x	10.6x	9.9x	29.7%	10.5%
Titan Cement Company S.A.	23.70	80.7%	1,860	2,803	1.66x	1.61x	1.47x	9.4x	8.6x	7.4x	17.7%	(7.4%)
U.S. Concrete, Inc.	49.60	57.4%	834	1,585	1.11x	1.03x	0.95x	9.7x	7.0x	6.0x	11.5%	10.9%
	Median	81.9%			1.67x	1.61x	1.50x	9.9x	8.6x	7.7x	16.5%	2.6%
	Mean	79.3%			2.39x	2.23x	2.07x	11.8x	9.8x	8.7x	17.8%	3.8%

Source: Capital IQ as of July 31, 2018, and includes the most actively traded companies for respective covered sectors. For definitions, see page 24.

Public Companies' Trading Statistics

Company	Stock Price 8/7/18	% of 52-Wk High	Market Value	Enterprise Value	Enterprise Value as a Multiple of						LTM	
					Revenue			EBITDA			EBITDA Margin	Revenue Growth
					LTM	2018P	2019P	LTM	2018P	2019P		
Homebuilders												
Lennar Corporation	\$53.00	73.4%	\$17,112	\$27,529	1.78x	1.32x	1.15x	17.8x	10.4x	7.7x	10.0%	31.1%
D.R. Horton, Inc.	44.29	83.1%	16,700	18,831	1.20x	1.14x	1.02x	9.4x	8.2x	7.0x	12.8%	15.0%
PulteGroup, Inc.	29.36	83.4%	8,339	11,230	1.19x	1.12x	1.04x	7.9x	7.0x	6.7x	15.0%	17.0%
NVR, Inc.	2,747.02	74.2%	9,964	10,142	1.49x	1.42x	1.29x	10.3x	10.0x	9.0x	14.4%	11.4%
Toll Brothers, Inc.	35.92	68.1%	5,455	8,599	1.36x	1.20x	1.08x	11.9x	7.6x	6.7x	11.5%	16.6%
KB Home	24.27	62.6%	2,128	3,812	0.84x	0.81x	0.76x	10.7x	7.2x	6.6x	7.9%	15.1%
Meritage Homes Corporation	43.20	77.8%	1,756	2,898	0.86x	0.80x	0.77x	10.1x	8.3x	8.0x	8.4%	8.5%
M.D.C. Holdings, Inc.	30.80	87.5%	1,738	2,443	0.90x	0.82x	0.76x	10.6x	6.7x	6.8x	8.5%	5.6%
Hovnanian Enterprises, Inc.	1.62	47.5%	242	1,796	0.80x	0.90x	NA	NA	11.4x	NA	1.4%	(16.0%)
Beazer Homes USA, Inc.	13.17	56.7%	424	1,614	0.80x	0.76x	NA	17.6x	15.7x	NA	4.6%	7.3%
M/I Homes, Inc.	26.31	70.3%	752	1,512	0.72x	0.66x	0.62x	9.0x	NA	NA	8.0%	14.5%
	Median	73.4%			0.90x	0.90x	1.02x	10.5x	8.3x	6.9x	8.5%	14.5%
	Mean	71.3%			1.09x	0.99x	0.94x	11.5x	9.2x	7.3x	9.3%	11.4%
Lumber and Wood Products Manufacturers												
Weyerhaeuser Company	\$34.26	89.2%	\$25,958	\$31,492	4.13x	4.04x	3.98x	14.5x	13.6x	13.4x	28.5%	11.9%
West Fraser Timber Co. Ltd.	61.74	82.0%	4,606	4,887	1.10x	0.99x	1.03x	4.5x	4.0x	4.7x	24.5%	22.0%
Norbord Inc.	38.14	84.3%	3,307	3,560	1.45x	1.42x	1.44x	4.2x	4.5x	5.4x	34.3%	26.8%
Louisiana-Pacific Corporation	28.78	92.3%	4,178	3,553	1.21x	1.21x	1.19x	4.5x	4.9x	5.4x	27.0%	19.6%
Canfor Corporation	20.85	79.7%	2,681	2,799	0.72x	0.68x	0.69x	3.5x	3.4x	3.8x	20.7%	15.4%
Universal Forest Products, Inc.	36.79	93.0%	2,267	2,551	0.59x	0.56x	0.53x	10.3x	9.5x	8.5x	5.8%	19.6%
Boise Cascade Company	44.00	89.2%	1,711	1,958	0.40x	0.38x	0.37x	7.0x	6.8x	7.0x	5.7%	19.7%
	Median	89.2%			1.10x	0.99x	1.03x	4.5x	4.9x	5.4x	24.5%	19.6%
	Mean	87.1%			1.37x	1.33x	1.32x	6.9x	6.6x	6.9x	20.9%	19.3%

Definitions

EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization

Enterprise Value: Market Capitalization + Total Debt + Preferred Equity + Minority Interest – Cash and Short-Term Investments

LTM: Last 12 Months

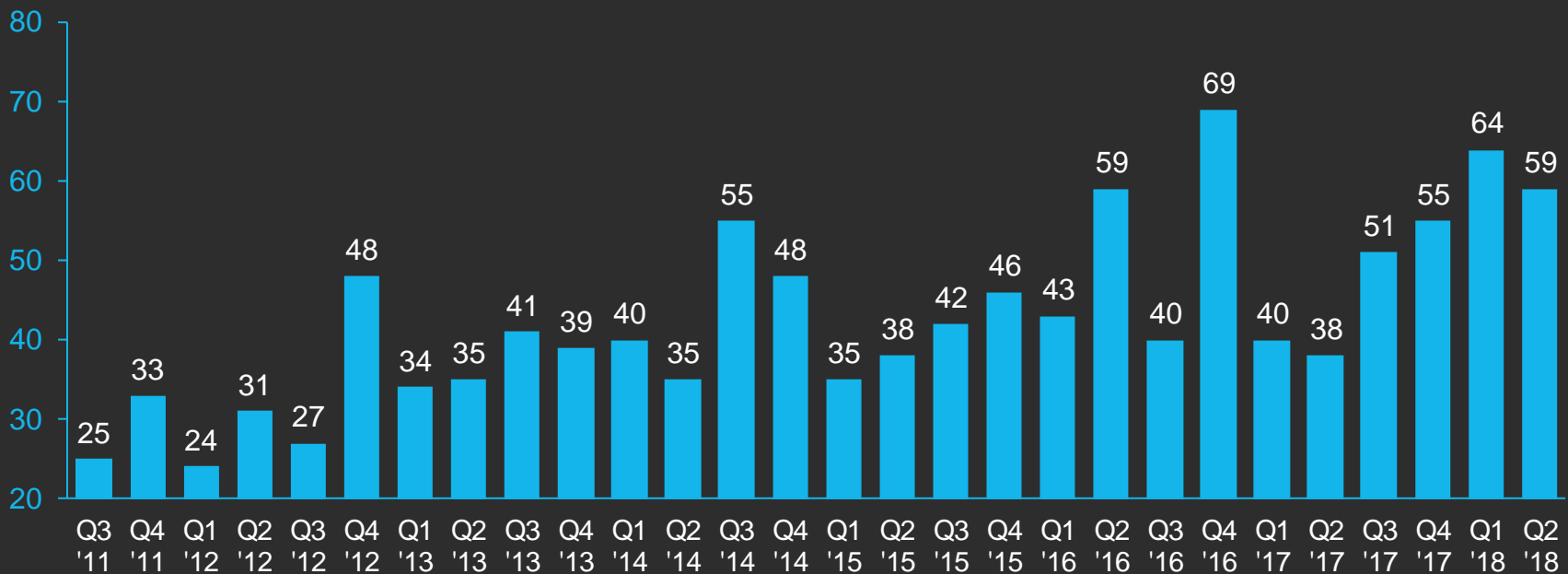
Source: Capital IQ as of July 31, 2018, and includes the most actively traded companies for respective covered sectors.

1H 2018 M&A Activity Remains Robust

M&A activity in the sector was strong in 1H 2018, with 123 completed transactions involving target companies headquartered in the United States or Canada. Activity in the first half of the year was up 16.0% from the second half of 2017, and up 57.7% from the same period a year ago.

The surge in activity was driven by an increase in willing sellers and the strong acquisition appetite of private equity firms and strategics, particularly because of the abundance of debt and equity capital, low interest rates and a favorable housing market outlook.

Building Products and Materials M&A Trends



Note: Includes all transactions where the target is headquartered in the United States or Canada. Source: Capital IQ

Notable M&A Activity – 1H 2018



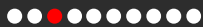
Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Products Distributors				
Jun-18	Ellsworth Builders Supply	United States	Hammond Lumber Company	Sells hardware, lumber and home decor supplies to contractors and homeowners in Maine
Jun-18	Circle Bolt & Nut Company	United States	Optimas OE Solutions Holding	Supplies fasteners, specialty hardware and value added services
Jun-18	The E.T. Horn Company	United States	IMCD N.V.	Distributes specialty ingredients, chemicals and raw materials for use in various industries in North America
May-18	MORSCO	United States	Reece Limited	Distributes plumbing, HVAC and pipe/valves/fittings equipment
May-18	Flooring Solutions	United States	Lynx Equity Limited	Distributes flooring products
May-18	NexGen Building Supply	United States	L&W Supply Corporation	Distributes building materials for interior and exterior residential and commercial projects
May-18	All Integrated Solutions	United States	MSC Industrial Direct Co.	Supplies standard and specialty components and fasteners
May-18	Tri-State Builder's Supply	United States	Beacon Roofing Supply	Distributes roofing, siding, windows, doors and related building products
Apr-18	Dehco	United States	Patrick Industries	Distributes building products and components
Apr-18	SRS Distribution	United States	Leonard Green & Partners	Distributes roofing products in the United States
Apr-18	Guardian Building Products	United States	Pacific Avenue Capital Partners	Distributes specialty building products and materials
Apr-18	WSB Titan	Canada	Gypsum Management & Supply	Distributes building supplies
Mar-18	Fentress County Block Company	United States	Clark Family Concrete Holdings	Supplies construction and building products
Mar-18	Cedar Creek Holdings	United States	BlueLinx Corporation	Distributes lumber and building materials
Mar-18	American Roofing Supply	United States	SRS Distribution	Distributes residential and commercial roofing products and accessories

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Products Distributors (continued)				
Mar-18	Klumb Lumber Company	United States	ECMD	Distributes lumber, building materials and specialty products
Mar-18	Builder's Glass & Hardware	United States	Majestic Marble And Glass Company	Sells hardware and building products
Mar-18	United Subcontractors	United States	TopBuild Corp.	Provides insulation, specialty and shell construction services
Feb-18	Bedrock International	United States	Architectural Surfaces Group	Offers granite and marble stone countertops, tiles, sinks and faucets
Feb-18	Production Tool Supply Company	United States	Berkshire Hathaway	Supplies industrial tools
Feb-18	RM Supply	United States	Foundation Building Materials	Supplies building materials
Feb-18	ArmCom Distributing Company	United States	Foundation Building Materials	Distributes ceiling products and other building products
Jan-18	Snavey Forest Products	United States	Weekes Forest Products	Distributes lumber and building products
Jan-18	Window Nation	United States	Cortec Group	Distributes building products, including windows, doors, gutter systems and accessories
Jan-18	Atlantic Plywood Corporation	United States	Parksite	Distributes hardwood, plywood and panel products and solutions
Jan-18	Brock-White Co. of Wisc.	United States	Construction Supply Holdings	Distributes construction materials
Jan-18	A.H. Harris & Sons	United States	HD Supply Construction Supply	Distributes and sells construction supplies

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Products Manufacturers				
Jun-18	The ReWall Company	United States	Continuous Material Recovery	Uses recycled materials to manufacture building products
Jun-18	Arizona Home Supply	United States	Westland Distributing Partners	Distributes equipment and parts for mobile homes
Jun-18	The Maiman Company/Graham Manufacturing Corporation	United States	Masonite International Corporation	Provides premium and custom grade wood doors and door frames
Jun-18	Drew Foam Companies	United States	Branford Castle Partners	Manufactures building and packaging materials
May-18	Plasterform	Canada	Armstrong World Industries	Manufactures architectural cast ceilings, walls, facades, columns and moldings
May-18	VERSATEX Building Products	United States	The AZEK Company	Manufactures and distributes PVC trim boards and other products
May-18	Design Cabinets and Furniture	United States	Ninth Street Capital Partners	Designs new construction and remodels custom kitchens, bath cabinetry, entertainment centers, theaters and libraries
May-18	Dasco Pro	United States	Vaughan & Bushnell Manufacturing Company	Produces chisels and punches
May-18	Senneca Holdings	United States	Kohlberg & Company	Distributes doors, including traffic, corrosion resistant, strip, cold storage, fire and sliding doors
May-18	Pioneer Industries	United States	ASSA ABLOY	Manufactures metal doors, window frames and wind resistant assemblies
May-18	Metal Window Corp.	United States	Arcadia Incorporated	Manufactures unique, high-quality aluminum window and door products
May-18	Corneookson	United States	Clopay Building Products Company	Manufactures rolling doors and grilles
Apr-18	Johnson Level & Tool Mfg. Co.	United States	Hultafors Group	Manufactures measuring, marking, layout and hand tools
Apr-18	TB Concept	Canada	Armacell	Manufactures and sells pipes
Apr-18	Fortis Security Products	United States	BASE Equity Partners	Designs and manufactures physical security products

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Products Manufacturers (continued)				
Apr-18	Cadence	United States	Kohlberg & Company	Manufactures and supplies products, technologies and services
Apr-18	Wasco Products	United States	VELUX America Inc.	Designs, manufactures and supplies standard and custom skylights
Mar-18	USG Corporation	United States	Knauf KG	Sells building materials worldwide
Mar-18	Thermo-Tech Windows and Doors	United States	Harvey Industries	Manufactures and markets vinyl windows and doors
Mar-18	Nationwide Industries	United States	Harbour Group	Manufactures hardware products in the fence and gate, cable railing and patio markets
Mar-18	RCR International	Canada	M-D Building Products	Manufactures weather-stripping products, insulation components, floor protection products and squeegees
Mar-18	Ashland Products	United States	Amesbury Group Inc.	Manufactures residential window and door hardware
Mar-18	Glasshouse	United States	United Subcontractors	Fabricates and installs architectural glass products
Mar-18	Discount Drainage Supplies	United States	Foundation Investment Partners	Distributes concrete drainage products, corrugated steel pipes, sanitary sewers and other municipal supplies
Feb-18	Ox Engineered Products	United States	Wind Point Partners	Manufactures structural sheathing and thermal insulation building products
Feb-18	Chamberlain Security	United States	Rankin Industries Inc.; Broco Inc.	Manufactures security components
Feb-18	Aurora Systems	United States	Allegion plc	Designs and manufactures sliding doors and interior storefront assemblies
Feb-18	The Fletcher-Terry Company	United States	Capital Partners	Manufactures and sells substrate cutters
Feb-18	Groupe Promax	Canada	Screenco Manufacturing	Manufactures windows and patio door screen products
Jan-18	Atrium Corporation	United States	Clayton, Dubilier & Rice	Manufactures and sells residential aluminum and vinyl windows and doors

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Products Manufacturers (continued)				
Jan-18	Ply Gem Holdings	United States	Clayton, Dubilier & Rice	Manufactures and sells residential and commercial building products
Jan-18	Bravura Brass	United States	The Delaney Co.	Manufactures forged brass door hardware
Jan-18	Residential Division of Lockheed Window Corp.	United States	Slocomb Windows and Doors	Manufactures windows and doors for residential use
Jan-18	The Canvas Exchange	United States	Ohio Awning & Manufacturing Co.	Manufactures awnings
Jan-18	Arizona Polymer Flooring	United States	ICP Construction	Manufactures flooring products and concrete coating systems
Jan-18	Janus International Group	United States	Clearlake Capital Group	Designs, manufactures and installs steel roll-up doors and building components
Jan-18	Energy Labs	United States	Vertiv Group Corporation	Manufactures air handling units, air cooled units, evaporative cooled rooftop DX units and energy recovery systems
Jan-18	U-C Coatings Corporation	United States	High Road Capital Partners	Manufactures and supplies wood protection products
Jan-18	ADO Products	United States	TopBuild Corp.	Manufactures and markets protective wear, insulation and ventilation products
Jan-18	The Group Legacy	United States	Bohle America	Designs and manufactures hardware and accessories for kitchen and bathroom
Jan-18	Mercury Plastics	United States	Masco Corporation	Manufactures custom thermoplastic extrusions, extruded plastic profiles and specialized fabrications
Jan-18	Courion Industries	United States	GAL Manufacturing Company	Manufactures freight door systems, cartlift systems and replacement parts
Jan-18	Technical Glass Products	United States	Allegion plc	Manufactures advanced fire-rated entrance, aluminum fire flames and wall systems

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Lumber and Wood Manufacturers				
May-18	Suwannee Lumber Holding Company/Caddo River Forest Products	United States	Conifex Timber	Manufactures softwood lumber and specialty products
Apr-18	Spinner Wood Products	United States	Universal Forest Products	Manufactures and distributes wooden bins and pallets
Apr-18	Cox Industries	United States	Koppers	Manufactures utility poles for cooperative and municipal utility companies
Mar-18	Alberta Truebeam	Canada	Atlas Engineered Products	Produces engineered wood products
Mar-18	Certain Assets of Langdale Forest Products Co.	United States	Cox Industries	Manufactures wood utility poles
Feb-18	American Building Supply	United States	JELD-WEN Holding	Manufactures door, millwork and hardware products
Feb-18	Highwood Trusses	Canada	Atlas Engineered Products	Manufactures engineered wood products, such as trusses, floor systems and beams
Jan-18	Alta Forest Products	United States	ITOCHU International	Manufactures wood fence boards

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Materials Manufacturers				
Jun-18	Granite Express	United States	Pioneer Sand Company	Owns and operates quarries
Jun-18	Dellinger Precast	United States	Eastern Vault Company	Manufactures precast concrete products
Jun-18	Ready Mix Concrete Operations of Grupo Cementos de Chihuahua	United States	CRH plc	Provides ready-mix products
Jun-18	Piqua Concrete Co.	United States	Smyrna Ready Mix	Provides ready-mix concrete products
May-18	Kitsap Reclamation and Materials	United States	ACG Materials	Operates a basalt quarry and offers mining and processing of aggregate products
May-18	Mark Twain Redi-Mix	United States	Eastern Missouri Concrete	Operates as a concrete contractor company
May-18	Richards Paving	United States	Advanced Pavement Group Corp.	Provides asphalt and concrete paving contractor services
May-18	U.S. Concrete & Quarries Business of Boral Limited	United States	Brannan Sand and Gravel Company	Manufactures concrete
May-18	Superior Ready Mix	United States	Summit Materials	Offers ready-mix concrete
May-18	Midwest Minerals	United States	Cornejo & Sons	Provides crushed limestone aggregates and agricultural lime
May-18	Day Concrete & Block Co.	United States	Summit Materials	Manufactures ready-mix concrete, concrete blocks, sack cement and concrete waste material
May-18	FlyAsh Beneficiation and Mineral Grinding Technologies of SCB International	United States	Charah Solutions	Operates a concrete production business
Apr-18	Werthan	United States	Sims-Lohman	Operates as a supplier of natural stones, engineered stones, solid surfaces and tiles
Apr-18	Mintek Resources	United States	O-N Minerals (Chemstone) Company	Manufactures, processes, sells and distributes products made up of quicklime and cement
Apr-18	Teevin & Fischer Quarry	United States	Knife River Corporation	Produces and supplies gravel and rocks

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Building Materials Manufacturers (continued)				
Apr-18	Southern Athletic Fields	United States	PROFILE Products	Manufactures athletic field maintenance products, such as chalker, clay bricks and conditioner
Mar-18	Golden Spread Redi-Mix	United States	U.S. Concrete	Operates ready-mix concrete plants
Mar-18	Block USA	United States	CRH plc	Produces and distributes grey concrete masonry and architectural color units
Mar-18	Suwannee American Cement Co.	United States	CRH plc	Offers cement products
Feb-18	Kelly Limestone	United States	ACG Materials	Manufactures prill and pelletized limestone, gypsum and dolomite products
Feb-18	Mertens Construction Company	United States	Summit Materials	Manufactures aggregates, limestone, road rocks and other construction materials
Feb-18	Metro Ready-Mix	United States	Summit Materials	Processes and markets concrete
Feb-18	Lehigh White Cement Company	United States	CEMEX; Aalborg Cement Company	Produces, imports and markets white Portland and masonry cements
Feb-18	Perma-Patch	United States	Gemini Investors	Manufactures cold patch asphalt repair material
Jan-18	On Time Ready Mix	United States	U.S. Concrete	Provides ready-mix concrete
Jan-18	The Shockey Precast Group	United States	Metromont Corporation	Produces structural and architectural precast concrete systems

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Homebuilders				
Jun-18	Hudspeth & Associates	United States	ASRC Industrial Services	Provides general construction and environmental remediation services
Jun-18	WJH	United States	Century Communities	Provides home building services
Jun-18	A-1 Sewer & Drain Plumbing & Heating	United States	Succession Capital Partners	Provides commercial and residential plumbing services
Jun-18	AV Homes	United States	Taylor Morrison Home Corporation	Engages in the homebuilding and community development businesses
Jun-18	The Dwyer Group	United States	Harvest Partners	Provides commercial and residential restoration and cleaning services
May-18	Scott Felder Homes	United States	Platform Ventures	Engages in home building
May-18	Triangle Home HVAC Division of Triangle Refrigeration Co.	United States	Ranck Plumbing Heating & Air Conditioning	Offers heating, ventilation and air conditioning installation and repair services to residential customers
Apr-18	GHO Homes Corporation	United States	Green Brick Partners	Provides home building services
Apr-18	Water Works	United States	Gold Medal Service	Provides plumbing, heating, air conditioning and water purification services
Apr-18	The Brohn Group	United States	CMH Services	Provides home building services
Apr-18	H2H Blinds	United States	Installed Building Products	Installs blinds and shutters for residential construction market
Apr-18	Missouri Terrazzo Company	United States	Paul Berra	Operates as a flooring contractor
Mar-18	Midwest Furnace and Roof Co. and Purdy Electric	United States	Kassel Equity Group	Provides HVAC, roofing and home remodeling services
Feb-18	Hallmark Southwest Corporation	United States	Dvele	Manufactures prefabricated houses
Feb-18	RSI Communities	United States	William Lyon Homes	Builds and sells new homes and residential communities

Notable M&A Activity – 1H 2018



Date Announced	Target	Target Country	Acquiror	Target Business Description
Homebuilders (continued)				
Jan-18	Greencraft Interiors	United States	L.A.R.K. Industries	Provides installation of flooring, cabinets and countertops for residential customers
Jan-18	Candlelight Homes	United States	CalAtlantic Group	Offers home building services
Jan-18	Rocket Insulation & Coatings	United States	Installed Building Products	Provides spray foam and fiberglass insulation installation services
Jan-18	EcoCabins	United States	Sprout Tiny Homes	Engages in construction of modular residential buildings
Jan-18	Skyline Corporation	United States	Champion Enterprises Holdings (nka:Skyline Champion Corporation)	Engages in factory-built housing business

Duff & Phelps' Ongoing and Recent Transactions

Sell Side Advisor
(Ongoing)

Leading provider of resilient,
hard-surface flooring

Sell Side Advisor
(Ongoing)

Lumber manufacturing plant
and pine sawmill

Sell Side Advisor



a Hart Group, Inc. company
has been acquired by



Sell Side Advisor



has been acquired by



Sell Side Advisor



a portfolio company of



has been acquired by



Sell Side Advisor



has been acquired by



Sell Side Advisor



a portfolio company of



has been acquired by



Sell Side Advisor



has been acquired by



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