COMMERCIAL / MULTIFAMILY QUARTERLY DATABOOK | Q4 2018

19080

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COMMERCIAL/MULTIFAMILY
QUARTERLY DATABOOK
Q4 2018

MORTGAGE BANKERS ASSOCIATION

MBA COMMERCIAL REAL ESTATE / MULTIFAMILY FINANCE

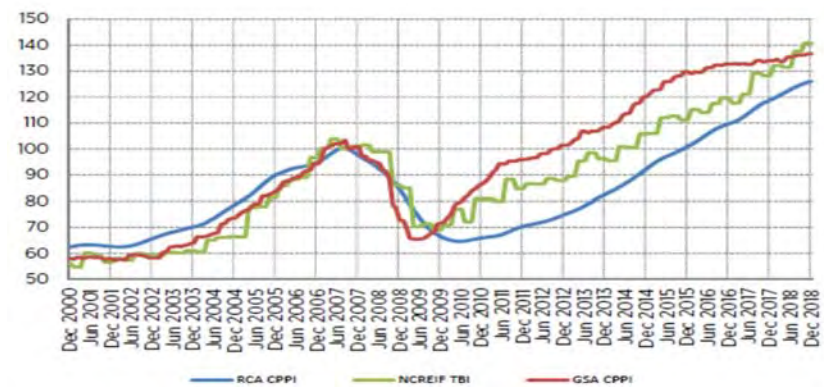
QUARTERLY DATABOOK

MORTGAGE BANKERS ASSOCIATION

Fourth Quarter 2018

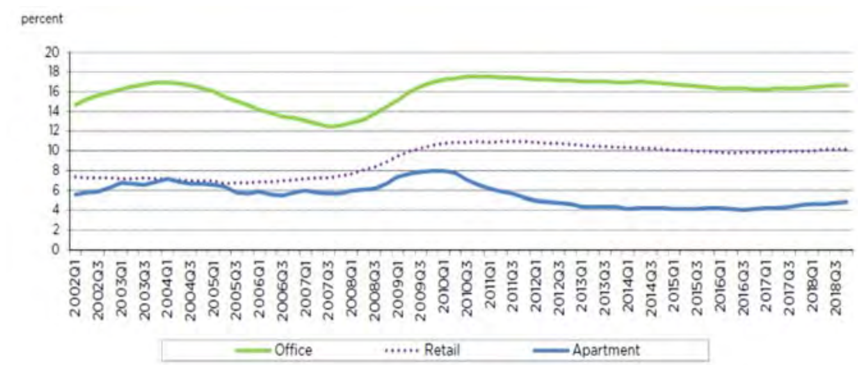
Selected Charts

Price Indices



Source: MBA, Real Capital Analytics, National Council of Real Estate Investment Fiduciaries, and Green Street Advisors

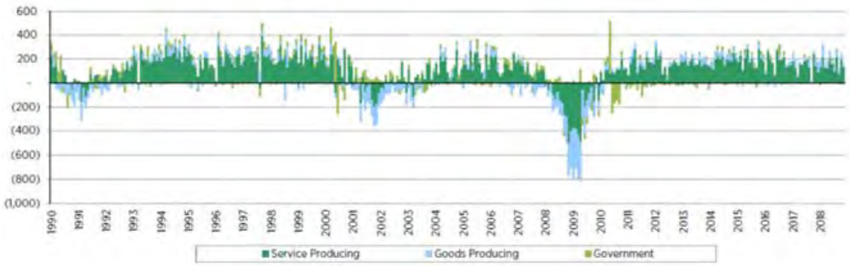
Average Vacancy Rates *By Property Type*



Source: REIS

Month-over-month Change in At-Place Employment

Thousands of jobs

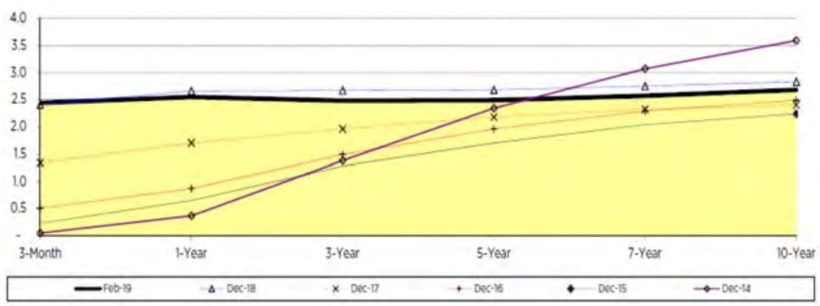


Source: Bureau of Labor Statistics

Ten-year Treasury and 10-year Swaps *Percent*

Source: Federal Reserve Board & JP Morgan Securities

Treasury Yield Curve *Percent*



Source: Federal Reserve Board

Multifamily Permits, Starts and Completions *Thousands, Seasonally adjusted annual rate*

Source: Census Bureau

The Commercial Real Estate/ Multifamily Finance Quarterly Data Book is a quarterly compendium of the latest MBA research on the commercial/multifamily finance markets. The latest version of the Data Book can be downloaded from the MBA website at:

http://www. mba.org/crefresearch

MBA Commercial Real Estate/Multifamily Finance Quarterly Data Book

Fourth Quarter 2018

March 29, 2019

1. Outlook

Introduction

ECONOMY

The U.S. Economy slowed its pace slightly at the end of 2018. During the fourth quarter, real gross domestic product (GDP) grew at a seasonally adjusted annual rate of 2.2 percent – below the 2.9 percent growth for the year as a whole. The job market remained strong and tight. During the fourth quarter, job growth averaged 233,000 per month (higher than the 223,000 monthly average for the year as a whole), and the unemployment rate ended the year at 3.9 percent. Wages have been increasing, with average hourly earnings ending 2018 3.3 percent higher than a year earlier. The number of households also grew – with 1.5 million households added during the year and the net increase driven by growth in owner-occupied households.

PROPERTY FUNDAMENTALS

Average national vacancy rates generally ticked up during 2018, as did asking rents. Apartment vacancy rates rose from 4.6 percent in Q4 2017 to 4.9 percent in Q4 2018, and rents rose 5 percent. For office properties, vacancy rates increased from 16.4 percent to 16.7 percent and rents rose 2.6 percent. Among retail properties vacancy rates rose from 10.0 percent to 10.2 percent and rents were up 1.6 percent.

New construction activity remained robust, with increases in the value of construction put-in-place for multifamily, office, and lodging properties. The value of other commercial properties put-in-place declined from a year earlier. Multifamily permits and starts remained strong, and the number of multifamily units under construction ended the year at 601,000 – a level that has been relatively stable since mid-2016 and remains higher than other periods going back to the mid-1970s.

PROPERTY SALES

Commercial and multifamily property sales transactions rose in 2018, with $484 billion of sales of office, apartment, retail and industrial properties – a 14 percent increase from 2017. The increase was driven by a rise in entity-level transactions, which pushed industrial property sales up 25 percent and retail properties up 32 percent. Sales of apartment properties increased 12 percent and office transactions rose 1 percent.

Property prices also increased during the year – by 1.9 percent according to the Green Street Advisors CPPI, 6.0 percent according to the Real Capital Analytics CPPI and 9.8 percent according to the NCREIF TBI.

Cap rates remained a key contributor to the continued value increases, falling from a year earlier for apartment and office properties and holding steady for industrial and retail.

MORTGAGE ORIGINATIONS

2018 ended on a strong note for commercial mortgage borrowing and lending, with fourth quarter originations 14 percent higher than a year earlier, despite the broader market volatility. Investor and lender interest in multifamily and industrial properties continues to drive transaction volumes while questions about retail and office property markets have slowed activity for those property types.

An increase in fourth quarter originations for healthcare, multifamily and industrial properties led the overall increase in commercial/multifamily lending volumes in the fourth quarter compared to the same quarter in 2017. The fourth quarter saw a 61 percent year-over-year increase in the dollar volume of loans for healthcare properties, a 32 percent increase for multifamily properties, a 28 percent increase for industrial properties, and a slight increase (one percent) for retail properties. Originations decreased for hotel property loans (4 percent) and office property loans (3 percent).

Among investor types, the dollar volume of loans originated for the Government Sponsored Enterprises (GSEs - Fannie Mae and Freddie Mac) increased year-over-year by 32 percent. There was a 22 percent increase for life insurance company loans and a five percent increase in commercial bank portfolio loans. The dollar volume of loans for Commercial Mortgage Backed Securities (CMBS) declined 35 percent.

MORTGAGE DEBT OUTSTANDING

2018 recorded the largest annual increase in commercial and multifamily mortgage debt outstanding since the Great Recession, and the largest increase in multifamily mortgage debt on record. Growth in multifamily mortgage debt made up almost half the total increase in debt outstanding, and Fannie Mae, Freddie Mac and FHA collectively accounted for two-thirds of the multifamily growth. The GSEs, life insurance companies, the CMBS market and banks all increased their holdings of commercial and multifamily mortgage debt during the year.

Commercial/multifamily mortgage debt outstanding ended 2018 at $3.4 trillion -- $216 billion (6.8 percent) higher than at the end of 2017. Total mortgage debt outstanding in the final three months of 2018 rose by 2.1 percent ($68.5 billion) compared to the previous quarter, with all four major investor groups increasing their holdings. Multifamily mortgage debt grew $32.2 billion (2.4 percent) to $1.36 trillion over the same period.

In the fourth quarter of 2018, agency and GSE portfolios and MBS saw the largest rise in dollar terms in their holdings of commercial/multifamily mortgage debt, with an increase of $26.8 billion (4.1 percent). Commercial banks increased their holdings by $21.0 billion (1.6 percent), and life insurance companies increased their holdings by $12.4 billion (2.5 percent), and state and local governments saw the largest decrease at $1.2 billion (1.1 percent).

LOAN PERFORMANCE

It's hard to imagine commercial and multifamily mortgages performing much better than they have recently. Future performance will be largely driven by changes in the economy and how they affect property incomes, property values and the ability of owners to refinance when their loans come due. Currently, all of those factors are favorable.

Based on the unpaid principal balance (UPB) of loans, delinquency rates for each group at the end of the fourth quarter were as follows:

- Banks and thrifts (90 or more days delinquent or in non-accrual): 0.48 percent, unchanged from the third quarter of 2018;
- Life company portfolios (60 or more days delinquent): 0.05 percent, an increase of 0.01 percentage points from the third quarter of 2018;
- Fannie Mae (60 or more days delinquent): 0.06 percent, a decrease of 0.01 percentage points from the third quarter of 2018;
- Freddie Mac (60 or more days delinquent): 0.01 percent, unchanged from the third quarter of 2018; and
- CMBS (30 or more days delinquent or in REO): 2.77 percent, a decrease of 0.28 percentage points from the third quarter of 2018.

MBA Economic Forecast

March 21, 2019

	2018				2019				2020							
	Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**2018**	**2019**	**2020**	**2021**
Percent Change, SAAR																
Real Gross Domestic Product	2.2	4.2	3.4	2.6	1.2	2.3	2.2	2.2	1.2	1.4	1.4	1.5	3.1	2.0	1.4	1.4
Personal Consumption Expenditures	0.5	3.8	3.5	2.8	1.3	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.7	2.1	2.2	2.1
Business Fixed Investment	11.5	8.7	2.5	6.2	3.3	3.3	2.8	3.2	1.4	1.2	2.5	2.2	7.2	3.1	1.8	2.1
Residential Investment	-3.4	-1.3	-3.6	-3.5	-6.1	4.4	5.2	5.8	1.2	-0.3	-1.0	1.3	-3.0	2.2	0.3	2.0
Govt. Consumption & Investment	1.5	2.5	2.6	0.4	2.6	3.1	0.9	0.6	0.9	1.9	-0.1	0.2	1.8	1.8	0.7	0.3
Net Exports (Bil. Chain 2009$)	-751.0	-696.0	-792.2	-803.9	-804.5	-815.1	-824.8	-837.9	-881.3	-907.7	-910.6	-926.0	-760.8	-820.6	-906.4	-992.0
Inventory Investment (Bil. Chain 2009$)	25.8	-31.3	76.3	82.5	66.8	56.9	57.6	57.4	58.7	54.6	42.8	41.2	38.3	59.7	49.4	40.3
Consumer Prices (YOY)	2.2	2.7	2.6	2.2	1.6	1.9	2.1	2.3	2.3	1.9	2.0	2.1	2.4	2.0	2.1	2.2
Percent																
Unemployment Rate	4.1	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.9	3.7	3.8	3.9
Federal Funds Rate	1.625	1.875	2.125	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375
10-Year Treasury Yield	2.8	2.9	2.9	3.0	2.7	2.7	2.8	2.8	2.9	3.0	3.0	3.0	3.0	2.8	3.0	3.0

Notes:
The Fed Funds Rate forecast is shown as the mid point of the Fed Funds range at the end of the period.
All data except interest rates are seasonally adjusted
The 10-Year Treasury Yield is the average for the quarter, while the annual value is the Q4 value
Forecast produced with the assistance of the Macroeconomic Advisers' model

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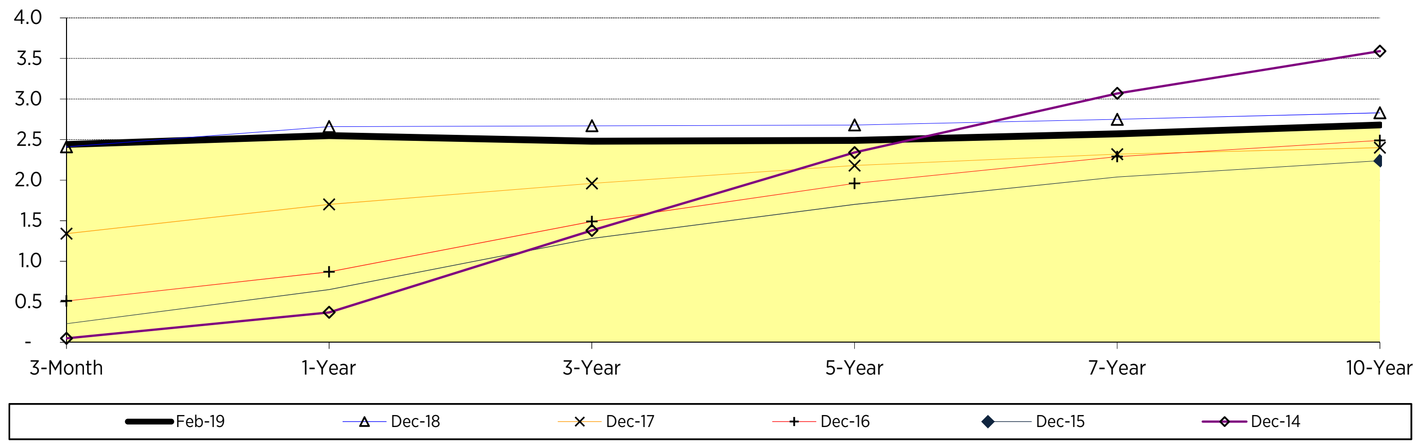
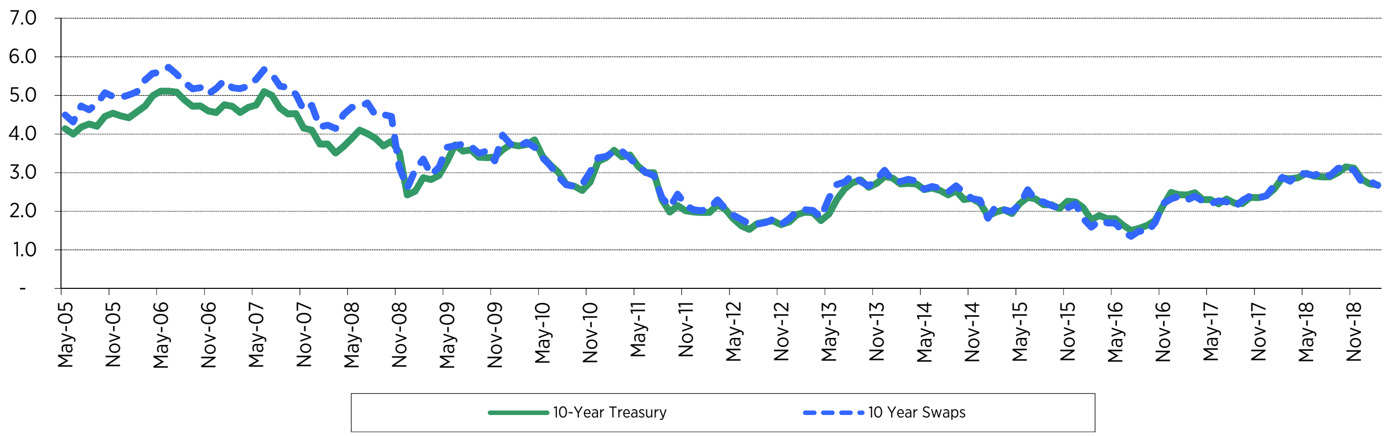
TREASURY YIELDS AND BANK RATES

Federal Reserve Statistical Release H-15

Treasury Yield Curve



Ten Year Treasury and Ten Year Swaps



Source: Federal Reserve Board H-15 Report and JP Morgan Securities
Yields on actively traded issues adjusted to constant maturities.

TREASURY YIELDS AND BANK RATES

Federal Reserve Statistical Release H-15

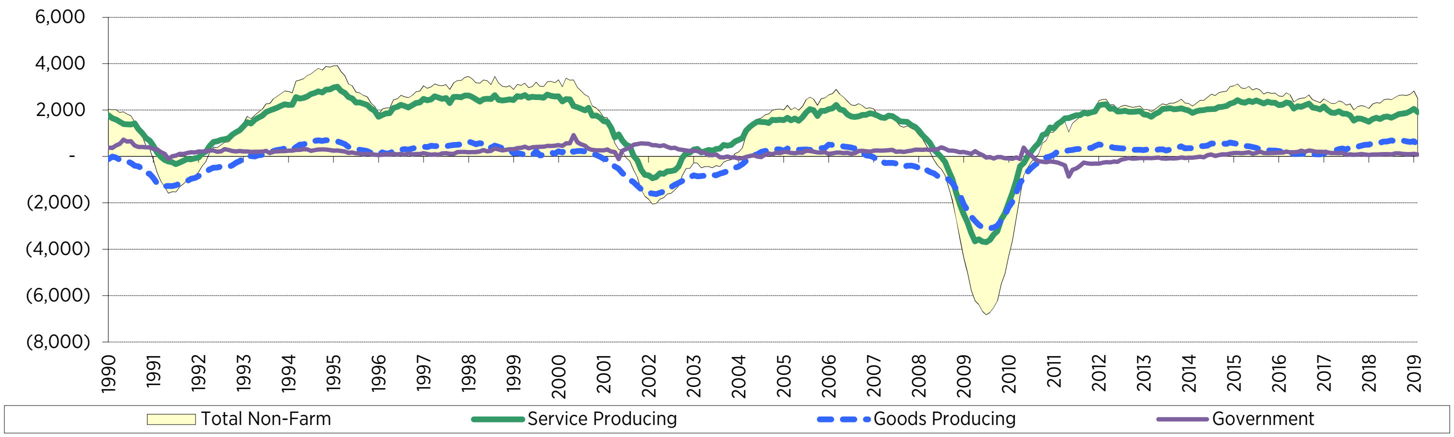
	3-Month Treasury	1-Year Treasury	3-Year Treasury	5-Year Treasury	7-Year Treasury	10-Year Treasury	10-Year Swap
Dec-13	0.07	0.13	0.69	1.58	2.29	2.90	2.95
Dec-14	0.03	0.21	1.06	1.64	1.98	2.21	2.33
Dec-15	0.23	0.65	1.28	1.70	2.04	2.24	2.16
Dec-16	0.51	0.87	1.49	1.96	2.29	2.49	2.32
Dec-17	1.34	1.70	1.96	2.18	2.32	2.40	2.40
Dec-18	3.97	4.33	4.43	4.45	4.48	4.54	4.97
Feb-18	1.59	1.96	2.36	2.60	2.78	2.86	2.88
Mar-18	1.73	2.06	2.42	2.63	2.77	2.84	2.78
Apr-18	1.79	2.15	2.52	2.70	2.82	2.87	2.99
May-18	1.90	2.27	2.66	2.82	2.93	2.98	2.97
Jun-18	1.94	2.33	2.65	2.78	2.87	2.91	2.93
Jul-18	1.99	2.39	2.70	2.78	2.85	2.89	3.02
Aug-18	2.07	2.45	2.71	2.77	2.84	2.89	2.92
Sep-18	2.17	2.56	2.84	2.89	2.96	3.00	3.11
Oct-18	2.29	2.65	2.94	3.00	3.09	3.15	3.14
Nov-18	2.37	2.70	2.91	2.95	3.04	3.12	3.06
Dec-18	2.41	2.66	2.67	2.68	2.75	2.83	2.76
Jan-19	2.42	2.58	2.52	2.54	2.61	2.71	2.78
Feb-19	2.44	2.55	2.48	2.49	2.57	2.68	2.67
Change in Rate Feb-18 to Feb-19	0.85	0.59	0.12	(0.11)	(0.21)	(0.18)	(0.21)

Source: Federal Reserve Board H-15 Report and JP Morgan Securities
Yields on actively traded issues adjusted to constant maturities.

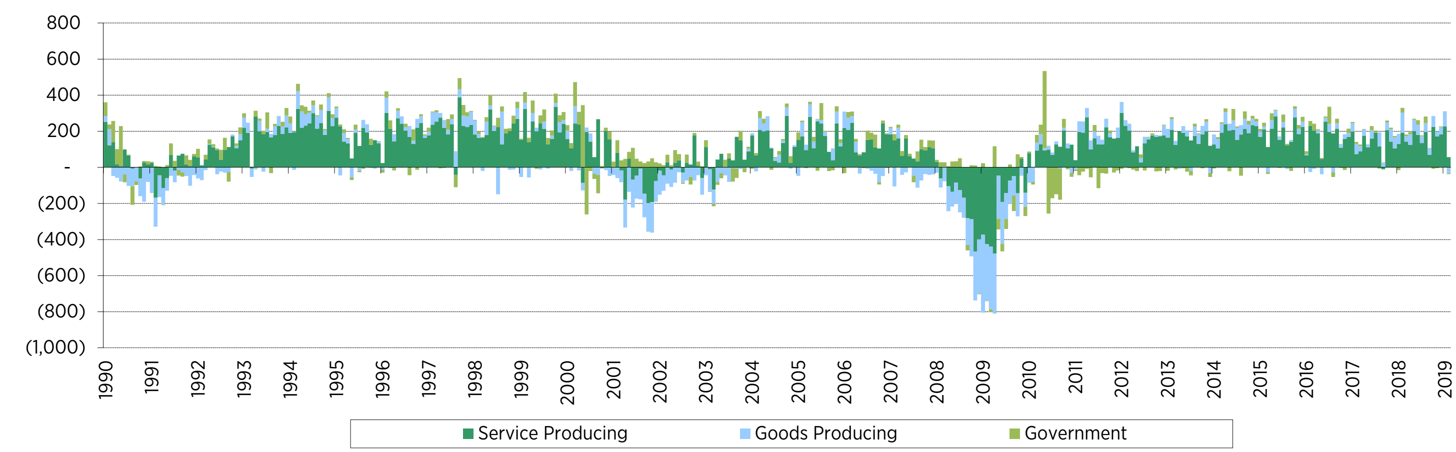
EMPLOYEES ON NONFARM PAYROLLS

Number of Employees on Nonfarm Payrolls
Seasonally Adjusted, Thousands of Employees

Year-over-year Change



Month-over-month Change



Source: Bureau of Labor Statistics

EMPLOYEES ON NONFARM PAYROLLS

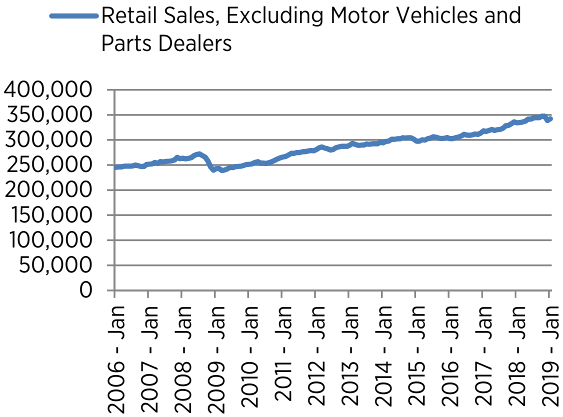
Number of Employees on Nonfarm Payrolls
Seasonally Adjusted, Thousands of Employees

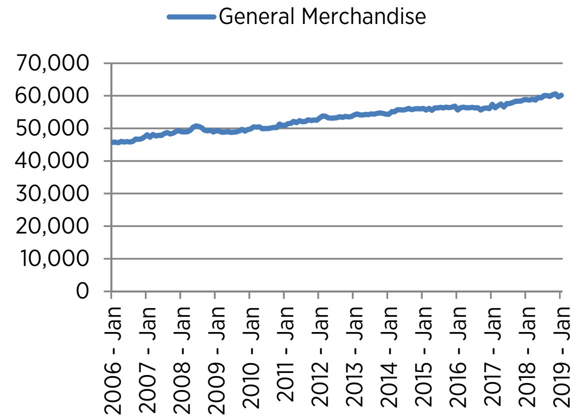
	Private	Private		
	Service Producing	Goods Producing	Government	Total Nonfarm
Dec 2014	98,968	19,481	21,947	140,396
Dec 2015	101,283	19,740	22,102	143,125
Dec 2016	103,312	19,827	22,304	145,443
Dec 2017	104,877	20,330	22,389	147,596
Dec 2018	106,829	20,961	22,485	150,275
Sep 2018	106,249	20,832	22,494	149,575
Oct 2018	106,474	20,892	22,486	149,852
Nov 2018	106,645	20,921	22,482	150,048
Dec 2018	106,829	20,961	22,485	150,275
Jan 2019	107,056	21,042	22,488	150,586
Feb 2019	107,113	21,010	22,483	150,606
Percent change				
Feb 2018 to Feb 2019	1.8%	2.5%	0.4%	1.7%
		Change		
		Year-over-year		
Dec 2014	2,279	600	127	3,006
Dec 2015	2,315	259	155	2,729
Dec 2016	2,029	87	202	2,318
Dec 2017	1,565	503	85	2,153
Dec 2018	1,952	631	96	2,679
		Month-over-month		
Sep 2018	70	38	-	108
Oct 2018	225	60	(8)	277
Nov 2018	171	29	(4)	196
Dec 2018	184	40	3	227
Jan 2019	227	81	3	311
Feb 2019	57	(32)	(5)	20

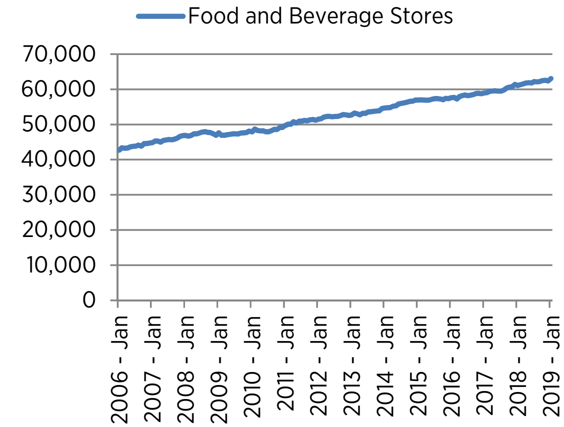
Source: Bureau of Labor Statistics

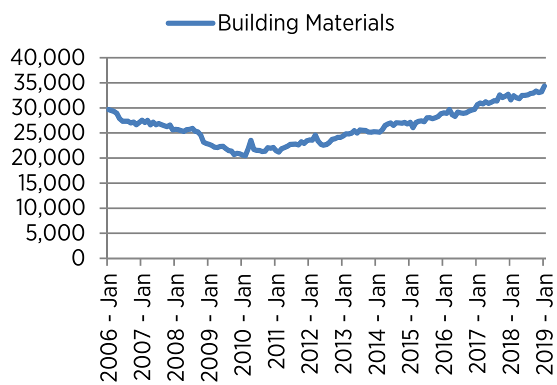
MONTHLY RETAIL SALES

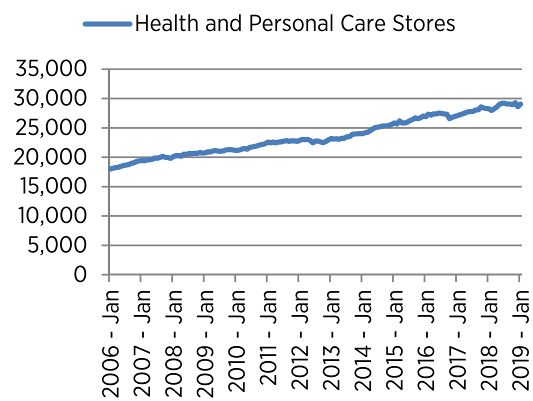
Seasonally Adjusted
By Kind of Business, $millions











Source: U.S. Census Bureau

MONTHLY RETAIL SALES

Seasonally Adjusted
By Kind of Business, $millions
Total excludes motor vehicle and parts dealers

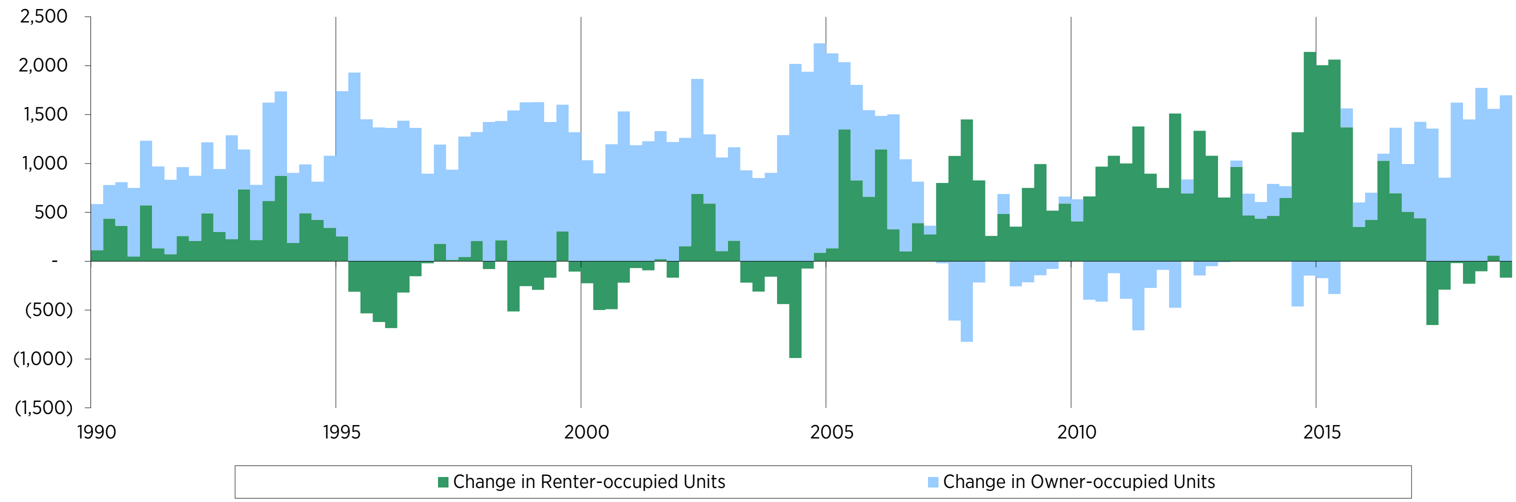
	Selected Businesses						
	General Merchandise	Food & Beverage	Building Materials	Health & Personal	Clothing & Accessories	Total	% Change
							Year-Over-Year
2014	667,331	669,318	317,569	299,079	250,287	3,614,612	3.30%
2015	675,045	685,691	331,273	315,008	255,737	3,628,267	0.38%
2016	674,525	698,577	349,149	326,097	258,266	3,701,133	2.01%
2017	691,710	718,554	378,028	333,921	261,816	3,885,012	4.97%
2018	714,531	743,360	390,777	345,379	274,497	4,091,871	5.32%
							Month-over-Month
2018 - Jun	59,395	61,810	32,491	29,195	23,080	341,698	0.09%
2018 - Jul	60,052	62,226	32,579	29,198	23,458	344,006	0.68%
2018 - Aug	60,068	62,114	32,845	29,069	22,761	344,471	0.14%
2018 - Sep	59,794	62,219	32,910	29,062	22,925	344,330	-0.04%
2018 - Oct	60,287	62,472	33,341	28,950	23,172	347,466	0.91%
2018 - Nov	60,606	62,563	33,042	29,281	23,218	347,398	-0.02%
2018 - Dec	59,674	62,382	33,222	28,610	22,944	338,837	-2.46%
2019 - Jan	60,137	63,051	34,334	29,054	22,644	342,033	0.94%
Percent change 2018 - Jan to 2019 - Jan	2.2%	3.2%	8.7%	2.8%	1.6%	2.4%	

Source: U.S. Census Bureau

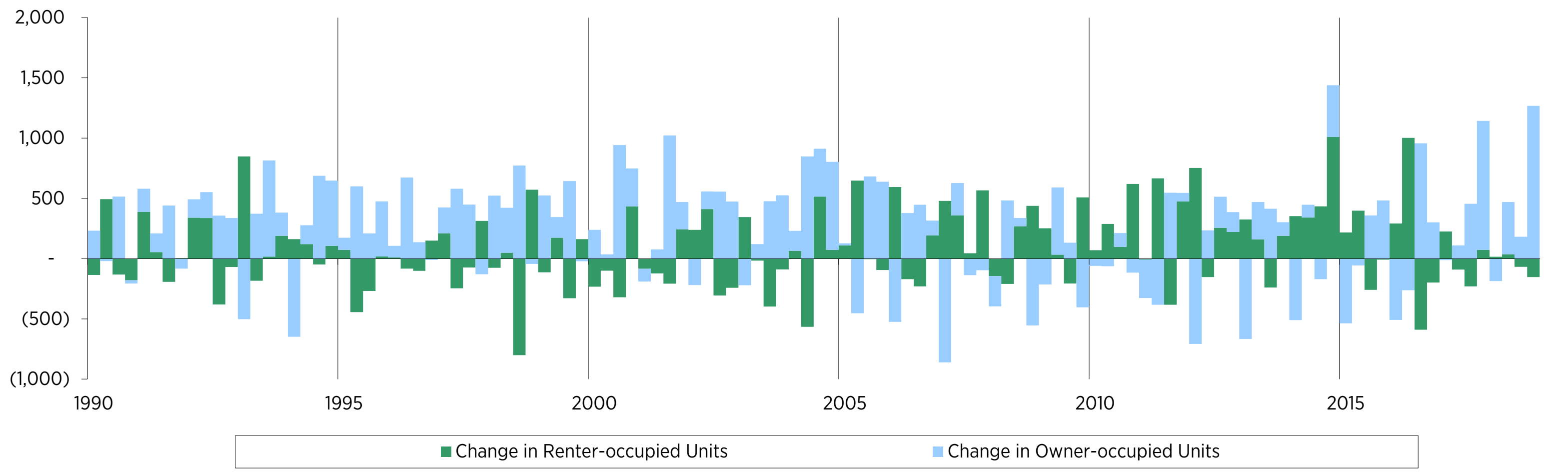
Change in Owner- and Renter-Occupied Housing Units

Thousands of Units

Year-over-year Change



Quarter-over-quarter Change



Source: MBA, U.S. Census Bureau and Haver Analytics

Owner- and Renter-Occupied Housing Units

Thousands of Units at End-of-period

	Number of Occupied Units			Year-over-year Change		
	Total	Owner	Renter	Total	Owner	Renter
2009	112,485	75,537	36,948	662	72	590
2010	113,442	75,415	38,028	958	(122)	1,080
2011	114,106	75,328	38,779	664	(87)	751
2012	115,139	75,278	39,859	1,030	(50)	1,080
2013	115,743	75,448	40,296	607	170	437
2014	117,739	75,302	42,437	1,995	(146)	2,141
2015	118,340	75,552	42,788	601	250	351
2016	119,335	76,040	43,295	995	488	507
2017	120,938	77,663	43,276	1,604	1,623	(19)
2018	122,469	79,361	43,109	1,531	1,698	(167)
				Quarter-over-quarter Change		
2015 - Q4	118,340	75,552	42,788	475	484	(8)
2016 - Q1	118,122	75,042	43,080	(218)	(510)	292
2016 - Q2	118,864	74,781	44,083	742	(261)	1,003
2016 - Q3	119,230	75,738	43,492	366	957	(591)
2016 - Q4	119,335	76,040	43,295	105	302	(197)
2017 - Q1	119,551	76,028	43,521	216	(12)	226
2017 - Q2	119,569	76,138	43,431	18	110	(90)
2017 - Q3	119,793	76,594	43,202	224	456	(229)
2017 - Q4	120,938	77,663	43,276	1,145	1,069	74
2018 - Q1	120,770	77,478	43,292	(168)	(185)	16
2018 - Q2	121,240	77,911	43,329	470	433	37
2018 - Q3	121,354	78,093	43,261	114	182	(68)
2018 - Q4	122,469	79,361	43,109	1,115	1,268	(152)

Source: MBA, U.S. Census Bureau and Haver Analytics

2. Commercial/Multifamily Finance Environment

Extract of Commercial Real Estate Comments from the Federal Reserve Board's Beige Book
March 6, 2019

This report was prepared at the Federal Reserve Bank of Kansas City based on information collected on or before February 25, 2019. This document summarizes comments received from contacts outside the Federal Reserve System and is not a commentary on the views of Federal Reserve officials.

NATIONAL SUMMARY

Economic activity continued to expand in late January and February, with ten Districts reporting slight-to-moderate growth, and Philadelphia and St. Louis reporting flat economic conditions. About half of the Districts noted that the government shutdown had led to slower economic activity in some sectors including retail, auto sales, tourism, real estate, restaurants, manufacturing, and staffing services. Consumer spending activity was mixed across the country, with contacts from several Districts attributing lower retail and auto sales to harsh winter weather and to higher costs of credit. Manufacturing activity strengthened on balance, but numerous manufacturing contacts conveyed concerns about weakening global demand, higher costs due to tariffs, and ongoing trade policy uncertainty. Activity in the nonfinancial services sector increased at a modest-to-moderate pace in most Districts, driven in part by growth in the professional, scientific, and technical services sub-sector. Residential construction activity was steady or slightly higher across most of the U.S., but residential home sales were generally lower. Several real estate contacts noted that inventories had risen slightly but remained historically low, while home prices continued to appreciate but at a slightly slower pace. Agricultural conditions remained weak, and energy activity was mixed across Districts.

FIRST DISTRICT—BOSTON

Commercial real estate fundamentals in the First District were either flat or up slightly in recent weeks, depending on the location and property type. Office leasing activity remained strong in both Boston and Portland, with asking rents continuing to rise in the former and holding steady in the latter. Office leasing was described as stable at a modest pace in Providence and slow (but also stable) in Hartford. In Providence, office rents were up 2 percent to 4 percent from one year ago; in Hartford, rents have been flat for an extended period. Industrial leasing demand was robust in most of the First District, although low inventories held back activity in Rhode Island. Contacts in Providence and Hartford perceived that investors were increasingly seeking to purchase properties in smaller cities in order to obtain higher yields than in Boston, but hard numbers on transactions volume were not available.

Planned construction of speculative office space tailored to the life sciences industry increased in the Boston area. Commercial real estate lenders were reported to be offering increasingly narrow interest rate spreads and generous loan terms. Construction costs continued to rise on average, and one Boston contact saw steep increases in subcontracting costs from a year ago that were attributed to scarce labor in the skilled trades.

Most contacts maintained a positive outlook. However, some expect economic growth--and hence demand for commercial real estate--to slow in 2019.

SECOND DISTRICT—NEW YORK

Commercial real estate markets have been mixed but little changed overall. Both office availability rates and asking rents have remained steady, on balance. Retail markets have continued to soften, as vacancies have continued to rise. Industrial markets, on the other hand, have remained firm: While availability rates have leveled off at low levels, rents have continued to climb briskly—mainly in the New York City metropolitan region.

New multi-family construction starts remained sluggish, though a substantial volume of residential development remains under construction--particularly in New York City. New office construction starts picked up in New York City but remained sluggish elsewhere.

THIRD DISTRICT—PHILADELPHIA

On balance, commercial real estate construction and leasing activity appear to have edged down slightly from relatively high levels. However, most contacts remain very busy. Consolidations in health care and education are fueling new projects for architects and engineers. Contacts noted that absorption of new hotel properties and high-end multifamily units have largely kept pace with construction. The strong market for industrial and warehouse space continued for smaller spaces; however, demand may have eased a bit for warehouses in excess of 1 million square feet.

FOURTH DISTRICT—CLEVELAND

Nonresidential construction remained steady, as negative seasonal effects countered underlying demand growth. Nonresidential builders noted that they believed normal seasonal variation caused the pause in demand growth, and they expected growth to resume once winter ends. Nonresidential builders' backlogs increased, as the stable and strong demand outpaced their ability to work through it during the winter. Builders acquired more public projects than private work.

FIFTH DISTRICT—RICHMOND

Commercial real estate leasing rose modestly in recent weeks. District brokers reported increased demand for restaurant, grocery, and industrial space, while retail activity was stable to increasing. Moreover, vacancy rates decreased slightly across all sub-markets, and contacts reported that limited inventory pushed rental rates up slightly in some areas. On the commercial sales side, brokers reported modest increases in prices and volumes. Multi-family leasing remained healthy, although reports on construction activity varied across the District.

SIXTH DISTRICT—ATLANTA

Commercial real estate leasing and sales activity remained steady across most District markets. Overall, rents grew and vacancies trended downward at a modest pace. Strength remained in the industrial, multifamily, and medical sectors. Office market contacts reported overall persistent strength; however, higher levels of employee densification and greater deliveries of space appeared to be creating pockets of slowing in some local markets.

SEVENTH DISTRICT—CHICAGO

Investor demand for multifamily properties remained strong. Home prices and rents edged higher. Nonresidential construction was unchanged on balance, though one contact noted a pickup in bidding activity. Contacts indicated that shortages of materials and workers were leading to delays in completing projects. Commercial real estate activity was also unchanged, with growth in demand for industrial space offset by declines in demand for big box retail and office space. Contacts noted that in many areas the availability of industrial space was quite limited. Rents and the overall availability of sublease space were flat. Vacancy rates edged higher.

EIGHTH DISTRICT—ST. LOUIS

Commercial real estate activity was mixed. Survey respondents reported an increase in demand for industrial space year over year but no change in the demand for office buildings and a decrease in demand for retail properties. These contacts expect demand for office and industrial space to increase in the next quarter and the demand for retail properties to continue to decline.

Commercial construction activity improved slightly. Contacts reported increased demand for construction of office and retail property types. One respondent noted that labor shortages are slowing down project construction schedules. Memphis area contacts reported that some companies are choosing to renovate existing facilities rather than build new ones.

NINTH DISTRICT—MINNEAPOLIS

Commercial real estate grew moderately since the last report. Industrial property vacancies remained low in the Minneapolis-St. Paul region despite significant new construction, and average price per square foot remained healthy. Office vacancy rates in the region were stable at somewhat elevated levels. Multifamily vacancy rates have stayed low throughout much of the region, while new construction continued. Retail vacancies have risen in many District markets, as major bankruptcies continued to roll through the chain-retail industry. Residential real estate was widely lower. January home sales registered a decline across most of the District's larger cities, with a number seeing double-digit drops compared with a year earlier.

TENTH DISTRICT—KANSAS CITY

Commercial real estate activity continued to expand slightly as sales and absorption rose, and vacancy rates declined slightly. Commercial real estate contacts expected a similar pace of growth moving forward.

ELEVENTH DISTRICT—DALLAS

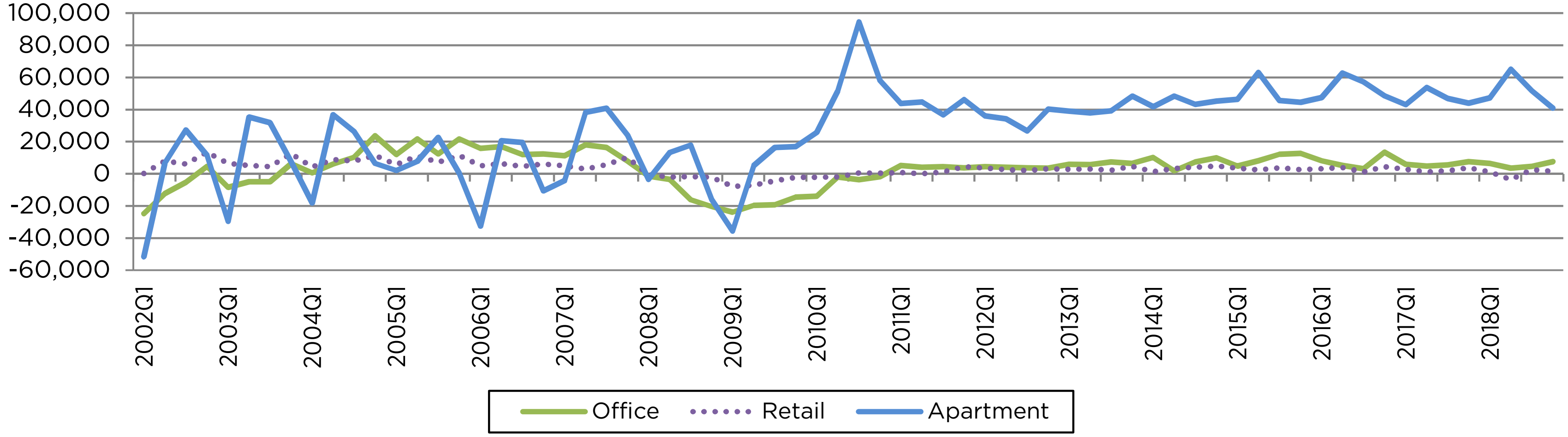
Conditions were stable in the apartment market, and the expectation was for rent growth to remain solid in Austin and Fort Worth and to firm up in Houston. Industrial activity generally remained solid, and reports on the office market indicated that leasing was most active for new or recently renovated class A space.

TWELFTH DISTRICT—SAN FRANCISCO

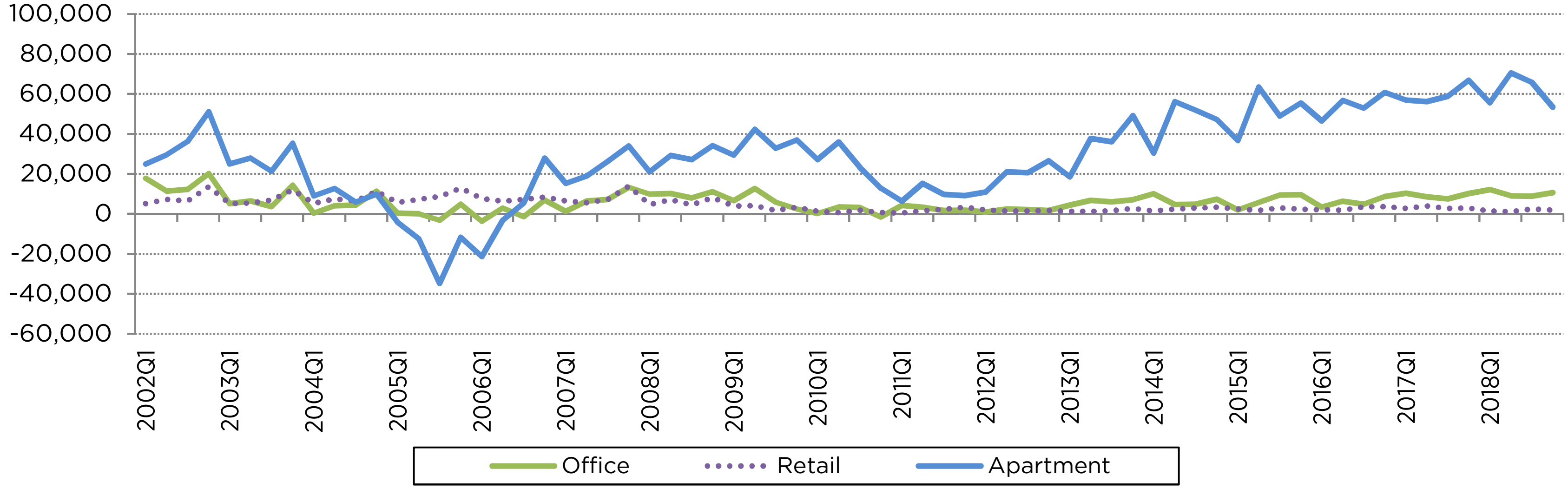
In the commercial real estate market, contacts reported stable construction activity. Contacts in the Pacific Northwest generally noted that construction activity has not deviated noticeably from its solid trend. However, in Oregon, a contact observed that building activity was down slightly on a year-over-year basis. A contact in Central California saw commercial leasing and sales activity slow modestly.

NET INVENTORY CHANGE/NET ABSORPTION COMMERCIAL/MULTIFAMILY PROPERTIES

Net Absorption (Thousands of Square Feet)



Net Inventory Change (Thousands of Square Feet)



Source: REIS

COMMERCIAL/MULTIFAMILY PROPERTIES NET INVENTORY CHANGE LESS NET ABSORPTION

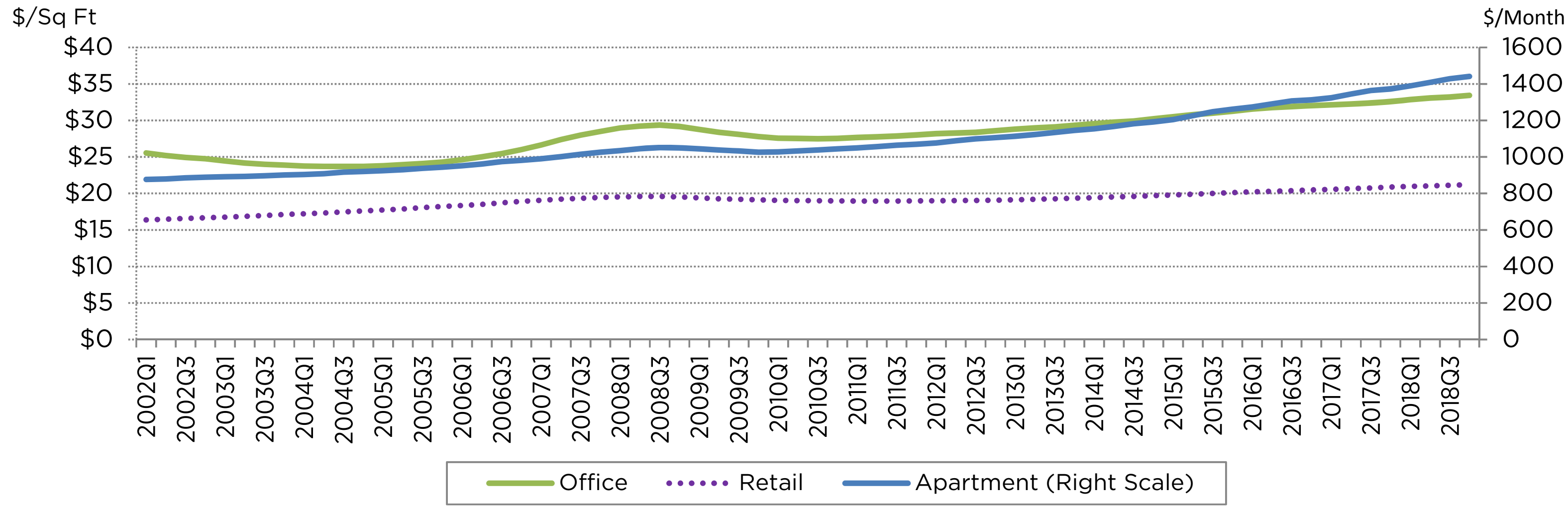
THOUSANDS OF SQUARE FEET

Year	Q1	Q2	Q3	Q4	Calendar Year	YTD Q4
APARTMENT						
2012	(25,258)	(13,070)	(6,074)	(13,650)	(58,052)	(58,052)
2013	(20,527)	(153)	(3,032)	827	(22,885)	(22,885)
2014	(11,318)	7,789	8,469	2,069	7,009	7,009
2015	(9,707)	297	3,149	10,952	4,691	4,691
2016	(954)	(6,092)	(4,364)	12,238	828	828
2017	13,905	2,473	11,962	22,908	51,248	51,248
2018	8,328	5,338	14,080	12,478	40,224	40,224
OFFICE						
2012	(3,446)	(1,576)	(1,408)	(1,802)	(8,232)	(8,232)
2013	(1,462)	986	(1,355)	695	(1,136)	(1,136)
2014	(57)	2,878	(2,463)	(2,563)	(2,205)	(2,205)
2015	(2,811)	(2,523)	(2,606)	(3,194)	(11,134)	(11,134)
2016	(4,883)	1,152	1,699	(4,589)	(6,621)	(6,621)
2017	4,406	3,775	1,936	2,587	12,704	12,704
2018	5,712	5,531	4,204	3,194		18,641
RETAIL						
2012	(1,430)	(1,216)	(578)	(1,337)	(4,561)	(4,561)
2013	(1,573)	(1,633)	(742)	(1,862)	(5,810)	(5,810)
2014	247	(858)	(1,114)	(1,550)	(3,275)	(3,275)
2015	(1,111)	(759)	(696)	(180)	(2,746)	(2,746)
2016	(1,048)	(1,955)	2,335	(786)	(1,454)	(1,454)
2017	63	2,874	833	(680)	3,090	3,090
2018	322	4,806	(137)	361	5,352	5,352

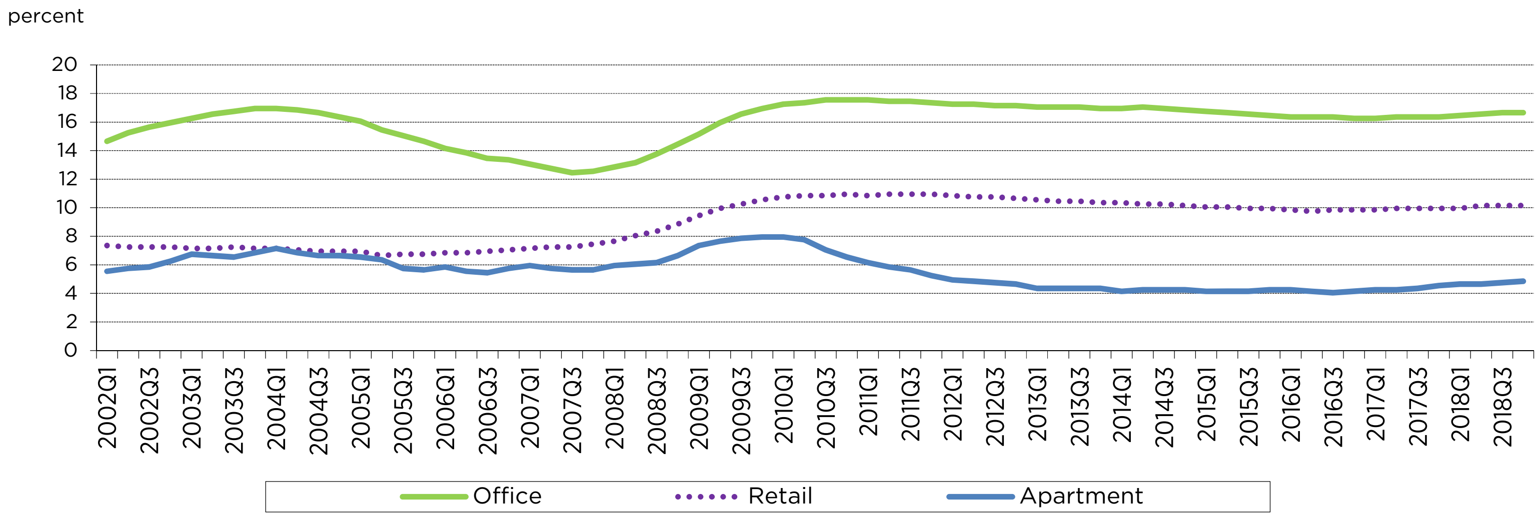
Source: REIS

AVERAGE RENTS AND VACANCY RATES AT COMMERCIAL/MULTIFAMILY PROPERTIES

Average Rents



Average Vacancy Rates



Source: REIS

MBA COMMERCIAL REAL ESTATE / MULTIFAMILY FINANCE

QUARTERLY DATABOOK

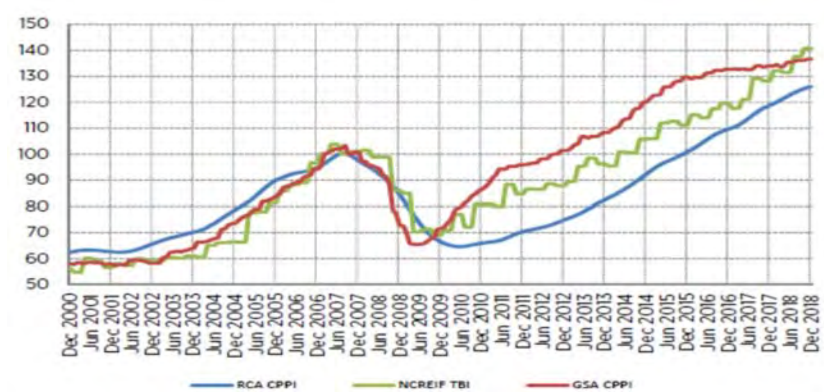
MBa

MORTGAGE BANKERS ASSOCIATION

Fourth Quarter 2018

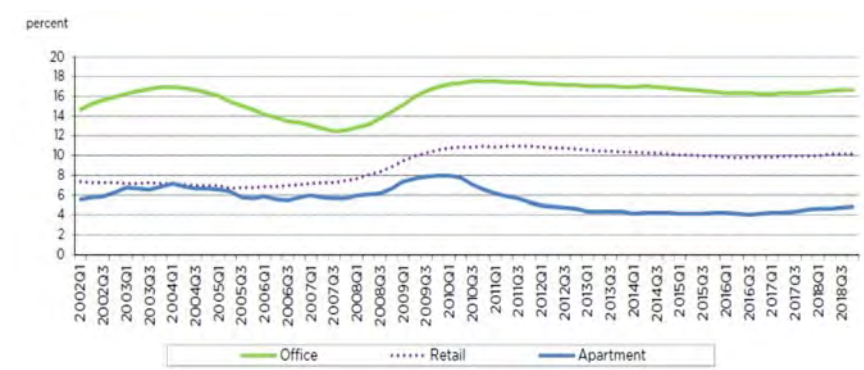
Selected Charts

Price Indices



Source: MBA, Real Capital Analytics, National Council of Real Estate Investment Fiduciaries, and Green Street Advisors

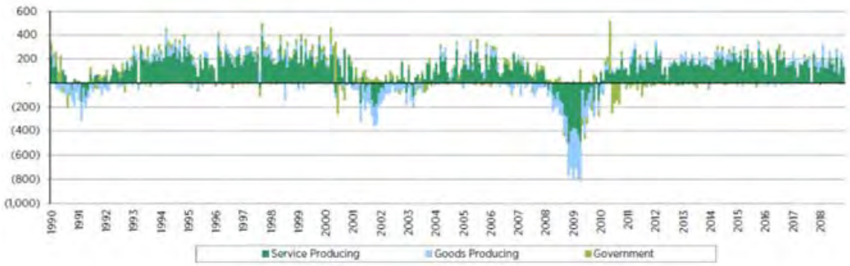
Average Vacancy Rates *By Property Type*



Source: REIS

Month-over-month Change in At-Place Employment

Thousands of jobs

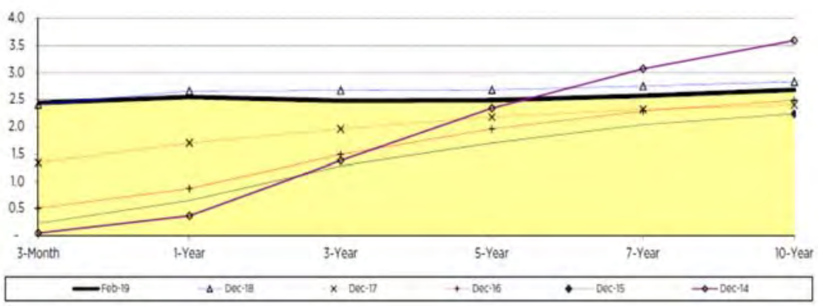


Source: Bureau of Labor Statistics

Ten-year Treasury and 10-year Swaps *Percent*

Source: Federal Reserve Board & JP Morgan Securities

Treasury Yield Curve *Percent*



Source: Federal Reserve Board

Multifamily Permits, Starts and Completions *Thousands, Seasonally adjusted annual rate*

Source: Census Bureau

The Commercial Real Estate/ Multifamily Finance Quarterly Data Book is a quarterly compendium of the latest MBA research on the commercial/multifamily finance markets. The latest version of the Data Book can be downloaded from the MBA website at:

http://www. mba.org/crefresearch

AVERAGE RENTS AND VACANCY RATES AT COMMERCIAL/MULTIFAMILY PROPERTIES

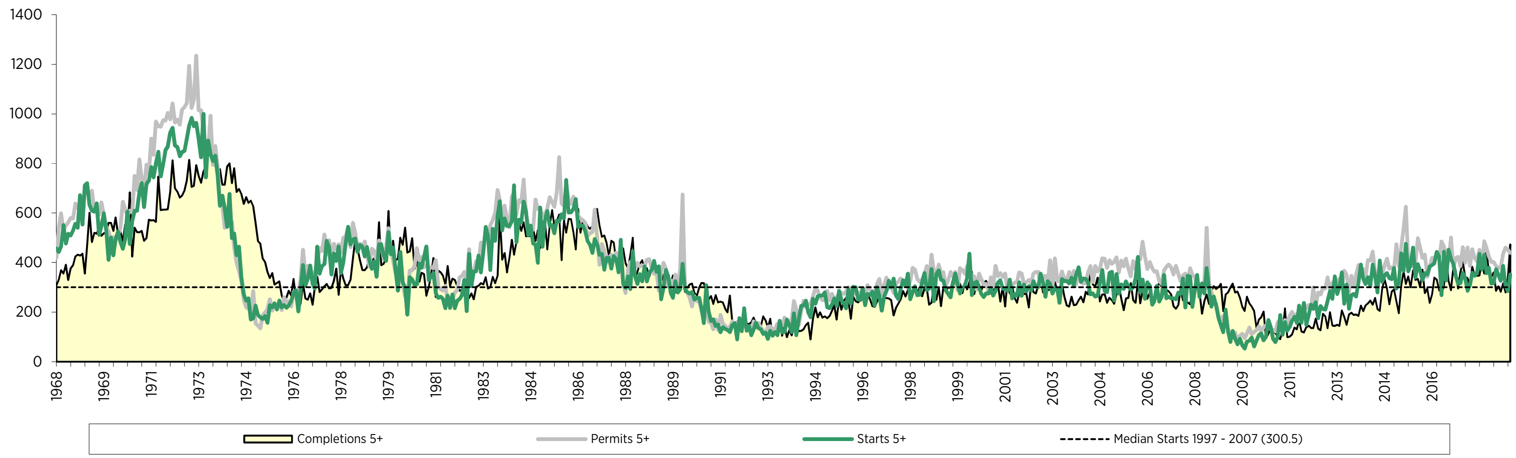
	Average Asking Rents					Average Vacancy Rates (percent)				
Year	Q1	Q2	Q3	Q4	Q4 Year-over-year % change	Q1	Q2	Q3	Q4	Q4 Year-over-year change
APARTMENT	(per month)									
2012	$ 1,077	$ 1,089	$ 1,100	$ 1,107	3.5%	5.0	4.9	4.8	4.7	-0.6
2013	$ 1,114	$ 1,123	$ 1,135	$ 1,146	3.5%	4.4	4.4	4.4	4.4	-0.3
2014	$ 1,155	$ 1,168	$ 1,183	$ 1,192	4.0%	4.2	4.3	4.3	4.3	-0.1
2015	$ 1,205	$ 1,226	$ 1,248	$ 1,262	5.9%	4.2	4.2	4.2	4.3	0.0
2016	$ 1,273	$ 1,291	$ 1,307	$ 1,313	4.0%	4.3	4.2	4.1	4.2	-0.1
2017	$ 1,324	$ 1,345	$ 1,364	$ 1,373	4.6%	4.3	4.3	4.4	4.6	0.4
2018	$ 1,389	$ 1,409	$ 1,429	$ 1,441	5.0%	4.7	4.7	4.8	4.9	0.3
OFFICE	(per sq. ft)									
2012	$ 28.18	$ 28.28	$ 28.36	$ 28.60	2.1%	17.3	17.3	17.2	17.2	-0.2
2013	$ 28.83	$ 28.97	$ 29.11	$ 29.32	2.5%	17.1	17.1	17.1	17.0	-0.2
2014	$ 29.54	$ 29.77	$ 29.92	$ 30.24	3.1%	17.0	17.1	17.0	16.9	-0.1
2015	$ 30.53	$ 30.78	$ 31.01	$ 31.27	3.4%	16.8	16.7	16.6	16.5	-0.4
2016	$ 31.57	$ 31.76	$ 31.89	$ 32.01	2.4%	16.4	16.4	16.4	16.3	-0.2
2017	$ 32.16	$ 32.26	$ 32.38	$ 32.57	1.7%	16.3	16.4	16.4	16.4	0.1
2018	$ 32.85	$ 33.07	$ 33.21	$ 33.43	2.6%	16.5	16.6	16.7	16.7	0.3
RETAIL	(per sq. ft)									
2012	$ 19.00	$ 19.03	$ 19.06	$ 19.08	0.5%	10.9	10.8	10.8	10.7	-0.3
2013	$ 19.14	$ 19.20	$ 19.26	$ 19.35	1.4%	10.6	10.5	10.5	10.4	-0.3
2014	$ 19.43	$ 19.52	$ 19.60	$ 19.70	1.8%	10.4	10.3	10.3	10.2	-0.2
2015	$ 19.80	$ 19.90	$ 20.01	$ 20.11	2.1%	10.1	10.1	10.0	10.0	-0.2
2016	$ 20.22	$ 20.30	$ 20.39	$ 20.48	1.8%	9.9	9.8	9.9	9.9	-0.1
2017	$ 20.56	$ 20.66	$ 20.76	$ 20.88	2.0%	9.9	10.0	10.0	10.0	0.1
2018	$ 20.97	$ 21.03	$ 21.13	$ 21.21	1.6%	10.0	10.2	10.2	10.2	0.2

Source: REIS

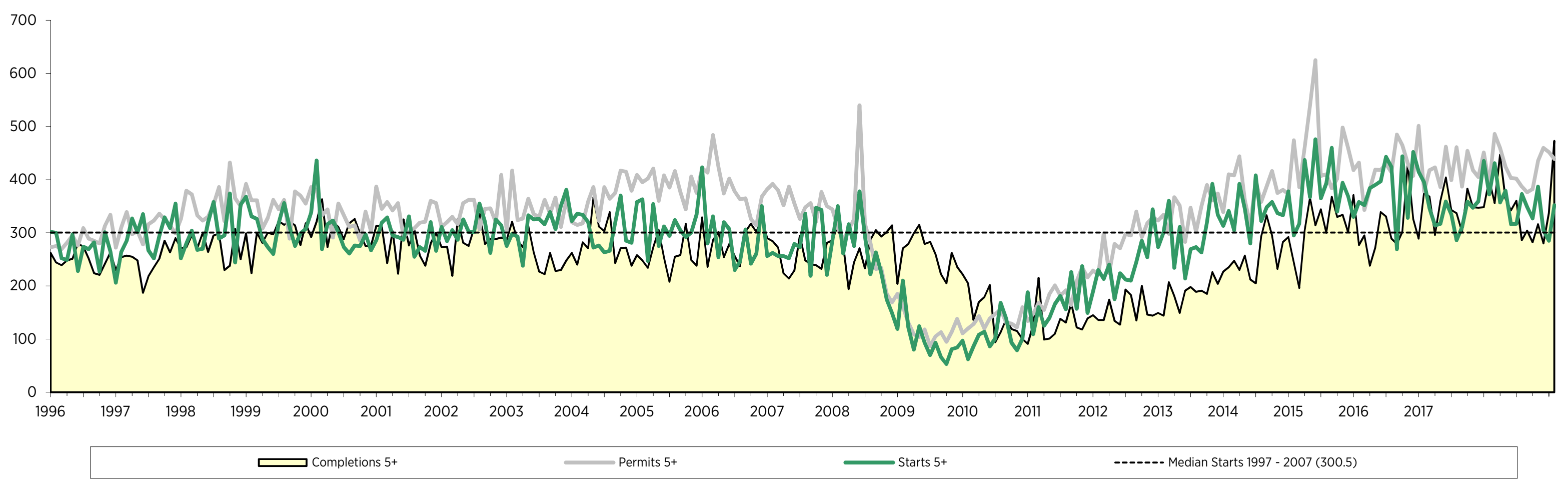
MULTIFAMILY BUILDING PERMITS, STARTS AND COMPLETIONS

Thousands of Units Permitted, Started and Completed
in Structures with 5 or More Units, Seasonally Adjusted Annual Rate

1968 to present



1996 to present



Source: U.S. Census Bureau

MULTIFAMILY BUILDING PERMITS, STARTS AND COMPLETIONS

Number of Units Permitted, Started and Completed in Structures with 5 or More Units, Seasonally Adjusted Annual Rate

	Thousands of Units			Percent Change		
	Permits	Starts	Completions	Permits	Starts	Completions
					Year-over-year	
2014	382	342	256	12.0%	16.3%	37.3%
2015	455	386	310	19.0%	12.9%	21.4%
2016	421	381	311	-7.3%	-1.3%	0.2%
2017	425	343	347	0.9%	-10.0%	11.5%
2018	427	360	336	0.6%	5.1%	-3.3%
					Month-over-month	
Feb 2018	391	372	400	-13.3%	-14.5%	14.9%
Mar 2018	486	431	356	24.3%	15.9%	-11.0%
Apr 2018	460	357	447	-5.3%	-17.2%	25.6%
May 2018	424	379	364	-7.8%	6.2%	-18.6%
Jun 2018	403	316	342	-5.0%	-16.6%	-6.0%
Jul 2018	402	317	360	-0.2%	0.3%	5.3%
Aug 2018	387	373	286	-3.7%	17.7%	-20.6%
Sep 2018	376	349	304	-2.8%	-6.4%	6.3%
Oct 2018	382	327	282	1.6%	-6.3%	-7.2%
Nov 2018	435	387	316	13.9%	18.3%	12.1%
Dec 2018	460	305	280	5.7%	-21.2%	-11.4%
Jan 2019	452	285	337	-1.7%	-6.6%	20.4%
Feb 2019	439	352	473	-2.9%	23.5%	40.4%
Percent change Feb 2018 to Feb 2019	12.3%	-5.4%	18.3%			

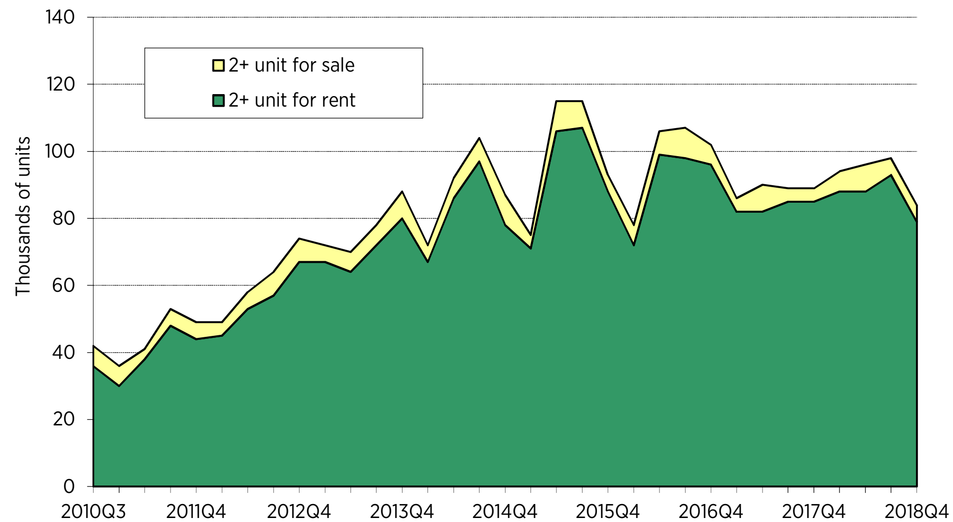
Source: U.S. Census Bureau

NEW PRIVATELY OWNED HOUSING UNITS STARTED, BY PURPOSE

Thousands of Units

			Units in Buildings with 2 or More Units			
Quarter	TOTAL	1-Family Units	Total	For Rent	For Sale	Percent for Rent
2010Q3	161	119	42	36	6	86%
2011Q2	164	123	41	38	3	93%
2011Q3	171	118	53	48	5	91%
2011Q4	149	100	49	44	5	90%
2012Q1	154	105	49	45	4	92%
2012Q2	209	151	58	53	5	91%
2012Q3	214	150	64	57	7	89%
2012Q4	203	129	74	67	7	91%
2013Q1	208	136	72	67	5	93%
2013Q2	244	174	70	64	6	91%
2013Q3	243	165	78	72	6	92%
2013Q4	229	142	87	80	8	92%
2014Q1	206	134	72	67	5	93%
2014Q2	275	183	92	86	6	93%
2014Q3	282	178	104	97	7	93%
2014Q4	241	154	87	78	9	90%
2015Q1	215	140	75	71	4	95%
2015Q2	320	205	115	106	9	92%
2015Q3	318	203	115	107	8	93%
2015Q4	259	166	93	88	5	95%
2016Q1	249	170	79	72	6	91%
2016Q2	323	218	105	99	7	94%
2016Q3	312	206	106	98	9	92%
2016Q4	289	187	102	96	6	94%
2017Q1	267	181	86	82	4	95%
2017Q2	328	238	90	82	8	91%
2017Q3	319	230	89	85	4	96%
2017Q4	289	200	89	85	4	96%
2018Q1	289	195	94	88	6	94%
2018Q2	353	257	96	88	8	92%
2018Q3	336	238	98	93	5	95%
2018Q4	265	181	84	79	5	94%

Source: U.S. Census Bureau



Value of Commercial Real Estate Construction Put-In-Place

January 2019 Data

The value of selected commercial real estate (CRE)-related private construction put-in-place increased in the month of January and was higher than the pace of construction in January 2018. The $344.9 billion seasonally adjusted annual rate in January was 1.0 percent higher than the December 2018 rate, and 3.9 percent higher than the December 2018 pace. The pace of construction in January was 115 percent higher than its recession low and one percent below its pre-recession high.

Private MULTIFAMILY new construction activity increased in January. January's seasonally adjusted annual pace of $65.7 billion was 1.4 percent higher than December 2018's $64.8 billion and 12.8 percent higher than last January's rate. The pace of construction in January was 402 percent higher than its recession low and zero percent from the pre-recession high.

The value of private OFFICE construction put-in-place increased in January. January's seasonally adjusted annual pace of $66.0 billion was 7.6 percent higher than last January's rate. The pace of construction in January was 204 percent higher than its recession.

The value of private HEALTH CARE construction put-in-place essentially unchanged in January. January's seasonally adjusted annual pace of $33.1 billion was 2.1 percent lower than last January's rate. The pace of construction in January was 21 percent higher than its recession low and 18 percent below its pre-recession high.

The value of private RETAIL, WHOLESALE AND SELECTED SERVICES (referred to as COMMERCIAL by the Census Bureau) construction put-in-place increased 1.5 percent in January. January's seasonally adjusted annual pace of $81.8 billion was 4.7 percent lower than last January's rate. The pace of construction in January was 138 percent higher than its recession low and nine percent below its pre-recession high.

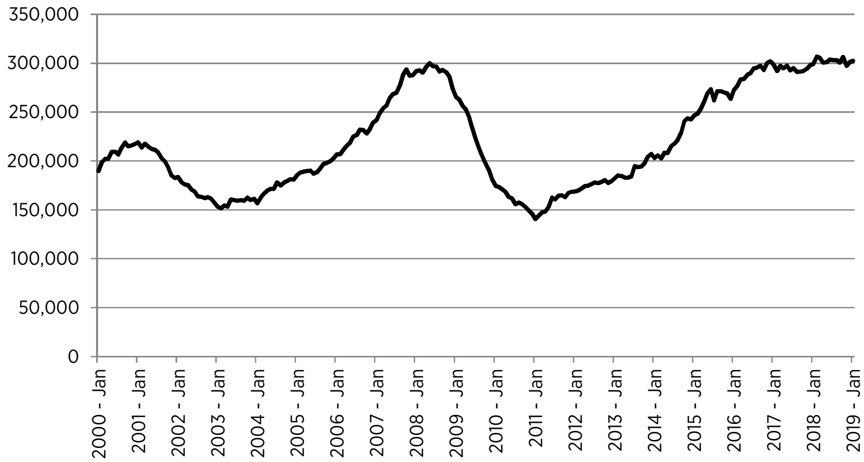
The value of LODGING construction put-in-place increased 2.4 percent in January. January's seasonally adjusted annual pace of $32.1 billion was 10.9 percent higher than last January's rate. The pace of construction in January was 304 percent higher than its recession low and 15 percent below its pre-recession high.

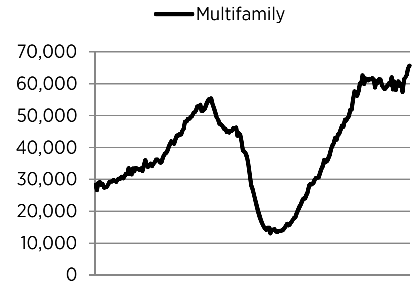
The value of MANUFACTURING construction put-in-place decreased 1.0 percent in January. January's seasonally adjusted annual pace of $66.2 billion was 3.7 percent higher than last January's rate. The pace of construction in January was 119 percent higher than its recession low and 22 percent below its pre-recession high.

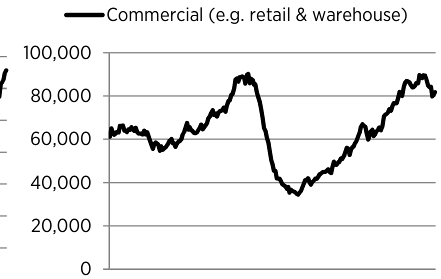
VALUE OF CONSTRUCTION PUT-IN-PLACE

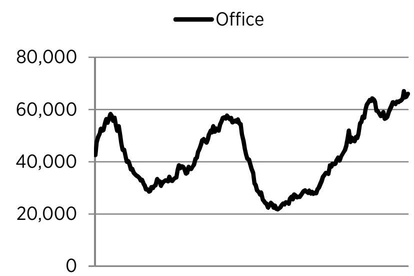
Seasonally Adjusted Annual Rate

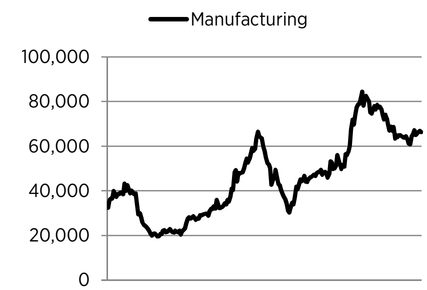
Value of Selected Private CRE-Related Construction Put-In-Place, $millions



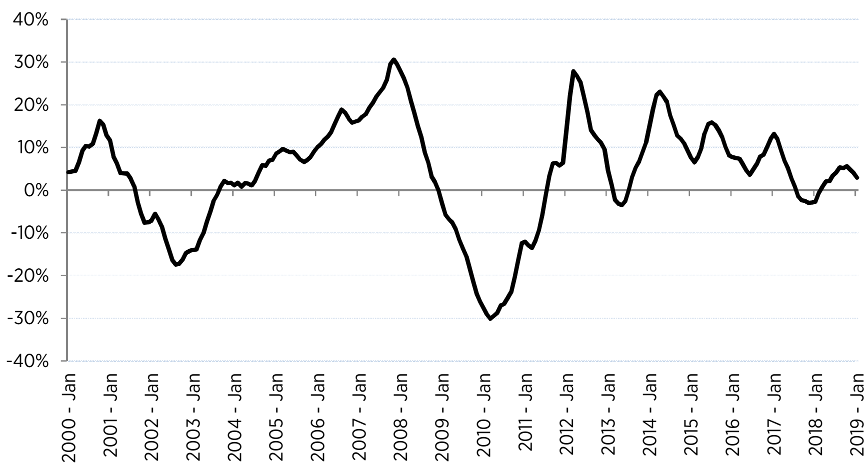


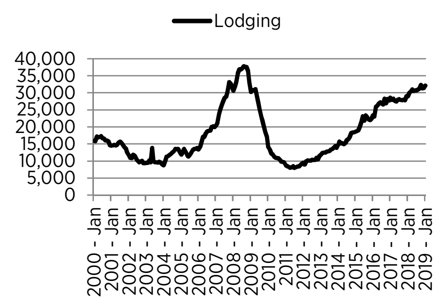


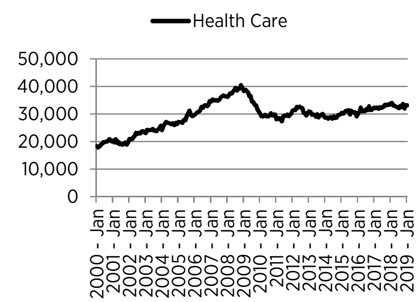




Year-Over-Year % Change in Trailing Three Month Selected Private CRE-Related Construction







Source: MBA, U.S. Census Bureau

VALUE OF CONSTRUCTION PUT-IN-PLACE

Seasonally Adjusted Annual Rate

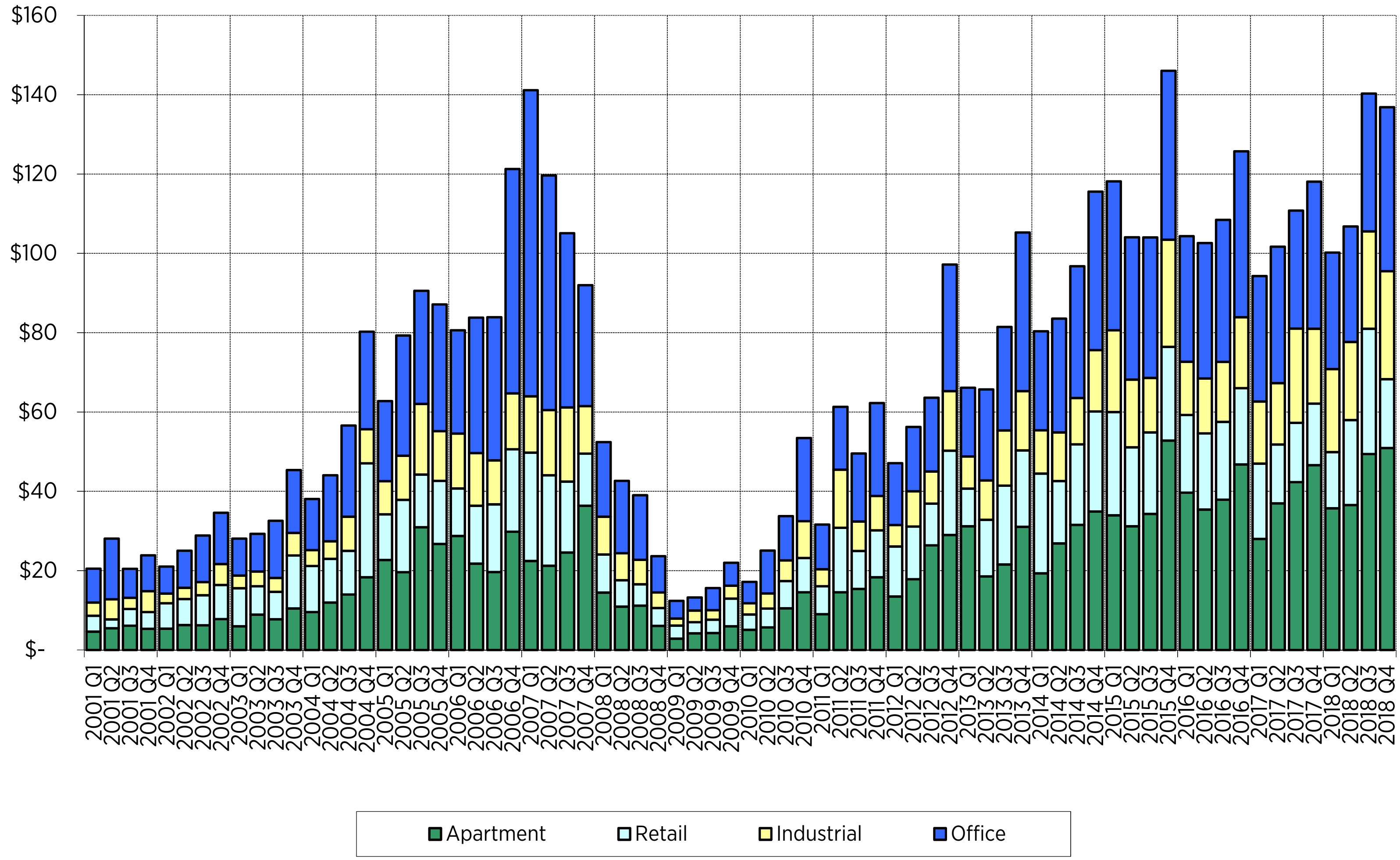
Value of Selected Private CRE-Related Construction Put-In-Place, $millions

	Selected Private CRE-Related Types of Construction							
	Multifamily	Commercial	Office	Lodging	Health Care	Manufacturing	Total	% Change
								Month-over-Month
2017 - Oct	60,119	84,187	57,110	27,993	33,125	64,788	327,322	0.4%
2017 - Nov	59,763	84,878	59,112	27,745	33,341	64,348	329,187	0.6%
2017 - Dec	62,001	86,092	60,242	29,027	33,379	63,952	334,693	1.7%
2018 - Jan	58,190	85,824	61,364	28,931	33,804	63,838	331,951	-0.8%
2018 - Feb	60,745	89,603	62,800	30,057	33,908	64,451	341,564	2.9%
2018 - Mar	58,018	89,266	62,258	30,318	33,007	63,262	336,129	-1.6%
2018 - Apr	60,071	88,263	62,065	30,985	32,897	61,286	335,567	-0.2%
2018 - May	60,682	89,654	63,090	30,535	32,611	60,770	337,342	0.5%
2018 - Jun	59,351	89,395	62,728	30,702	32,443	64,168	338,787	0.4%
2018 - Jul	59,928	87,806	63,308	30,673	32,095	65,111	338,921	0.0%
2018 - Aug	57,371	84,908	63,441	30,966	32,931	67,113	336,730	-0.6%
2018 - Sep	61,480	84,186	64,083	31,186	32,428	64,966	338,329	0.5%
2018 - Oct	61,905	84,281	67,003	32,281	33,567	65,554	344,591	1.9%
2018 - Nov	62,737	79,780	64,570	31,253	31,961	66,222	336,523	-2.3%
2018 - Dec	64,773	80,581	64,836	31,322	33,098	66,897	341,507	1.5%
2019 - Jan	65,651	81,804	66,016	32,076	33,100	66,215	344,862	1.0%
Dec - Jan	1.4%	1.5%	1.8%	2.4%	0.0%	-1.0%	1.0%	
Jan - Jan	12.8%	-4.7%	7.6%	10.9%	-2.1%	3.7%	3.9%	
Trough to current	402%	138%	204%	304%	21%	119%	115%	
Peak to current	0%	-9%	-1%	-15%	-18%	-22%	-1%	

Source: MBA, U.S. Census Bureau

QUARTERLY SALES OF LARGER ($2.5 MILLION+) COMMERCIAL/MULTIFAMILY PROPERTIES

Billions of dollars, Properties and portfolios $2.5 million and greater



Source: Real Capital Analytics.

QUARTERLY SALES OF LARGER ($2.5 MILLION+) COMMERCIAL/MULTIFAMILY PROPERTIES

Billions of dollars, Properties and portfolios $2.5 million and greater

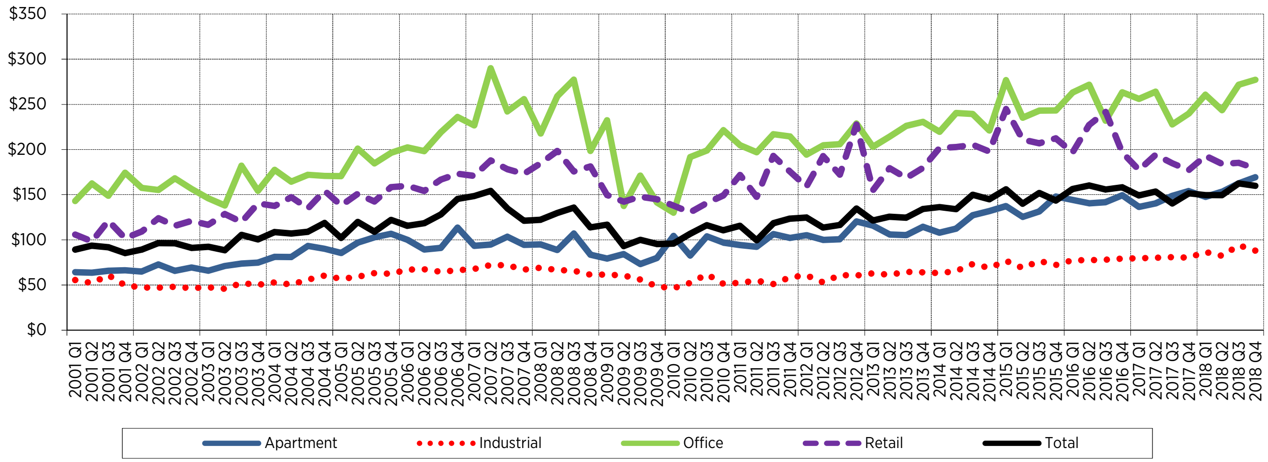
					Total		YTD Q4	
Year	Q1	Q2	Q3	Q4	Sales	Percent change	Sales	Percent change
APARTMENT								
2014	$ 19.33	$ 26.88	$ 31.56	$ 34.90	$ 112.67	10%	$ 112.67	58%
2015	$ 33.95	$ 31.21	$ 34.30	$ 52.79	$ 152.25	35%	$ 152.25	35%
2016	$ 39.67	$ 35.40	$ 37.90	$ 46.79	$ 159.76	5%	$ 159.76	5%
2017	$ 28.02	$ 36.97	$ 42.31	$ 46.61	$ 153.92	-4%	$ 153.92	-4%
2018	$ 35.73	$ 36.55	$ 49.42	$ 50.92	$ 172.61	12%	$ 172.61	12%
INDUSTRIAL								
2014	$ 10.91	$ 12.28	$ 11.68	$ 15.49	$ 50.35	7%	$ 50.35	58%
2015	$ 20.62	$ 17.07	$ 13.74	$ 27.03	$ 78.46	56%	$ 78.46	56%
2016	$ 13.42	$ 13.85	$ 15.12	$ 17.86	$ 60.26	-23%	$ 60.26	-23%
2017	$ 15.65	$ 15.47	$ 23.75	$ 18.90	$ 73.76	22%	$ 73.76	22%
2018	$ 20.94	$ 19.70	$ 24.56	$ 27.24	$ 92.44	25%	$ 92.44	25%
OFFICE								
2014	$ 24.95	$ 28.69	$ 33.23	$ 39.96	$ 126.83	19%	$ 126.83	91%
2015	$ 37.54	$ 35.88	$ 35.42	$ 42.56	$ 151.40	19%	$ 151.40	19%
2016	$ 31.67	$ 34.12	$ 35.80	$ 41.85	$ 143.44	-5%	$ 143.44	-5%
2017	$ 31.63	$ 34.42	$ 29.77	$ 37.09	$ 132.91	-7%	$ 132.91	-7%
2018	$ 29.36	$ 29.13	$ 34.75	$ 41.32	$ 134.56	1%	$ 134.56	1%
RETAIL								
2014	$ 25.16	$ 15.71	$ 20.28	$ 25.23	$ 86.38	37%	$ 86.38	98%
2015	$ 26.03	$ 19.91	$ 20.57	$ 23.64	$ 90.14	4%	$ 90.14	4%
2016	$ 19.57	$ 19.21	$ 19.63	$ 19.24	$ 77.66	-14%	$ 77.66	-14%
2017	$ 18.97	$ 14.84	$ 14.97	$ 15.49	$ 64.27	-17%	$ 64.27	-17%
2018	$ 14.16	$ 21.42	$ 31.58	$ 17.36	$ 84.52	32%	$ 84.52	32%
TOTAL								
2014	$ 80.34	$ 83.56	$ 96.75	$ 115.58	$ 376.23	18%	$ 376.23	76%
2015	$ 118.14	$ 104.07	$ 104.03	$ 146.02	$ 472.25	26%	$ 472.25	26%
2016	$ 104.34	$ 102.60	$ 108.45	$ 125.74	$ 441.12	-7%	$ 441.12	-7%
2017	$ 94.27	$ 101.70	$ 110.80	$ 118.09	$ 424.86	-4%	$ 424.86	-4%
2018	$ 100.19	$ 106.80	$ 140.31	$ 136.84	$ 484.14	14%	$ 484.14	14%

Source: Real Capital Analytics.

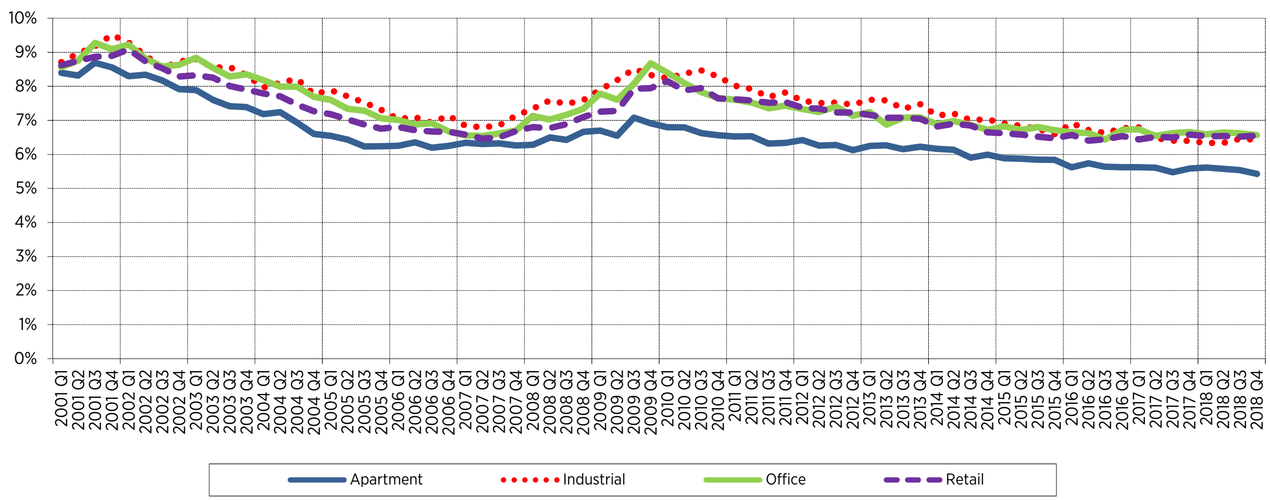
QUARTERLY SALES PRICES OF LARGER ($2.5 MILLION+) COMMERCIAL/MULTIFAMILY PROPERTIES

Properties and portfolios $2.5 million and greater

Sales price per unit or sq. ft. ($/sq. ft, or $1000/unit for apartment)



Capitalization Rate



Source: Real Capital Analytics.

QUARTERLY SALES PRICES OF LARGER ($2.5 MILLION+) COMMERCIAL/MULTIFAMILY PROPERTIES

Properties and portfolios $2.5 million and greater

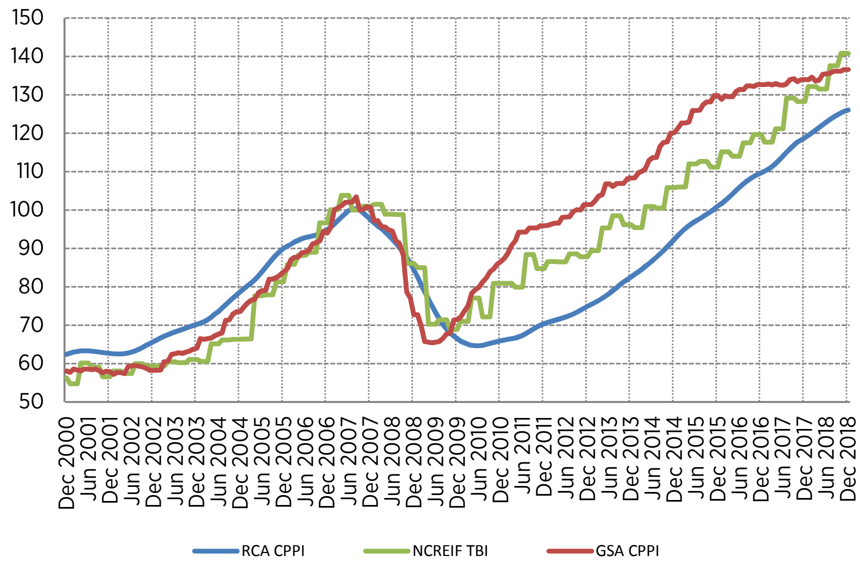
	Price per unit or sq. ft.					Capitalization Rate				
Year	Q1	Q2	Q3	Q4	Q4 Year-over-year % change	Q1	Q2	Q3	Q4	Q4 Year-over-year % change
APARTMENT	($1000/unit)									
2014	$ 108	$ 112	$ 127	$ 132	15%	6.2%	6.1%	5.9%	6.0%	-4%
2015	$ 137	$ 125	$ 132	$ 148	12%	5.9%	5.9%	5.8%	5.8%	-3%
2016	$ 144	$ 141	$ 142	$ 149	1%	5.6%	5.7%	5.6%	5.6%	-4%
2017	$ 137	$ 140	$ 149	$ 154	3%	5.6%	5.6%	5.5%	5.6%	-1%
2018	$ 148	$ 153	$ 163	$ 169	10%	5.6%	5.6%	5.5%	5.4%	-3%
INDUSTRIAL	($/sq. ft)									
2014	$ 63	$ 66	$ 73	$ 69	8%	7.1%	7.2%	7.0%	7.0%	-6%
2015	$ 77	$ 69	$ 77	$ 72	5%	6.9%	6.8%	6.8%	6.6%	-6%
2016	$ 78	$ 78	$ 78	$ 79	10%	6.9%	6.7%	6.6%	6.8%	3%
2017	$ 80	$ 80	$ 81	$ 80	1%	6.8%	6.5%	6.4%	6.4%	-6%
2018	$ 87	$ 82	$ 94	$ 88	10%	6.3%	6.3%	6.5%	6.4%	1%
OFFICE	($/sq. ft)									
2014	$ 220	$ 240	$ 239	$ 221	-4%	6.9%	7.0%	6.9%	6.7%	-5%
2015	$ 277	$ 235	$ 243	$ 243	10%	6.8%	6.7%	6.8%	6.7%	0%
2016	$ 263	$ 272	$ 232	$ 263	8%	6.6%	6.6%	6.4%	6.7%	0%
2017	$ 256	$ 264	$ 228	$ 240	-9%	6.7%	6.5%	6.6%	6.7%	-1%
2018	$ 261	$ 244	$ 272	$ 277	16%	6.6%	6.6%	6.6%	6.6%	-1%
RETAIL	($/sq. ft)									
2014	$ 202	$ 203	$ 205	$ 198	10%	6.8%	6.9%	6.8%	6.6%	-6%
2015	$ 245	$ 211	$ 207	$ 212	7%	6.6%	6.6%	6.5%	6.5%	-3%
2016	$ 197	$ 227	$ 242	$ 197	-7%	6.6%	6.4%	6.4%	6.5%	1%
2017	$ 177	$ 194	$ 185	$ 177	-10%	6.4%	6.5%	6.5%	6.6%	1%
2018	$ 193	$ 184	$ 185	$ 179	1%	6.5%	6.5%	6.5%	6.6%	0%
TOTAL	($1000/unit or $/sq. ft)*									
2014	$ 136	$ 134	$ 150	$ 145	8%	6.7%	6.7%	6.6%	6.5%	-5%
2015	$ 156	$ 140	$ 152	$ 144	-1%	6.5%	6.5%	6.4%	6.3%	-3%
2016	$ 156	$ 160	$ 156	$ 158	10%	6.3%	6.3%	6.2%	6.3%	-1%
2017	$ 149	$ 153	$ 140	$ 151	-4%	6.4%	6.2%	6.1%	6.2%	-2%
2018	$ 150	$ 150	$ 163	$ 160	6%	6.2%	6.2%	6.2%	6.1%	-1%

Source: Real Capital Analytics.

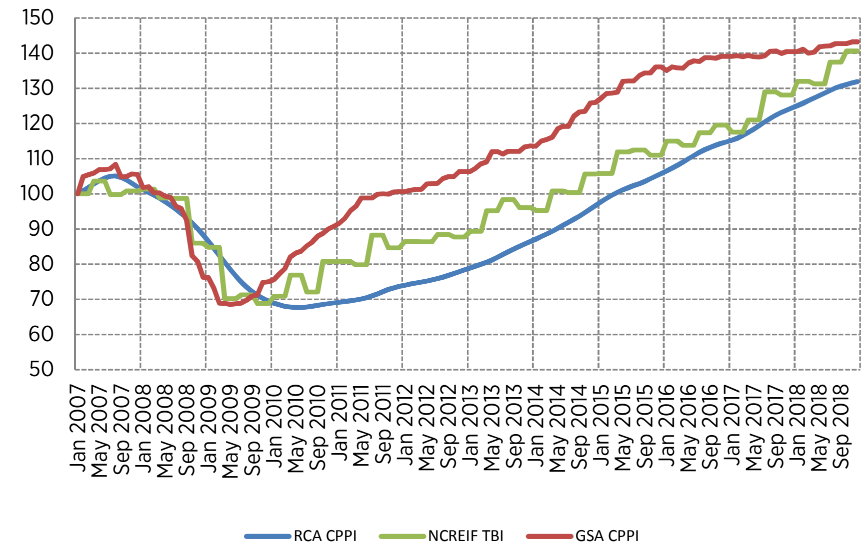
COMMERCIAL/MULTIFAMILY PROPERTY PRICES AS REFLECTED IN SELECTED INDICES

Re-Indexed Values of the Moody's/RCA CPPI,
NCREIF Transaction Based Index, and Green Street Advisors CPPI

September 2007 = 100



January 2007 = 100



Source: Mortgage Bankers Association, Real Capital Analytics,
National Council of Real Estate Investment Fiduciaries, and Green Street Advisors

COMMERCIAL/MULTIFAMILY PROPERTY PRICES AS REFLECTED IN SELECTED INDICES

Changes in the Moody's/RCA CPPI, NCREIF Transaction Based Index and Green Street Advisors CPPI

	Year-over-year Change		
	RCA CPPI	NCREIF TBI	Green Street Advisors CPPI
2008 -- December	-13.4%	-14.7%	-27.7%
2009 -- December	-21.2%	-20.0%	-1.7%
2010 -- December	-0.8%	17.5%	21.0%
2011 -- December	6.8%	4.7%	10.8%
2012 -- December	6.5%	3.7%	5.7%
2013 -- December	10.2%	9.5%	6.8%
2014 -- December	11.8%	10.0%	10.9%
2015 -- December	9.3%	5.1%	8.0%
2016 -- December	8.6%	7.7%	2.2%
2017 -- December	8.4%	7.1%	1.0%
2018 -- December	6.0%	9.8%	1.9%

	Quarter-over-quarter		Month-over month	Month-over month
	RCA CPPI	NCREIF TBI	Green Street Advisors CPPI	RCA CPPI
2017 -- October			-0.5%	0.6%
2017 -- November			0.4%	0.6%
2017 -- December	1.7%	-0.7%	0.0%	0.5%
2018 -- January			-0.1%	0.5%
2018 -- February			0.5%	0.5%
2018 -- March	1.6%	3.1%	-0.8%	0.6%
2018 -- April			0.2%	0.6%
2018 -- May			1.1%	0.6%
2018 -- June	1.8%	-0.5%	0.1%	0.6%
2018 -- July			0.1%	0.6%
2018 -- August			0.4%	0.5%
2018 -- September	1.6%	4.7%	0.0%	0.4%
2018 -- October			0.0%	0.4%
2018 -- November			0.3%	0.3%
2018 -- December	1.0%	2.3%	0.0%	0.3%
Current price relative to 2007 peak		136%	132%	126%

Source: Mortgage Bankers Association, Real Capital Analytics,
National Council of Real Estate Investment Fiduciaries, and Green Street Advisors

3. Production

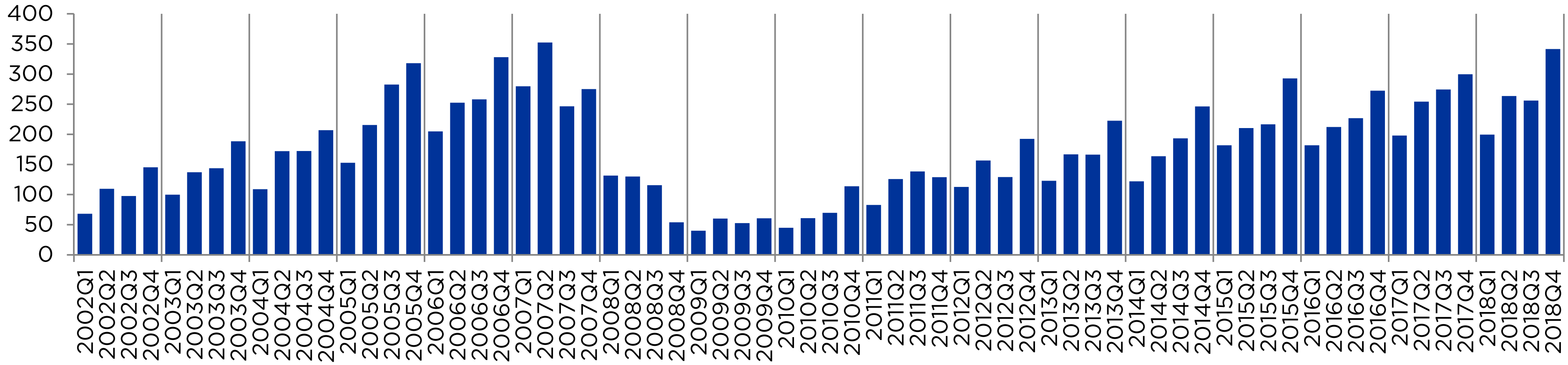
Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations
February 10, 2019

A strong final three months of the year helped commercial and multifamily mortgage originations increase by three percent in 2018, according to preliminary estimates from the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, released at the 2019 Commercial Real Estate Finance/Multifamily Housing Convention & Expo.

"Despite the broader market volatility, 2018 ended on a strong note for commercial mortgage borrowing and lending, with fourth quarter originations 14 percent higher than a year earlier," said Jamie Woodwell, MBA's Vice President for Commercial Real Estate Research. "Investor and lender interest in multifamily and industrial properties continues to drive transaction volumes while questions about retail and office property markets have slowed activity for those property types. The market as a whole ended the year roughly flat compared to 2017, continuing a plateau we've seen in mortgage borrowing and lending since 2015."

FOURTH QUARTER 2018 ORIGINATIONS UP 14 PERCENT COMPARED TO FOURTH QUARTER 2017
An increase in originations for health care, multifamily and industrial properties led the overall increase in commercial/multifamily lending volumes when compared to the fourth quarter of 2017. The fourth quarter saw a 61 percent year-over-year increase in the dollar volume of loans for health care properties, a 32 percent increase for multifamily

Commercial/Multifamily Mortgage Bankers Originations Index
2001 quarterly average = 100



properties, a 28 percent increase for industrial properties, a one percent increase for retail properties, a three percent decrease in office property loans, and a four percent decrease in hotel property loans.

Among investor types, the dollar volume of loans originated for Government Sponsored Enterprises (GSEs – Fannie Mae and Freddie Mac) increased by 32 percent year-over-year. There was a 22 percent year-over-year increase for life insurance company loans, a five percent increase in commercial bank portfolio loans, and a 35 percent decrease in the dollar volume of Commercial Mortgage Backed Securities (CMBS) loans.

FOURTH QUARTER 2018 ORIGINATIONS UP 33 PERCENT FROM THIRD QUARTER 2018

Fourth quarter 2018 originations for health care properties increased 155 percent compared to the third quarter 2018. There was a 56 percent increase in originations for hotel properties, a 34 percent increase for industrial properties, a 30 percent increase for multifamily properties, a 29 percent increase for office properties, and an 11 percent increase for retail properties from the third quarter 2018.

Among investor types, between the third and fourth quarter of 2018, the dollar volume of loans for commercial bank portfolios increased 46 percent, loans for GSEs increased 32 percent, originations for CMBS increased 31 percent, and loans for life insurance companies increased by 30 percent.

PRELIMINARY 2018 ORIGINATIONS THREE PERCENT HIGHER THAN 2017

A preliminary measure of commercial and multifamily mortgage origination volumes shows 2018 originations three percent higher than during 2017. Compared to 2017, originations for multifamily properties increased 22 percent. There was a 12 percent increase for industrial properties, a five percent increase for hotel properties, a seven percent decrease for office properties, a 13 percent decrease for retail properties, and a 16 percent decrease for health care properties.

Among investor types, 2018 versus 2017, loans for GSEs increased 16 percent, originations for life insurance companies increased 10 percent, loans for commercial bank portfolios decreased 10 percent and loans for CMBS decreased 26 percent in 2018 versus 2017.

In late March, MBA will release its Annual Origination Summation report for 2018 with final origination figures for the year.

To view the report, please visit the following Web link: https://www.mba.org/Documents/Research/4Q18CMFOriginationsSurvey.pdf

Detailed statistics on the size and scope of the commercial/multifamily origination market are available from these MBA commercial/multifamily research reports.

- Commercial Real Estate/Multifamily Finance: Annual Origination Volume Summation, 2017
- Commercial Real Estate/Multifamily Finance Firms: Annual Origination Volumes, 2017
- Annual Report on Multifamily Lending, 2017
- Commercial/Multifamily Database Subscriptions

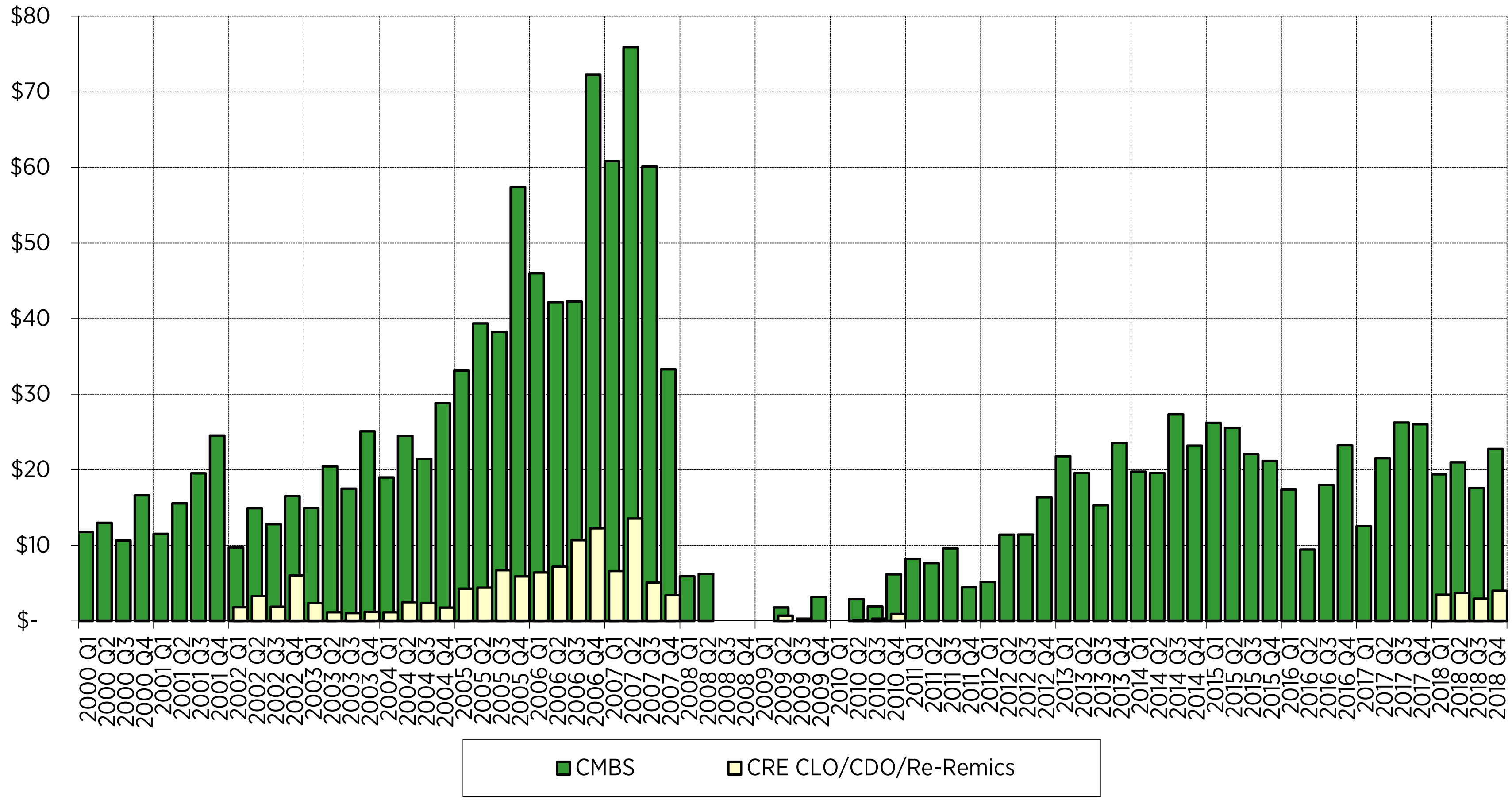
Commercial/Multifamily Mortgage Bankers Originations Index

	Origination Volume Index (2001 Avg Qtr = 100)				Percent Change,		
	Q1	Q2	Q3	Q4	Year-over-year Q4	Q3-to-Q4	YTD-YTD
TOTAL							
2015	182	210	217	293	19%	35%	24%
2016	182	212	227	272	-7%	20%	-1%
2017	198	254	274	300	10%	9%	15%
2018	200	264	256	342	14%	33%	3%
CMBS/Conduits							
2015	106	96	117	121	-2%	3%	6%
2016	86	57	112	118	-2%	5%	-15%
2017	71	153	159	150	27%	-6%	43%
2018	79	141	75	97	-35%	31%	-26%
Commercial Banks							
2015	263	381	416	625	82%	50%	59%
2016	379	507	380	521	-17%	37%	6%
2017	420	400	459	496	-5%	8%	-1%
2018	325	396	356	520	5%	46%	-10%
Life Insurance Companies							
2015	314	345	391	456	19%	17%	23%
2016	309	396	379	428	-6%	13%	0%
2017	309	386	370	410	-4%	11%	-2%
2018	337	408	384	498	22%	30%	10%
Fannie Mae/Freddie Mac							
2015	387	404	290	549	24%	90%	59%
2016	304	391	528	572	4%	8%	10%
2017	403	492	644	667	17%	4%	23%
2018	436	581	665	878	32%	32%	16%

	Origination Volume Index (2001 Avg Qtr = 100)				Percent Change,		
	Q1	Q2	Q3	Q4	Year-over-year Q4	Q3-to-Q4	YTD-YTD
Multifamily							
2015	260	317	293	431	15%	47%	31%
2016	265	313	369	428	-1%	16%	6%
2017	303	380	424	496	16%	17%	17%
2018	356	445	504	654	32%	30%	22%
Office							
2015	97	111	152	150	15%	-1%	23%
2016	115	123	145	159	6%	10%	6%
2017	117	164	156	171	7%	9%	12%
2018	116	157	129	166	-3%	29%	-7%
Retail							
2015	125	227	289	332	13%	15%	19%
2016	180	206	224	270	-19%	21%	-10%
2017	139	187	205	162	-40%	-21%	-21%
2018	101	189	148	164	1%	11%	-13%
Industrial							
2015	610	247	245	614	128%	150%	103%
2016	265	270	324	588	-4%	82%	-16%
2017	372	517	389	486	-17%	25%	22%
2018	424	464	465	624	28%	34%	12%
Hotel							
2015	322	470	332	766	60%	131%	29%
2016	331	416	231	470	-39%	103%	-23%
2017	198	473	500	656	40%	31%	26%
2018	306	576	403	629	-4%	56%	5%
Health Care							
2015	102	91	96	115	-57%	20%	-41%
2016	44	33	40	88	-24%	122%	-49%
2017	54	36	78	56	-36%	-28%	9%
2018	33	30	35	90	61%	155%	-16%

QUARTERLY ISSUANCE OF COMMERCIAL MORTGAGE BACKED SECURITIES (CMBS) and COMMERCIAL REAL ESTATE COLLATERALIZED LOAN OBLIGATIONS (CLOs)

Billions of Dollars



Source: Commercial Real Estate Direct

QUARTERLY ISSUANCE OF COMMERCIAL MORTGAGE BACKED SECURITIES (CMBS) and COMMERCIAL REAL ESTATE COLLATERALIZED DEBT OBLIGATIONS (CRE CDOs)/RE-REMICS

Billions of Dollars

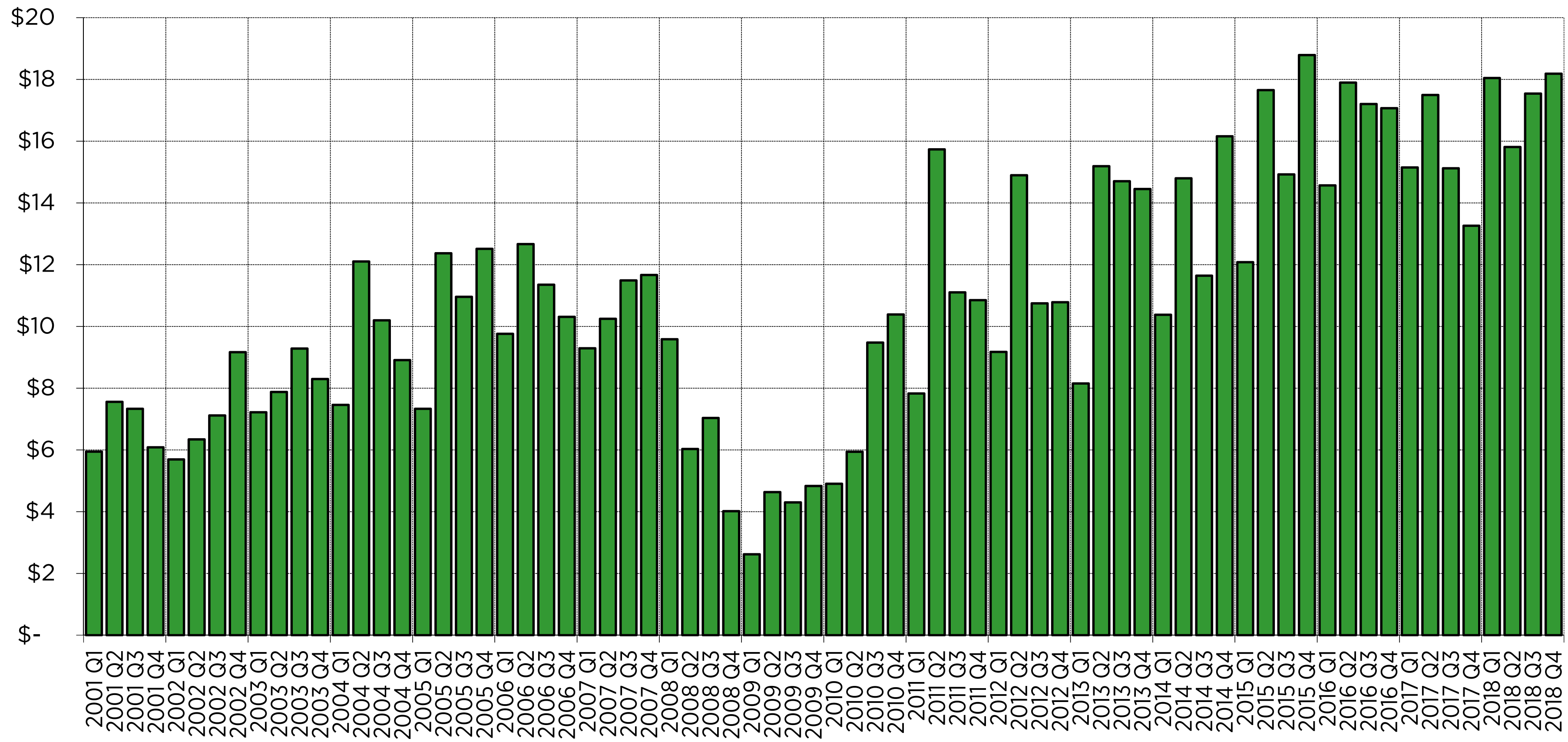
					Annual		YTD Q4	
Year	Q1	Q2	Q3	Q4	Total	Percent change	Total	Percent change
U.S. CMBS ISSUANCE								
2011	$ 8.24	$ 7.66	$ 9.62	$ 4.46	$ 29.97	172%	$ 29.97	172%
2012	$ 5.19	$ 11.42	$ 11.44	$ 16.37	$ 44.41	48%	$ 44.41	48%
2013	$ 21.80	$ 19.59	$ 15.31	$ 23.56	$ 80.26	81%	$ 80.26	81%
2014	$ 19.76	$ 19.57	$ 27.33	$ 23.21	$ 89.87	12%	$ 89.87	12%
2015	$ 26.23	$ 25.57	$ 22.08	$ 21.18	$ 95.07	6%	$ 95.07	6%
2016	$ 17.38	$ 9.46	$ 17.99	$ 23.23	$ 68.06	-28%	$ 68.06	-28%
2017	$ 12.55	$ 21.54	$ 26.26	$ 26.04	$ 86.39	27%	$ 86.39	27%
2018	$ 19.40	$ 20.99	$ 17.60	$ 22.77	$ 80.76	-7%	$ 80.76	-7%
** CRE CLO/CDO/RE-REMICS ISSUANCE*								
2011	$ -	$ -	$ -	$ -	$ -	-100%	$ -	-100%
2012	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2013	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2014	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2015	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2016	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2017	$ -	$ -	$ -	$ -	$ -	N/A	$ -	N/A
2018	$ 3.48	$ 3.70	$ 2.96	$ 4.01	$ 14.15	N/A	$ 14.15	N/A

Source: Commercial Real Estate Direct

* In January 2018, the CRE CLO/CDO/Re-Remics data collection began.

QUARTERLY COMMERCIAL MORTGAGE COMMITMENTS BY LIFE INSURANCE COMPANIES

Billions of Dollars



Source: American Council of Life Insurance Companies (ACLI)
a. Annual figures may not equal the sum of quarterly figures due to change in reporting.

QUARTERLY COMMERCIAL MORTGAGE COMMITMENTS BY LIFE INSURANCE COMPANIES

Billions of Dollars

					Annual (a)		YTD Q4	
Year	Q1	Q2	Q3	Q4	Total	Percent change	Total	Percent change
2001	$ 5.95	$ 7.56	$ 7.33	$ 6.08	$ 26.92		$ 26.92	
2002	$ 5.69	$ 6.34	$ 7.12	$ 9.17	$ 28.32	5%	$ 28.32	5%
2003	$ 7.22	$ 7.88	$ 9.28	$ 8.30	$ 32.68	15%	$ 32.68	15%
2004	$ 7.46	$ 12.11	$ 10.20	$ 8.91	$ 38.67	18%	$ 38.67	18%
2005	$ 7.33	$ 12.37	$ 10.96	$ 12.51	$ 43.17	12%	$ 43.17	12%
2006	$ 9.76	$ 12.66	$ 11.35	$ 10.31	$ 44.08	2%	$ 44.08	2%
2007	$ 9.29	$ 10.25	$ 11.49	$ 11.67	$ 42.69	-3%	$ 42.69	-3%
2008	$ 9.59	$ 6.03	$ 7.03	$ 4.02	$ 26.67	-38%	$ 26.67	-38%
2009	$ 2.62	$ 4.63	$ 4.30	$ 4.83	$ 16.39	-39%	$ 16.39	-39%
2010	$ 4.90	$ 5.94	$ 9.47	$ 10.39	$ 30.71	87%	$ 30.71	87%
2011	$ 7.83	$ 15.73	$ 11.10	$ 10.85	$ 45.52	48%	$ 45.52	48%
2012	$ 9.18	$ 14.90	$ 10.75	$ 10.78	$ 45.60	0%	$ 45.60	0%
2013	$ 8.15	$ 15.19	$ 14.70	$ 14.45	$ 52.50	15%	$ 52.50	15%
2014	$ 10.38	$ 14.80	$ 11.64	$ 16.16	$ 52.98	1%	$ 52.98	1%
2015	$ 12.08	$ 17.65	$ 14.93	$ 18.79	$ 63.45	20%	$ 63.45	20%
2016	$ 14.57	$ 17.90	$ 17.20	$ 17.07	$ 66.73	5%	$ 66.73	5%
2017	$ 15.15	$ 17.49	$ 15.12	$ 13.26	$ 61.03	-9%	$ 61.03	-9%
2018	$ 18.05	$ 15.81	$ 17.54	$ 18.19	$ 69.58	14%	$ 69.58	14%

Source: American Council of Life Insurance Companies (ACLI)

a. Annual figures may not equal the sum of quarterly figures due to changes in reporting.

4. Commercial/Multifamily Mortgage Debt Outstanding

March 14, 2019

The level of commercial/multifamily mortgage debt outstanding at the end of 2018 was $216 billion (6.8 percent) higher than at the end of 2017, according to the Mortgage Bankers Association's (MBA) latest Commercial/Multifamily Mortgage Debt Outstanding quarterly report.

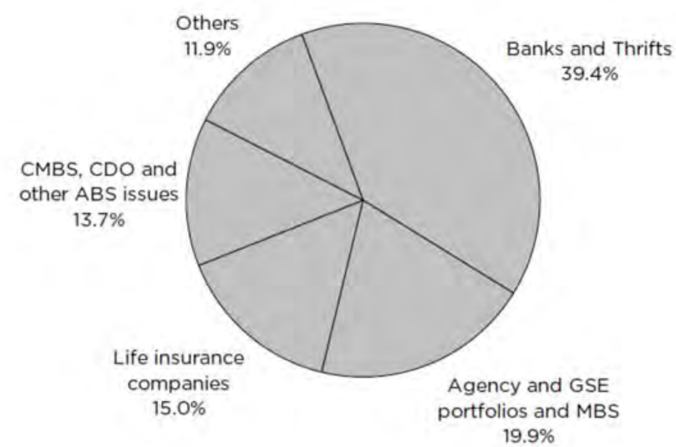
MBA's report found that total mortgage debt outstanding in the final three months of 2018 rose by 2.1 percent ($68.5 billion) compared to last year's third quarter, with all four major investor groups increasing their holdings. Multifamily mortgage debt grew $32.2 billion (2.4 percent) to $1.36 trillion over the same period.

"2018 recorded the largest annual increase in commercial and multifamily mortgage debt outstanding since the Great Recession, and the largest increase in multifamily mortgage debt on record," said Jamie Woodwell, MBA's Vice President of Research & Economics. "Growth in multifamily mortgage debt made up almost half the total increase in debt outstanding, and Fannie Mae, Freddie Mac and FHA collectively accounted for two-thirds of the multifamily growth. The GSEs, life insurance companies, the CMBS market and banks all increased their holdings of commercial and multifamily mortgage debt during the year."

The four major investor groups are: bank and thrift; commercial mortgage backed securities (CMBS), collateralized debt obligation (CDO) and other asset backed securities (ABS) issues; federal agency and government sponsored enterprise (GSE) portfolios and mortgage backed securities (MBS); and life insurance companies.

MBA's analysis summarizes the holdings of loans or, if the loans are securitized, the form of the security. For example, many life insurance companies invest both in whole loans for which they hold the mortgage note (and which appear in this data under "Life Insurance Companies"), and in CMBS, CDOs and other ABS for which the security issuers and trustees hold the note (and which appear here under CMBS, CDO and other ABS issues).

Commercial Multifamily Mortgage Debt Outstanding
By Investor Group, Fourth Quarter 2018



Commercial banks continue to hold the largest share (39 percent) of commercial/multifamily mortgages at $1.3 trillion. Agency and GSE portfolios and MBS are the second largest holders of commercial/multifamily mortgages, at $675 billion (20 percent of the total). Life insurance companies hold $509 billion (15 percent), and CMBS, CDO and other ABS issues hold $466 billion (14 percent).

MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Looking solely at multifamily mortgages, agency and GSE portfolios and MBS hold the largest share of total debt outstanding at $675 billion (50 percent of the total), followed by commercial banks with $430 billion (32 percent), state and local governments with $90 billion (7 percent) life insurance companies with $80 billion (6 percent), and CMBS, CDO and other ABS issues with $43 billion (3 percent). Nonfarm noncorporate businesses hold $18 billion (1 percent)).

CHANGES IN COMMERCIAL/MULTIFAMILY MORTGAGE DEBT OUTSTANDING

In the fourth quarter of 2018, agency and GSE portfolios and MBS saw the largest rise in dollar terms in their holdings of commercial/multifamily mortgage debt, with an increase of $26.8 billion (4.1 percent). Commercial banks increased their holdings by $21.0 billion (1.6 percent), and life insurance companies increased their holdings by $12.4 billion (2.5 percent), and state and local governments saw the largest decrease at $1.2 billion (1.1 percent).

In percentage terms, state and local government retirement funds saw the largest increase – 4.2 percent – in their holdings of commercial/multifamily mortgages, and nonfinancial corporate businesses saw their holdings decrease the most, at 1.7 percent.

CHANGES IN MULTIFAMILY MORTGAGE DEBT OUTSTANDING

The $32.2 billion rise in multifamily mortgage debt outstanding between the third and fourth quarters of 2018 represented a 2.4 percent increase. In dollar terms, agency and GSE portfolios and MBS, saw the largest increase (4.1 percent) in their holdings of multifamily mortgage debt. Commercial banks increased their holdings of multifamily mortgage debt by $4.5 billion (1.1 percent). Life insurance companies increased holdings by 2.6 percent to $2.0 billion. Local governments saw the largest decline in their holdings of multifamily mortgage debt, by $1.0 billion, or down 1.1 percent.

In percentage terms, REITs recorded the largest increase in holdings of multifamily mortgages (6.1 percent), and private pension funds saw the biggest decrease (5.6 percent).

CHANGES IN COMMERCIAL/MULTIFAMILY MORTGAGE DEBT OUTSTANDING DURING 2018

Between December 2017 and December 2018, commercial banks saw the largest gain (6 percent) in dollar terms in their holdings of commercial/multifamily mortgage debt – an increase of $71 billion. State and local government decreased their holdings of commercial/multifamily mortgages by $1.1 billion (1 percent).

In percentage terms, other insurance companies saw the largest increase (12 percent) in their holdings of commercial/multifamily mortgages, and state and local government retirement funds saw the largest decrease (14 percent).

CHANGES IN MULTIFAMILY MORTGAGE DEBT OUTSTANDING DURING 2018

The $102.3 billion rise in multifamily mortgage debt outstanding during 2018 represents an 8.1 percent increase. In dollar terms, agency and GSE portfolios and MBS saw the largest increase in their holdings of multifamily mortgage debt at 11 percent ($68.8 billion). State and local government saw the largest decrease in their holdings down $875 million (1 percent).

In percentage terms, REITs recorded the largest increase in their holdings of multifamily mortgages, 20 percent, while state and local government retirement saw the largest decrease, 14 percent.

MBA's complete Commercial/Multifamily Mortgage Debt Outstanding report can be downloaded here. The report's analysis is based on data from the Federal Reserve Board's Financial Accounts of the United States, the Federal Deposit Insurance Corporation's Quarterly Banking Profile, and data from Wells Fargo Securities. More information on this data series is contained in Appendix A.

YEAR END COMMERCIAL AND MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Commercial and Multifamily Mortgage Debt Outstanding, by Sector

MORTGAGE BANKERS ASSOCIATION

	Mortgage Debt Outstanding				Change		Sector Share of $
	2018 Q4		2017 Q4				
	($millions)	% of total	($millions)	% of total	($millions)	Percent	
Bank and Thrift	1,336,535	39.4%	1,265,893	39.9%	70,642	5.6%	32.7%
Agency and GSE portfolios and MBS	674,957	19.9%	606,124	19.1%	68,833	11.4%	31.9%
Life insurance companies	509,411	15.0%	466,476	14.7%	42,935	9.2%	19.9%
CMBS, CDO and other ABS issues	466,139	13.7%	440,849	13.9%	25,290	5.7%	11.7%
State and local government	108,348	3.2%	109,398	3.4%	-1,050	-1.0%	-0.5%
REITs	93,028	2.7%	89,037	2.8%	3,991	4.5%	1.8%
Federal government	87,454	2.6%	84,978	2.7%	2,476	2.9%	1.1%
Nonfarm noncorporate business	33,149	1.0%	30,328	1.0%	2,821	9.3%	1.3%
Finance companies	27,691	0.8%	28,573	0.9%	-882	-3.1%	-0.4%
Private pension funds	21,940	0.6%	21,841	0.7%	99	0.5%	0.0%
Other insurance companies	19,911	0.6%	17,823	0.6%	2,088	11.7%	1.0%
Nonfinancial corporate business	10,448	0.3%	11,381	0.4%	-933	-8.2%	-0.4%
State and local government retirement	2,046	0.1%	2,384	0.1%	-338	-14.2%	-0.2%
Household sector	1,149	0.0%	1,100	0.0%	49	4.5%	0.0%
TOTAL	3,392,206		3,176,185		216,021	6.8%	

Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

Note: Beginning with the Q2 2014 release, MBA's analysis of mortgage debt outstanding modifies the data from the Federal Reserve's Financial Accounts of the United States with respect to loans held in commercial mortgage-backed securities (CMBS) and by real estate investment trusts (REITs). The corrections create differences with previous releases and with the Federal Reserve data. For more information, please see the Appendix to this report.

YEAR END MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Multifamily Mortgage Debt Outstanding, by Sector

MBa
MORTGAGE BANKERS ASSOCIATION

	Mortgage Debt Outstanding				Change		Sector Share of $
	2018 Q4		2017 Q4				
	($millions)	% of total	($millions)	% of total	($millions)	Percent	
Agency and GSE portfolios and MBS	674,957	49.5%	606,124	48.1%	68,833	11.4%	67.3%
Bank and Thrift	430,440	31.6%	403,885	32.0%	26,555	6.6%	26.0%
State and local government	90,290	6.6%	91,165	7.2%	-875	-1.0%	-0.9%
Life insurance companies	80,227	5.9%	73,365	5.8%	6,862	9.4%	6.7%
CMBS, CDO and other ABS issues	43,363	3.2%	43,499	3.5%	-136	-0.3%	-0.1%
Nonfarm noncorporate business	18,370	1.3%	16,806	1.3%	1,564	9.3%	1.5%
Federal government	12,748	0.9%	12,711	1.0%	37	0.3%	0.0%
Finance companies	5,881	0.4%	6,609	0.5%	-728	-11.0%	-0.7%
REITs	3,713	0.3%	3,106	0.2%	607	19.5%	0.6%
Private pension funds	1,103	0.1%	1,363	0.1%	-260	-19.1%	-0.3%
State and local government retirement	959	0.1%	1,118	0.1%	-159	-14.2%	-0.2%
Nonfinancial corporate business	402	0.0%	438	0.0%	-36	-8.2%	0.0%
TOTAL	1,362,453		1,260,189		102,264	8.1%	

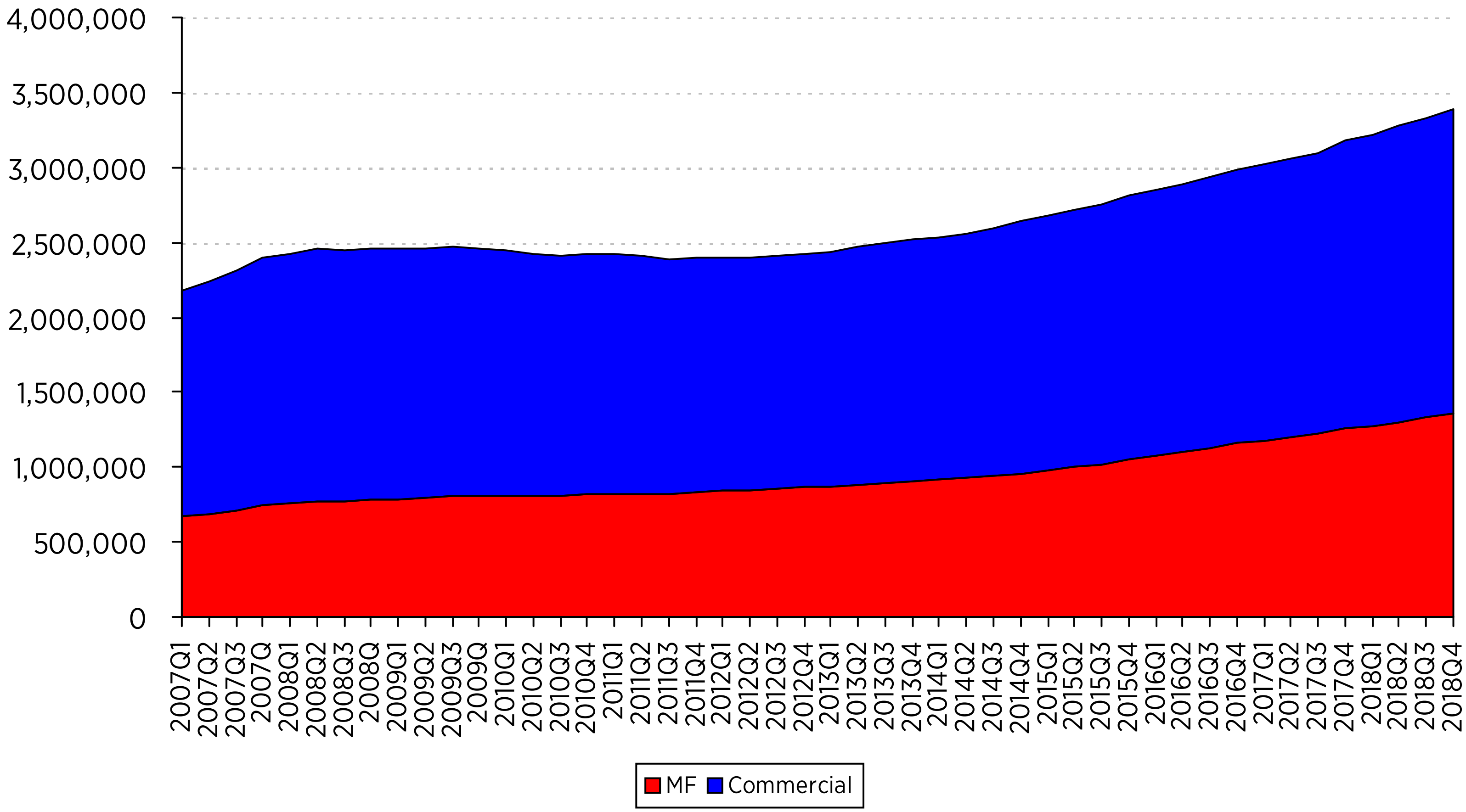
Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

Note: Beginning with the Q2 2014 release, MBA's analysis of mortgage debt outstanding modifies the data from the Federal Reserve's Financial Accounts of the United States with respect to loans held in commercial mortgage-backed securities (CMBS) and by real estate investment trusts (REITs). The corrections create differences with previous releases and with the Federal Reserve data. For more information, please see the Appendix to this report.

COMMERCIAL AND MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Commercial and Multifamily Mortgage Debt Outstanding, by Quarter

($millions)



Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

QUARTERLY COMMERCIAL AND MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Commercial and Multifamily Mortgage Debt Outstanding, by Sector

MBa MORTGAGE BANKERS ASSOCIATION

	Mortgage Debt Outstanding							
	2018 Q4		2018 Q3		Change		
	($millions)	% of total	($millions)	% of total	($millions)	Percent	Sector Share of $ Change
Bank and Thrift	1,336,535	39.4%	1,315,532	39.6%	21,003	1.6%	30.7%
Agency and GSE portfolios and MBS	674,957	19.9%	648,119	19.5%	26,838	4.1%	39.2%
Life insurance companies	509,411	15.0%	496,999	15.0%	12,412	2.5%	18.1%
CMBS, CDO and other ABS issues	466,139	13.7%	457,550	13.8%	8,589	1.9%	12.5%
State and local government	108,348	3.2%	109,580	3.3%	-1,232	-1.1%	-1.8%
REITs	93,028	2.7%	93,738	2.8%	-710	-0.8%	-1.0%
Federal government	87,454	2.6%	87,025	2.6%	429	0.5%	0.6%
Nonfarm noncorporate business	33,149	1.0%	32,045	1.0%	1,104	3.4%	1.6%
Finance companies	27,691	0.8%	27,898	0.8%	-207	-0.7%	-0.3%
Private pension funds	21,940	0.6%	21,840	0.7%	100	0.5%	0.1%
Other insurance companies	19,911	0.6%	19,654	0.6%	257	1.3%	0.4%
Nonfinancial corporate business	10,448	0.3%	10,631	0.3%	-183	-1.7%	-0.3%
State and local government retirement funds	2,046	0.1%	1,964	0.1%	82	4.2%	0.1%
Household sector	1,149	0.0%	1,135	0.0%	14	1.2%	0.0%
TOTAL	3,392,206		3,323,710		68,496	2.1%	

Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

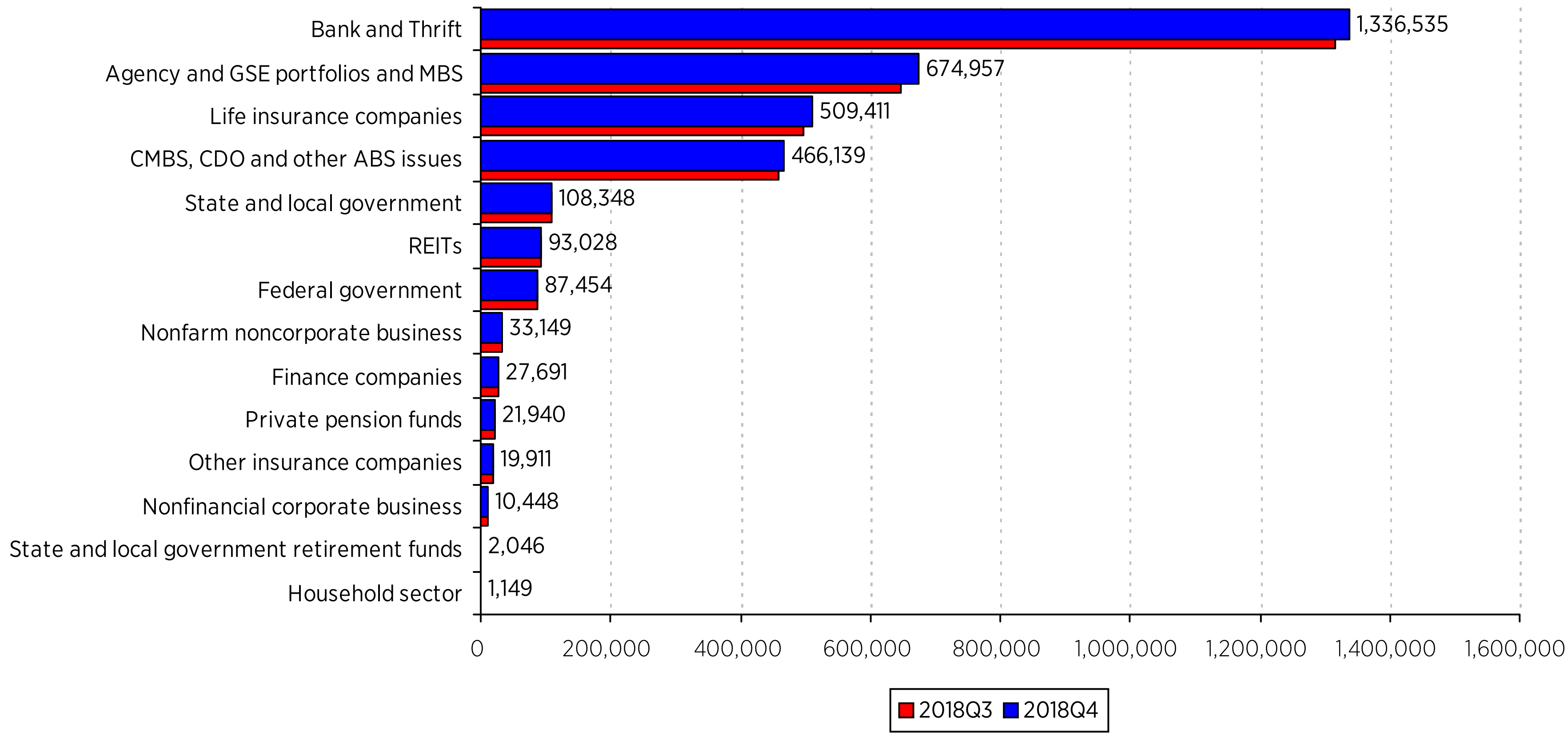
Note: Beginning with the Q2 2014 release, MBA's analysis of mortgage debt outstanding modifies the data from the Federal Reserve's Financial Accounts of the United States with respect to loans held in commercial mortgage-backed securities (CMBS) and by real estate investment trusts (REITs). The corrections create differences with previous releases and with the Federal Reserve data. For more information, please see the Appendix to this report.

COMMERCIAL AND MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Commercial and Multifamily Mortgage Debt Outstanding, by Sector

($millions)

MORTGAGE BANKERS ASSOCIATION

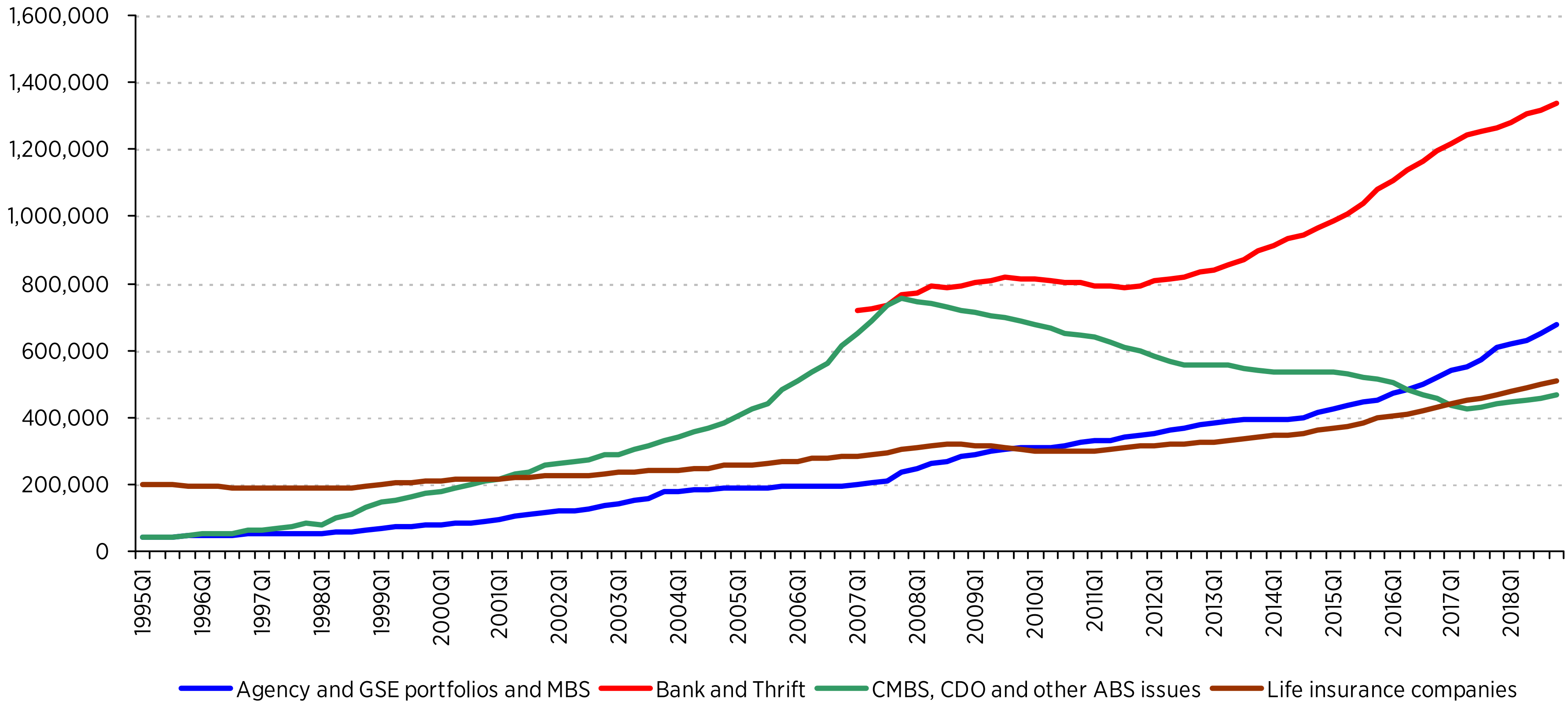


Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

COMMERCIAL AND MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Commercial and Multifamily Mortgage Debt Outstanding, by Selected Sector by Quarter

($millions)



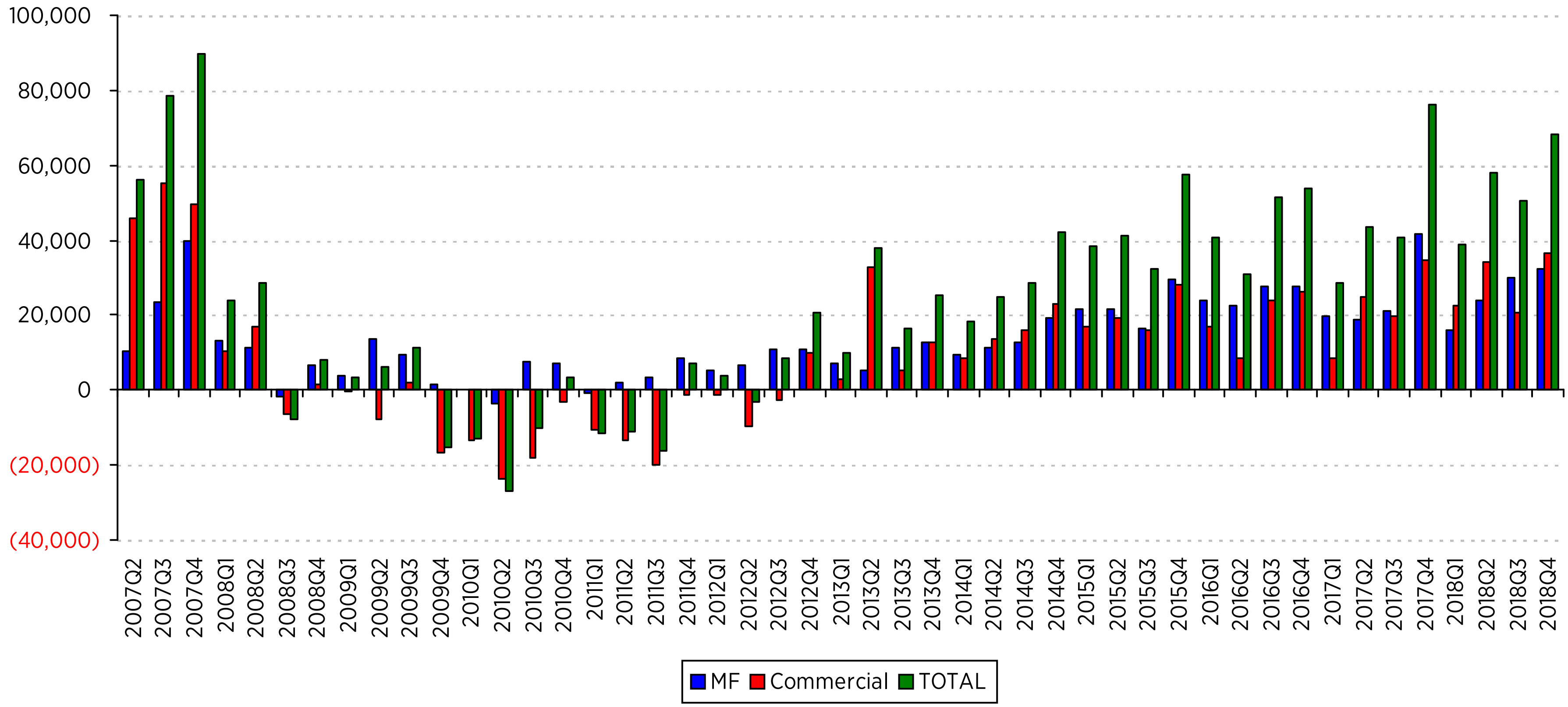
Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

COMMERCIAL AND MULTIFAMILY MORTGAGE FLOWS

Net Change in Commercial and Multifamily Mortgage Debt Outstanding, by Quarter

($millions)

MBa
MORTGAGE BANKERS ASSOCIATION



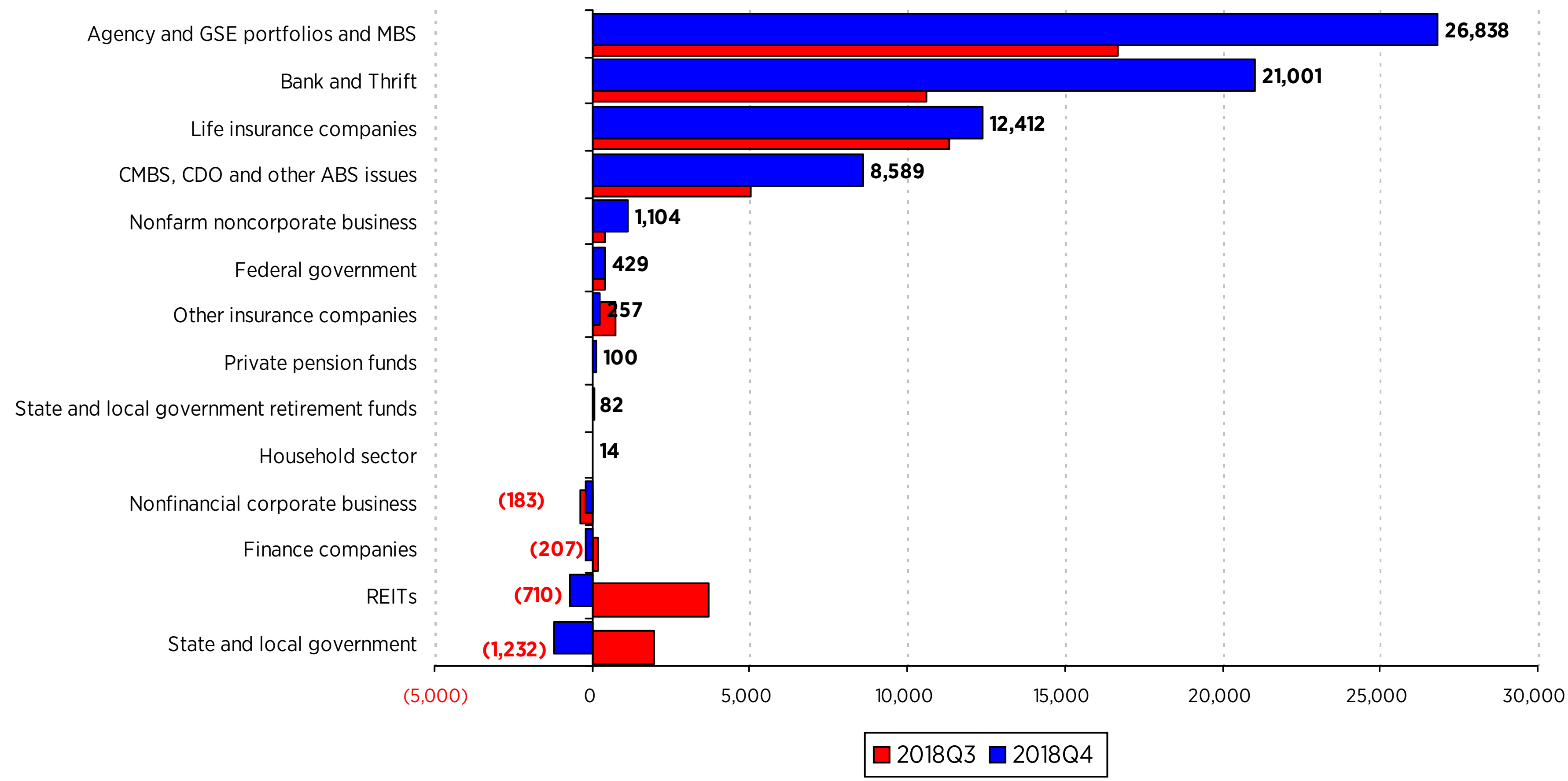
Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

COMMERCIAL AND MULTIFAMILY MORTGAGE FLOWS

Net Change in Commercial and Multifamily Mortgage Debt Outstanding, by Sector

($millions)

MORTGAGE BANKERS ASSOCIATION



Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

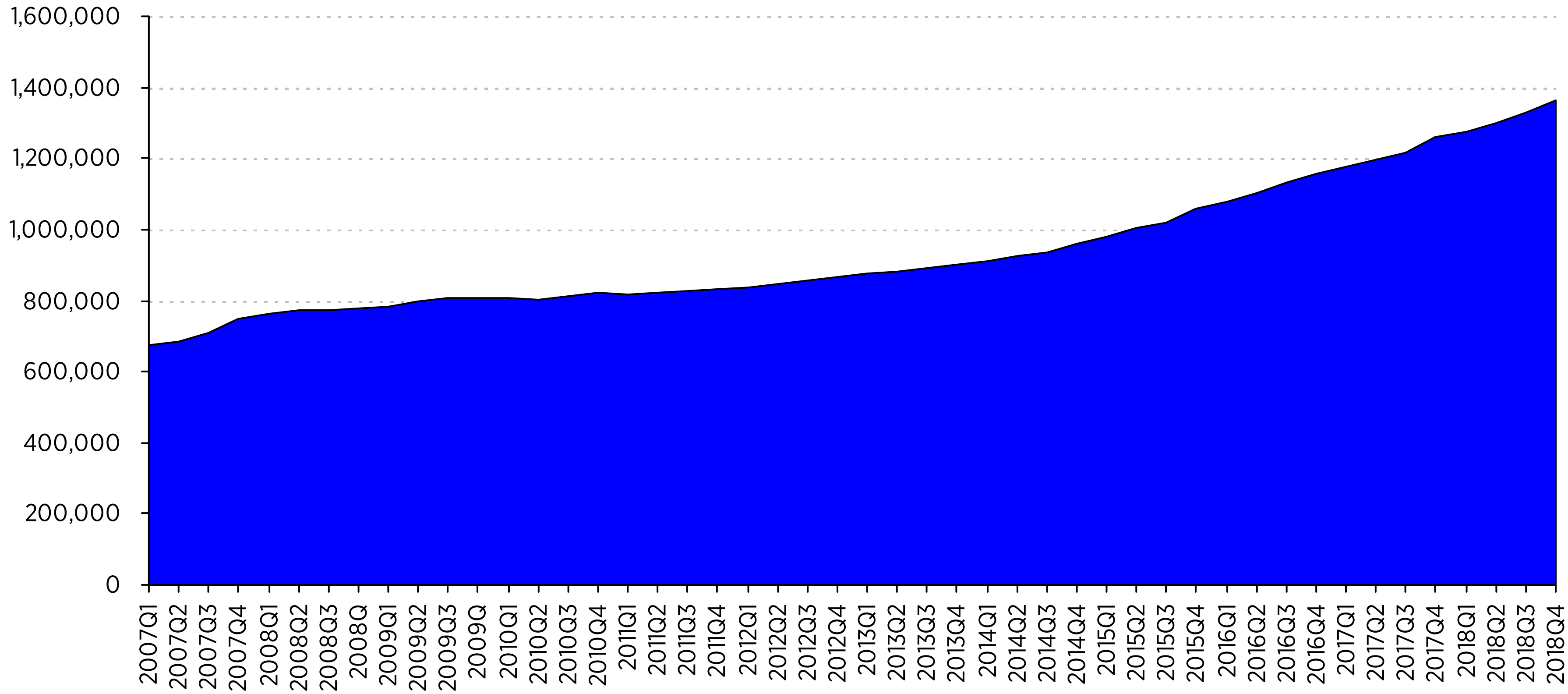
MORTGAGE BANKERS ASSOCIATION

MULTIFAMILY MORTGAGE DEBT OUTSTANDING

MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Multifamily Mortgage Debt Outstanding, by Quarter

($millions)



Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

QUARTERLY MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Multifamily Mortgage Debt Outstanding, by Sector

MORTGAGE BANKERS ASSOCIATION

	Mortgage Debt Outstanding				Change		Sector Share of $ Change
	2018 Q4		2018 Q3				
	($millions)	% of total	($millions)	% of total	($millions)	Percent	
Agency and GSE portfolios and MBS	674,957	49.5%	648,119	48.7%	26,838	4.1%	83.4%
Bank and Thrift	430,440	31.6%	425,935	32.0%	4,505	1.1%	14.0%
State and local government	90,290	6.6%	91,317	6.9%	-1,027	-1.1%	-3.2%
Life insurance companies	80,227	5.9%	78,195	5.9%	2,032	2.6%	6.3%
CMBS, CDO and other ABS issues	43,363	3.2%	43,870	3.3%	-507	-1.2%	-1.6%
Nonfarm noncorporate business	18,370	1.3%	17,758	1.3%	612	3.4%	1.9%
Federal government	12,748	0.9%	13,180	1.0%	-432	-3.3%	-1.3%
Finance companies	5,881	0.4%	5,915	0.4%	-34	-0.6%	-0.1%
REITs	3,713	0.3%	3,500	0.3%	213	6.1%	0.7%
Private pension funds	1,103	0.1%	1,168	0.1%	-65	-5.6%	-0.2%
State and local government retirement funds	959	0.1%	921	0.1%	38	4.1%	0.1%
Nonfinancial corporate business	402	0.0%	409	0.0%	-7	-1.7%	0.0%
TOTAL	1,362,453		1,330,287		32,166	2.4%	

Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

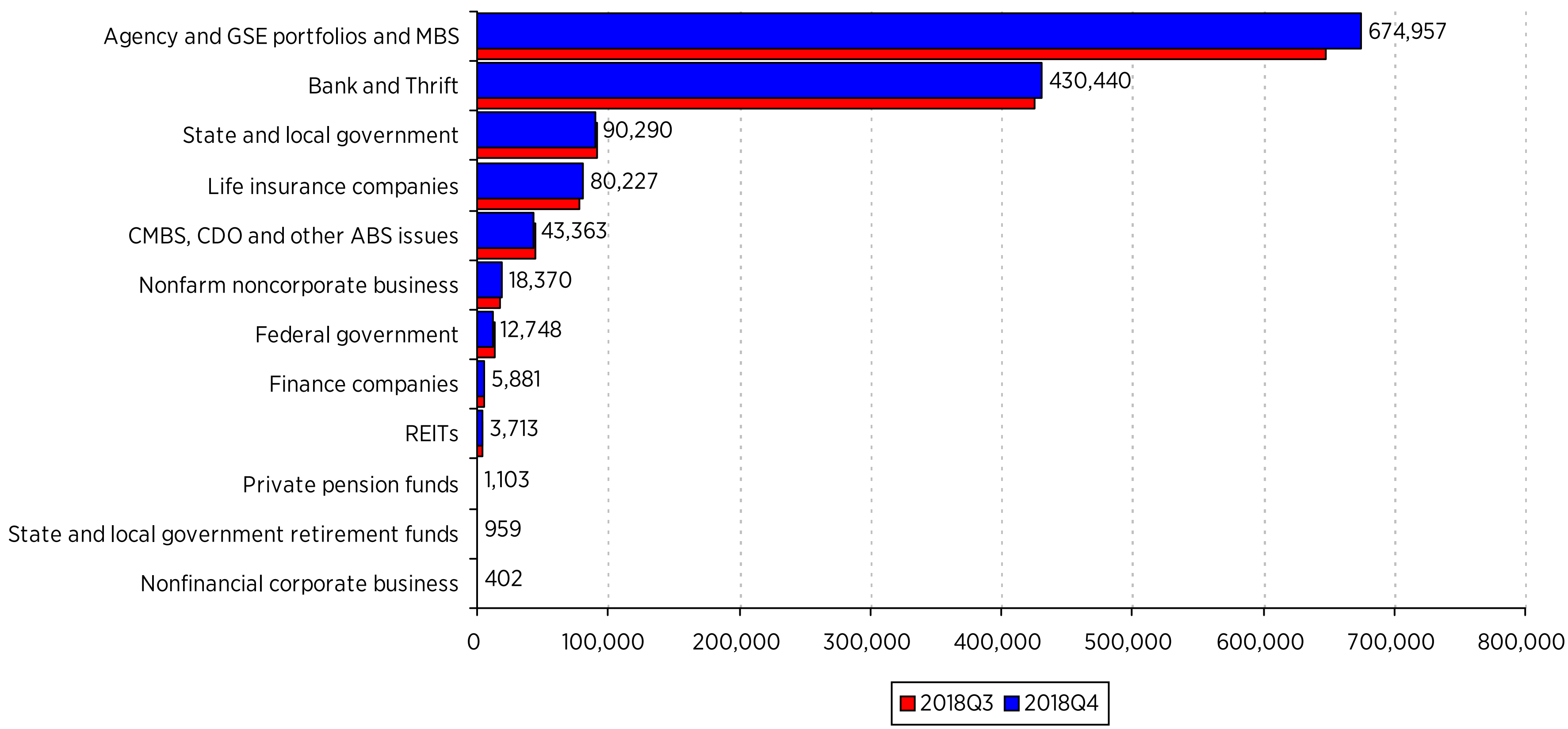
Note: Beginning with the Q2 2014 release, MBA's analysis of mortgage debt outstanding modifies the data from the Federal Reserve's Financial Accounts of the United States with respect to loans held in commercial mortgage-backed securities (CMBS) and by real estate investment trusts (REITs). The corrections create differences with previous releases and with the Federal Reserve data. For more information, please see the Appendix to this report.

MORTGAGE BANKERS ASSOCIATION

MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Multifamily Mortgage Debt Outstanding, by Sector

($millions)



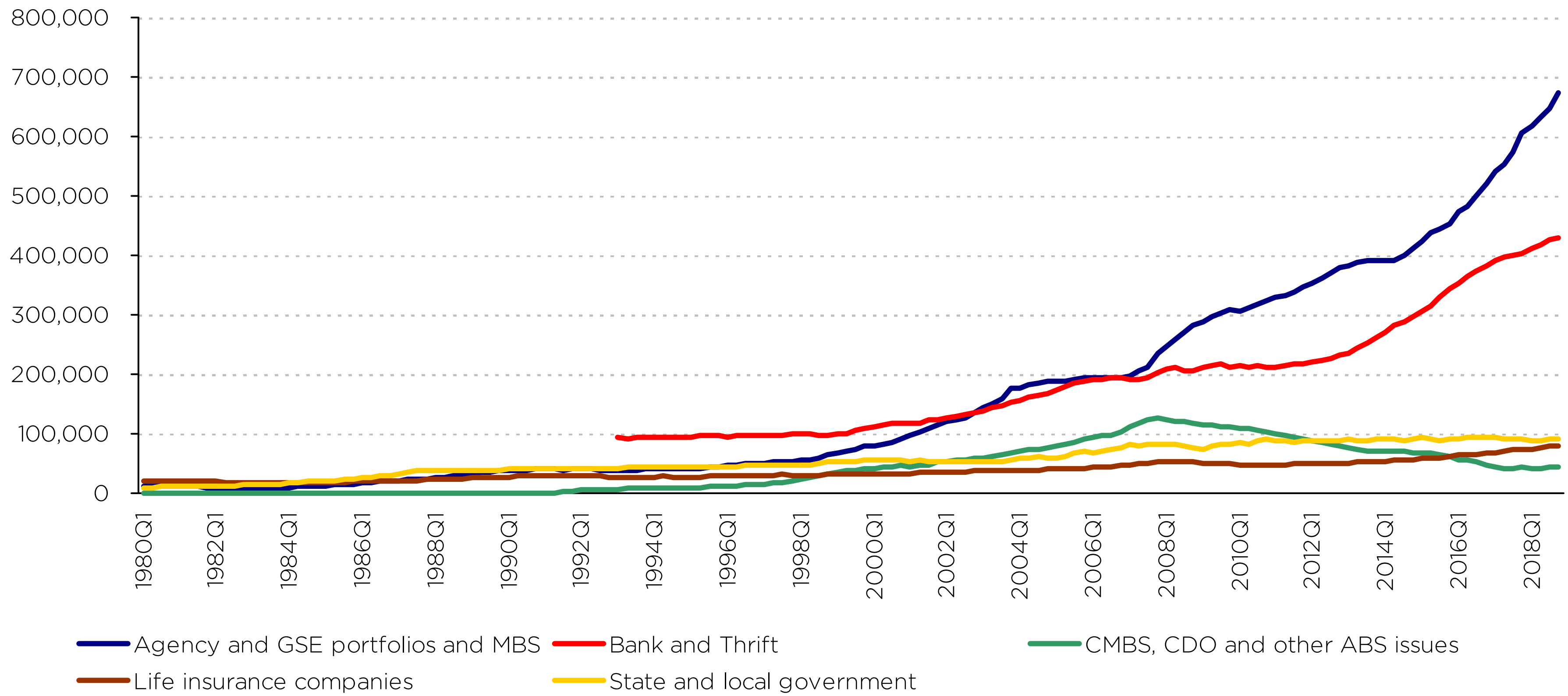
Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

MULTIFAMILY MORTGAGE DEBT OUTSTANDING

Total Multifamily Mortgage Debt Outstanding, by Selected Sector by Quarter

($millions)

MORTGAGE BANKERS ASSOCIATION

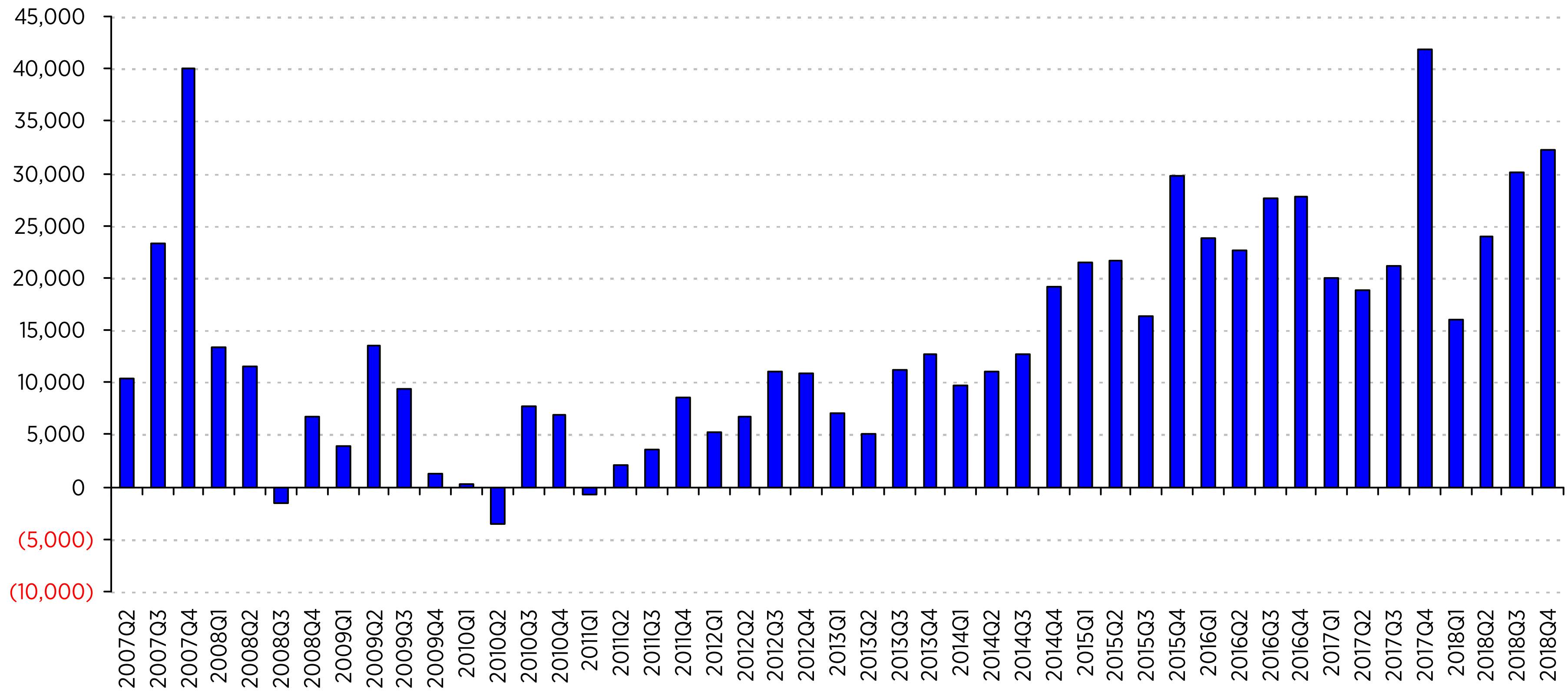


Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

MULTIFAMILY MORTGAGE FLOWS

Net Change in Multifamily Mortgage Debt Outstanding, by Quarter

($millions)



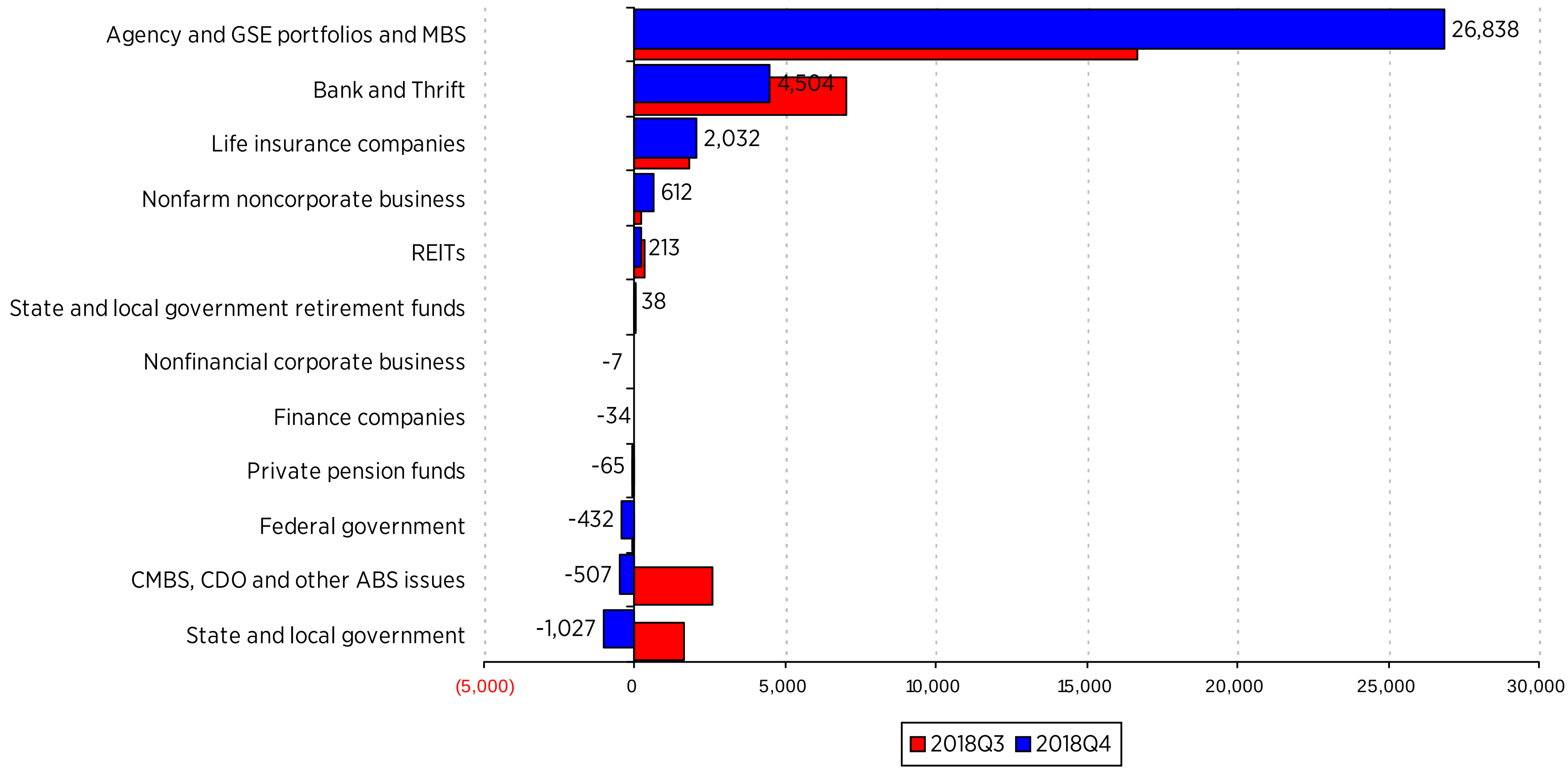
Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

MULTIFAMILY MORTGAGE FLOWS

Net Change in Multifamily Mortgage Debt Outstanding, by Sector

($millions)

MORTGAGE BANKERS ASSOCIATION



Source: MBA, Federal Reserve Board of Governors, Wells Fargo Securities, LLC, Intex Solutions, Inc. and FDIC

APPENDIX A

MBA's analysis is based on data from the Federal Reserve Board's *Financial Accounts of the United States*, the Federal Deposit Insurance Corporation's *Quarterly Banking Profile* and data from Wells Fargo Securities.

Bank Holdings

MBA's analysis of commercial and multifamily mortgage debt outstanding was changed in the fourth quarter of 2010 to exclude two categories of loans that had previously been included;

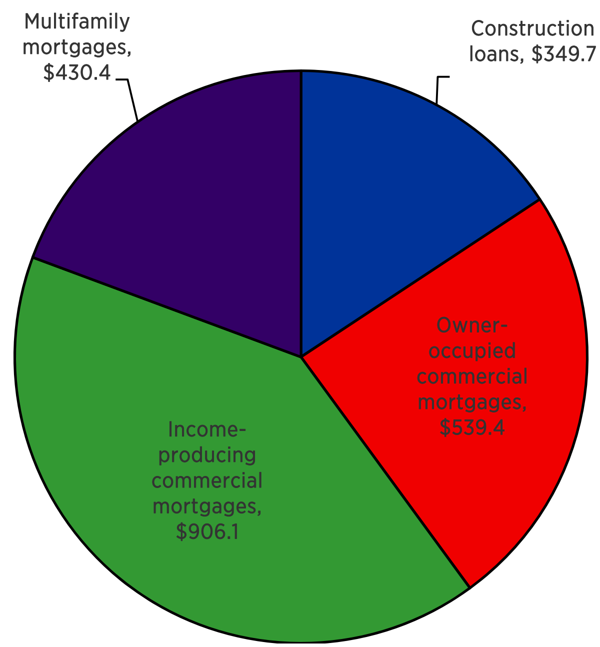
a. loans for acquisition, development and construction and
b. loans collateralized by owner-occupied commercial properties.

By excluding these loan types, MBA's analysis more accurately reflects the balance of loans supported by office buildings, retail centers, apartment buildings and other income-producing properties that rely on rents and leases to make their payments.

For the fourth quarter 2018, the Federal Reserve Board's Flow of Funds Accounts data attributed $2.2 trillion of outstanding commercial and multifamily mortgages to banks and thrifts. Comparing this number to the FDIC's Quarterly Banking Profile for the same period, one sees that banks and thrifts held $430 billion of multifamily mortgages and $1,445.5 billion of non-farm nonresidential mortgages, of which 63 percent or $906 billion were income-producing. The combined $1.34 trillion of mortgages backed by multifamily and other income-producing properties is included in this analysis. The $2.2 trillion total reported by the Federal Reserve also includes $539 billion of loans collateralized by owner-occupied commercial properties and another $350 billion of loans backed by acquisition, development and construction projects (including those for single-family development), which are excluded in from this analysis.

Estimated Components of Federal Reserve's Flow of Funds "Commercial and Multifamily Mortgages" Held by Banks and Thrifts

($Billions)



Source: MBA, Federal Reserve Board of Governors, and FDIC

Mortgages in CMBS and held by REITs

Beginning with its Q2 2014 release, the Federal Reserve's *Financial Accounts of the United States* adjusted its balance of commercial mortgages held in CMBS and by REITs to reflect the impact of FAS 167 and its implications for how entities report certain securitized mortgages on their balance sheets. The effect of this change was to inflate the balance of mortgages appearing under REITs by approximately $130 billion and to reduce the balance appearing under CMBS by the same amount. From an accounting perspective, such changes are required, but the changes lead to a significant distortion of the size of the CMBS and REIT markets.

For CMBS, MBA corrects for this by relying on data from Wells Fargo Securities to size the balance of commercial and multifamily mortgages in CMBS. (The analysis continues to rely on the Financial Accounts of the United States to size multifamily balances held in CMBS, as the FAS 167 adjustments did not affect them.)

For REIT balances, MBA uses Fed data to reverse the FAS 167 inclusions and thus to report the mortgages, and not securitized assets, that REITs hold. The full corrected series are available as a part of MBA's CREF Database. Contact CREFResearch@mba.org for more information.

Commercial/Multifamily Mortgage Delinquencies

Commercial and Multifamily Mortgage Delinquencies Remain Low in the Fourth Quarter of 2018
March 7, 2019

Commercial and multifamily mortgage delinquencies remained at a low rate in the final three months of 2018, according to the Mortgage Bankers Association's (MBA) latest Commercial/Multifamily Delinquency Report.

"It's hard to imagine commercial and multifamily mortgages performing much better," said Jamie Woodwell, MBA's Vice President of Commercial Research & Economics. "Future performance will be largely driven by changes in the economy and how they affect property incomes, property values and the ability of owners to refinance when their loans come due. Currently, all of those factors are favorable."

MBA's quarterly analysis looks at commercial/multifamily delinquency rates for five of the largest investor-groups: commercial banks and thrifts, commercial mortgage-backed securities (CMBS), life insurance companies, Fannie Mae and Freddie Mac. Together, these groups hold more than 80 percent of commercial/multifamily mortgage debt outstanding.

Based on the unpaid principal balance (UPB) of loans, delinquency rates for each group at the end of the fourth quarter were as follows:

- Banks and thrifts (90 or more days delinquent or in non-accrual): 0.48 percent, unchanged from the third quarter of 2018;
- Life company portfolios (60 or more days delinquent): 0.05 percent, an increase of 0.01 percentage points from the third quarter of 2018;
- Fannie Mae (60 or more days delinquent): 0.06 percent, a decrease of 0.01 percentage points from the third quarter of 2018;
- Freddie Mac (60 or more days delinquent): 0.01 percent, unchanged from the third quarter of 2018; and
- CMBS (30 or more days delinquent or in REO): 2.77 percent, a decrease of 0.28 percentage points from the third quarter of 2018.

MBA's analysis incorporates the measures used by each individual investor group to track the performance of their loans. Because each investor group tracks delinquencies in its own way, delinquency rates are not comparable from one group to another.

Construction and development loans are generally not included in the numbers presented here, but are included in many regulatory definitions of 'commercial real estate' despite the fact they are often backed by single-family residential development projects rather than by office buildings, apartment buildings, shopping centers, or other income-producing properties. The FDIC delinquency rates for bank and thrift held mortgages reported here do include loans backed by owner-occupied commercial properties.

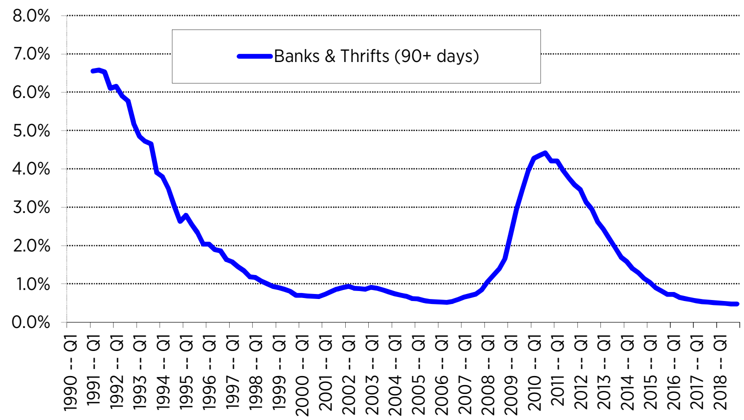
Differences between the delinquencies measures are detailed in Appendix A.

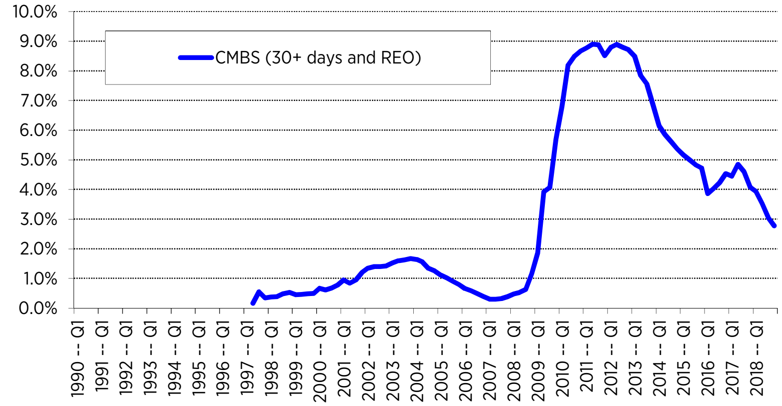
CHART 1. COMMERCIAL/MULTIFAMILY MORTGAGE DELINQUENCY RATES AMONG MAJOR INVESTOR GROUPS

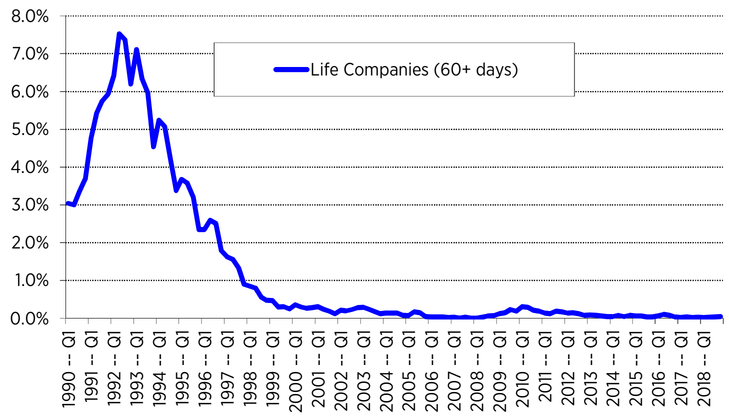
MBa MORTGAGE BANKERS ASSOCIATION

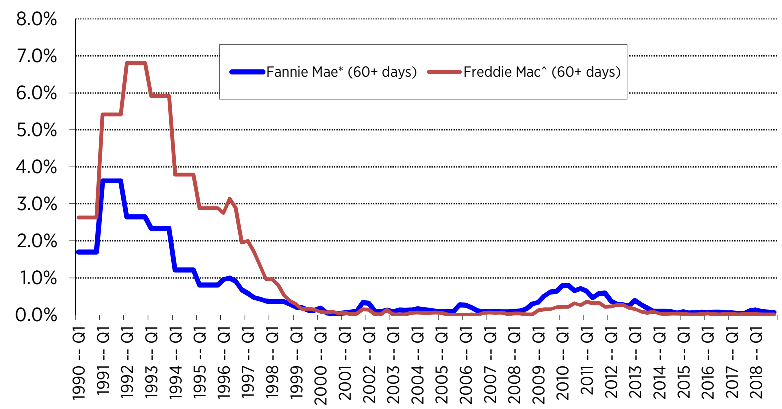
Selected delinquency rates at the end of the period

NOTE: Delinquency rates shown are NOT comparable between investor groups. These rates show how performance of loans for each investor groups has varied over time, but cannot be used to compare one investor group to another.







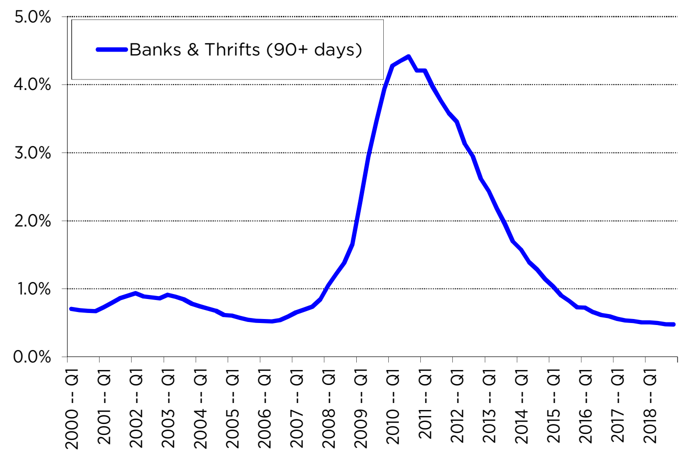


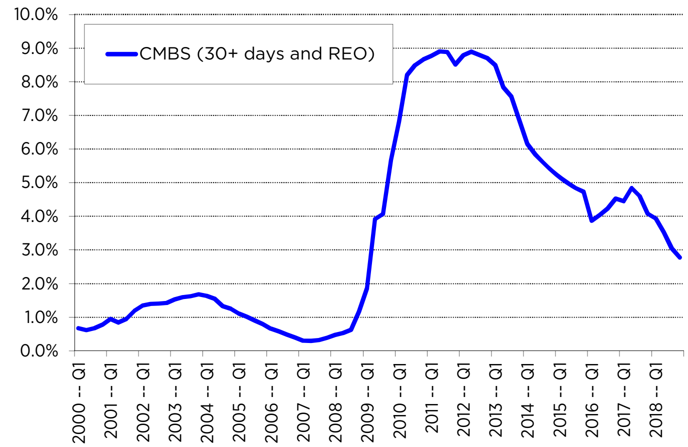
Sources: Wells Fargo Securities, LLC and Intex Solutions, Inc., American Council of Life Insurers, Fannie Mae, Freddie Mac, OFHEO and Federal Deposit Insurance Corporation

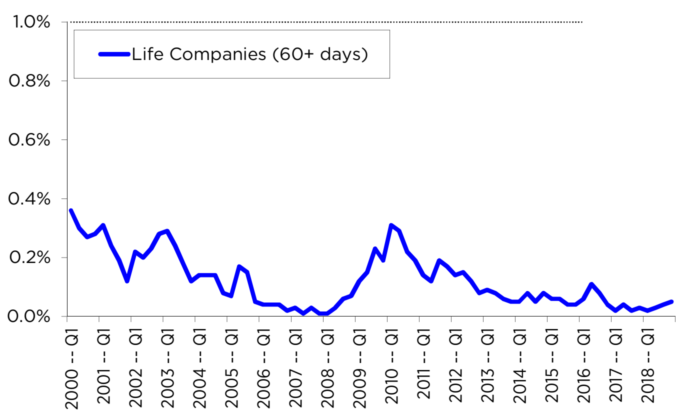
CHART 2. COMMERCIAL/MULTIFAMILY MORTGAGE DELINQUENCY RATES AMONG MAJOR INVESTOR GROUPS, 2000 - PRESENT

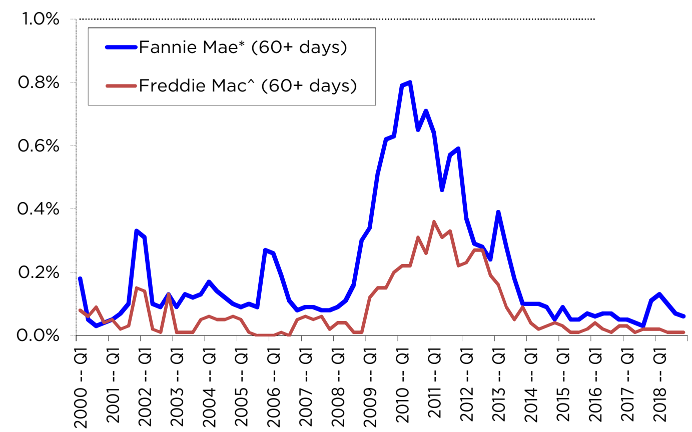
Selected delinquency rates at the end of the period

NOTE: Delinquency rates shown are NOT comparable between investor groups. These rates show how performance of loans for each investor groups has varied over time, but cannot be used to compare one investor group to another.





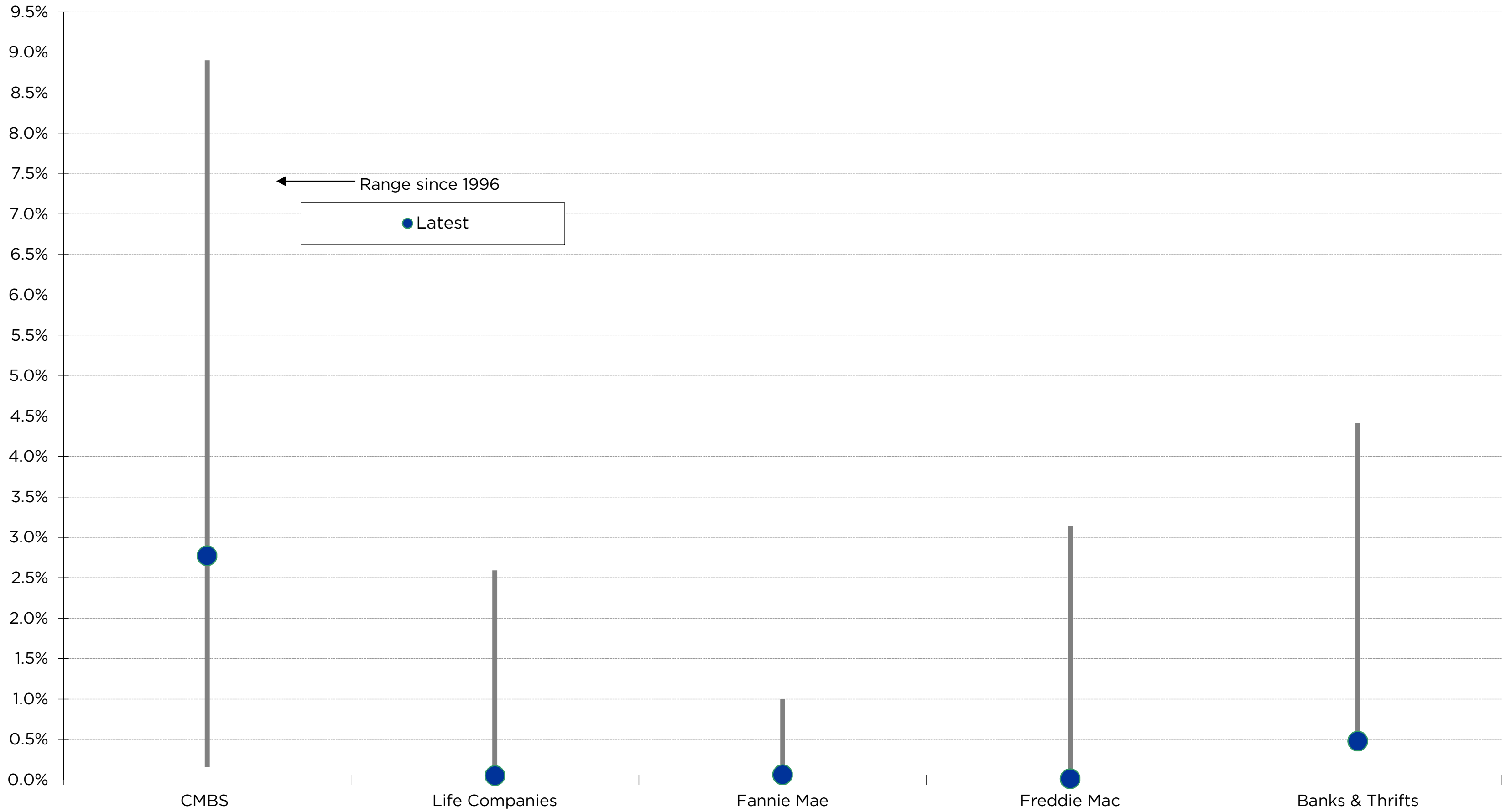




Sources: Wells Fargo Securities, LLC and Intex Solutions, Inc., American Council of Life Insurers, Fannie Mae, Freddie Mac, OFHEO and Federal Deposit Insurance Corporation

CHART 3. Latest Delinquency Rates and Range Since 1996

NOTE: Delinquency rates shown are NOT comparable between investor groups. These rates show how performance of loans for each investor groups has varied over time, but cannot be used to compare one investor group to another.



Sources: Wells Fargo Securities, LLC and Intex Solutions, Inc., American Council of Life Insurers, Fannie Mae, Freddie Mac, OFHEO and Federal Deposit Insurance Corporation

COMMERCIAL/MULTIFAMILY MORTGAGE DELINQUENCY RATES AMONG MAJOR INVESTOR GROUPS

Selected delinquency rates at the end of the period

NOTE: Delinquency rates shown are NOT comparable between investor groups. These rates show how performance of loans for each investor groups has varied over time, but cannot be used to compare one investor group to another.

	CMBS (30+ days and REO)	Life Companies (60+ days)	Fannie Mae (60+ days)	Freddie Mac (60+days)	Banks & Thrifts (90+ days)
Year-end					
2000 -- Q4	0.78%	0.28%	0.04%	0.04%	0.67%
2001 -- Q4	1.20%	0.12%	0.33%	0.15%	0.90%
2002 -- Q4	1.43%	0.28%	0.13%	0.13%	0.86%
2003 -- Q4	1.68%	0.12%	0.13%	0.05%	0.78%
2004 -- Q4	1.25%	0.08%	0.10%	0.06%	0.62%
2005 -- Q4	0.80%	0.05%	0.27%	0.00%	0.53%
2006 -- Q4	0.39%	0.02%	0.08%	0.05%	0.59%
2007 -- Q4	0.39%	0.01%	0.08%	0.02%	0.85%
2008 -- Q4	1.17%	0.07%	0.30%	0.01%	1.66%
2009 -- Q4	5.68%	0.19%	0.63%	0.20%	3.94%
2010 -- Q4	8.67%	0.19%	0.71%	0.26%	4.21%
2011 -- Q4	8.51%	0.17%	0.59%	0.22%	3.58%
2012 -- Q4	8.71%	0.08%	0.24%	0.19%	2.62%
2013 -- Q4	6.86%	0.05%	0.10%	0.09%	1.70%
2014 -- Q4	5.36%	0.08%	0.05%	0.04%	1.14%
2015 -- Q4	4.73%	0.04%	0.07%	0.02%	0.73%
2016 -- Q4	4.53%	0.04%	0.05%	0.03%	0.60%
2017 -- Q4	4.08%	0.03%	0.11%	0.02%	0.51%
2018 -- Q4	2.77%	0.05%	0.06%	0.01%	0.48%
Quarter-end					
2015 -- Q3	4.84%	0.04%	0.05%	0.01%	0.82%
2015 -- Q4	4.73%	0.04%	0.07%	0.02%	0.73%
2016 -- Q1	3.87%	0.06%	0.06%	0.04%	0.73%
2016 -- Q2	4.04%	0.11%	0.07%	0.02%	0.66%
2016 -- Q3	4.23%	0.08%	0.07%	0.01%	0.62%
2016 -- Q4	4.53%	0.04%	0.05%	0.03%	0.60%
2017 -- Q1	4.45%	0.02%	0.05%	0.03%	0.56%
2017 -- Q2	4.84%	0.04%	0.04%	0.01%	0.54%
2017 -- Q3	4.60%	0.02%	0.03%	0.02%	0.53%
2017 -- Q4	4.08%	0.03%	0.11%	0.02%	0.51%
2018 -- Q1	3.93%	0.02%	0.13%	0.02%	0.51%
2018 -- Q2	3.52%	0.03%	0.10%	0.01%	0.50%
2018 -- Q3	3.05%	0.04%	0.07%	0.01%	0.48%
2018 -- Q4	2.77%	0.05%	0.06%	0.01%	0.48%

Sources: Wells Fargo Securities, LLC and Intex Solutions, Inc., American Council of Life Insurers, Fannie Mae, Freddie Mac, OFHEO and Federal Deposit Insurance Corporation.

Note: Differences between the delinquency measures are detailed in Appendix A.

APPENDIX A
SOURCES & MEASURES OF DELINQUENCIES

Commercial Mortgage-backed Securities (CMBS)
Source: Wells Fargo Securities, LLC and Intex Solutions, Inc.
The delinquency rate for CMBS loans covers loans 30+ days delinquent, including those in foreclosure, and real estate owned (REO). The CMBS rate is the only one to include REO in either the numerator or the denominator. This series includes all private-label (non-Ginnie Mae, Fannie Mae or Freddie Mac issued) deals that are currently outstanding, including both fixed- and floating-rate deals. In reports released prior to Q3 2011, this series included only deals issued prior to 2009. Beginning with the Q3 2011 release all deals are included regardless of issue date.

Life Companies
Source: American Council of Life Insurers
The delinquency rate for life insurance company loans covers loans 60+ days delinquent, including those in foreclosure, and does not include real estate owned (REO) in either the numerator or the denominator.

Fannie Mae
Source: Fannie Mae Monthly Volume Summary and Office of Federal Housing Enterprise Oversight Annual Reports to Congress
The delinquency rate for multifamily loans either held in portfolio or securitized and guaranteed by the company covers loans 60+ days delinquent, including those in foreclosure, and does not include real estate owned (REO) in either the numerator or the denominator. The company was unable to provide December delinquency figures for the years 2000 to 2004, so the fourth quarter numbers presented for those years are November, rather December, figures. In January 2011, Fannie Mae revised its 2010 monthly multifamily delinquency rates for all periods presented to exclude multifamily borrowers who have entered into a forbearance agreement and are abiding by the terms of the agreement, but had been previously included in the multifamily delinquency rates due to an error.

Freddie Mac
Source: Freddie Mac Monthly Volume Summary and Office of Federal Housing Enterprise Oversight Annual Reports to Congress
The delinquency rate for multifamily loans either held in portfolio or securitized and guaranteed by the company covers loans
60+ days delinquent, including those in foreclosure, and does not include real estate owned (REO) in either the numerator or the denominator. Freddie Mac notes that their delinquency rate "[e]xcludes mortgage loans whose original contractual terms have been modified under an agreement with the borrower as long as the borrower complies with the modified contractual terms." As an example, after Hurricane Katrina, Freddie Mac modified a number of loans affected by the storms. In May 2010, Freddie Mac returned to reporting multifamily delinquencies as those loans 60+ days delinquent.

FDIC-insured Banks & Thrifts
Source: Federal Deposit Insurance Corporation
The delinquency rate for FDIC banks and thrifts covers loans 90+ days delinquent, including those in foreclosure and in non-accrual status, and does not include real estate owned (REO) in either the numerator or the denominator. The universe of loans covered by this series also includes a large number of "owner-occupied" commercial loans – loans supported by the income of the resident business rather than by rent and lease payments. In a 2007 analysis by MBA of the ten banks with the largest commercial mortgage portfolios, approximately half, in dollar volume, of their commercial (non-multifamily) loan portfolio was comprised of these "owner-occupied" properties.

Data are available for life companies, FDIC-insured banks and thirfts, Fannie Mae and Freddie Mac since 1990 and CMBS since 1997.

COMMERCIAL MORTGAGE-BACKED SECURITIES (CMBS) OUTSTANDING

Billions of Dollars

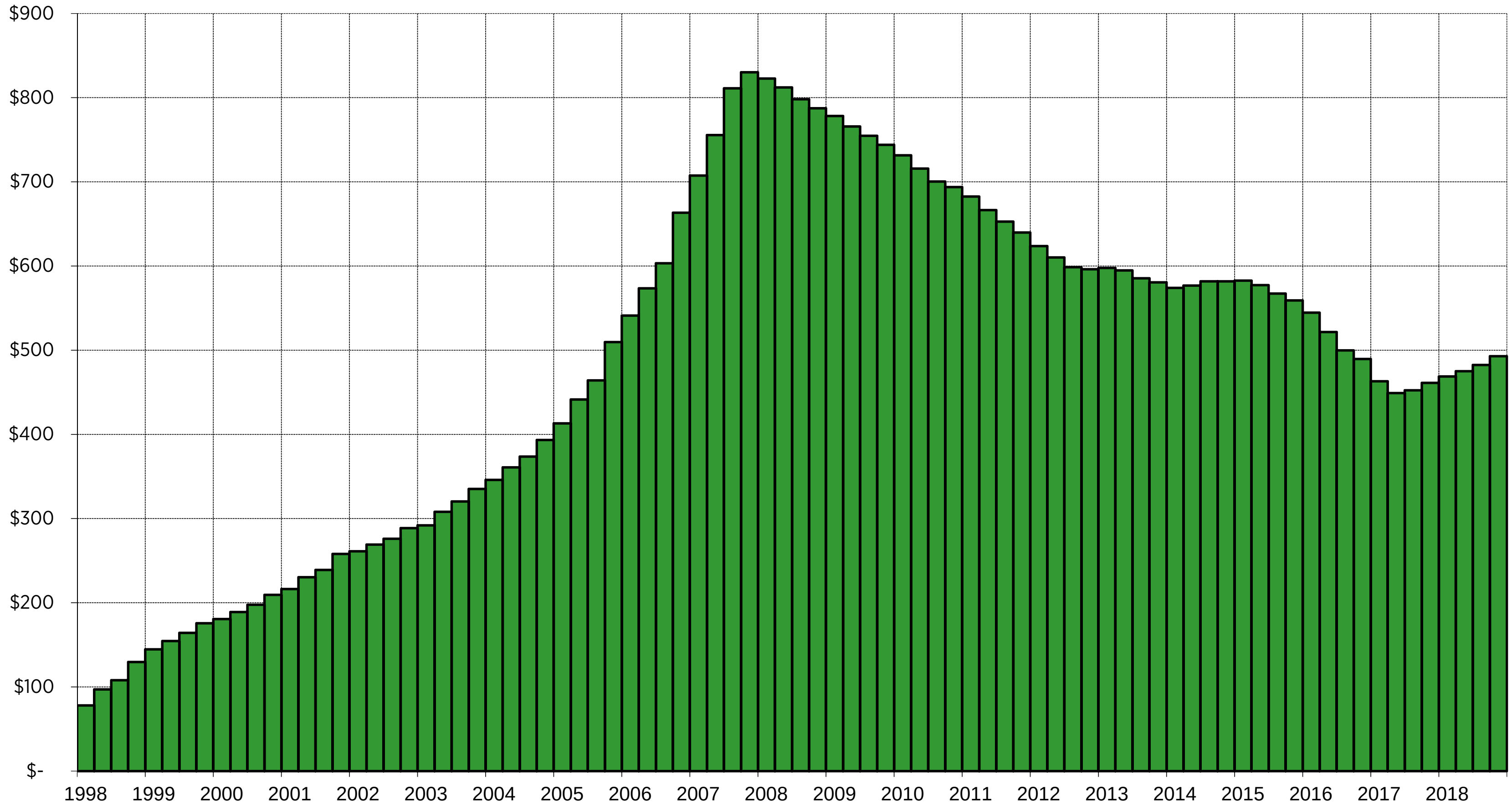
Year	Q1	Q2	Q3	Q4	Q4 Year-Over-Year Change: Total	Q4 Year-Over-Year Change: Percent change	Q3-to-Q4 Change: Total	Q3-to-Q4 Change: Percent change
U.S. CMBS OUTSTANDING								
1998	$ 77.98	$ 97.11	$ 107.97	$ 129.60				
1999	$ 144.62	$ 154.50	$ 164.11	$ 175.54	$ 45.94	35%	$ 11.43	7.0%
2000	$ 180.59	$ 188.90	$ 197.64	$ 209.43	$ 33.89	19%	$ 11.79	6.0%
2001	$ 216.32	$ 230.24	$ 238.90	$ 258.04	$ 48.61	23%	$ 19.14	8.0%
2002	$ 261.16	$ 269.10	$ 275.95	$ 288.57	$ 30.52	12%	$ 12.62	4.6%
2003	$ 292.00	$ 308.09	$ 320.32	$ 335.14	$ 46.57	16%	$ 14.82	4.6%
2004	$ 345.86	$ 360.86	$ 373.65	$ 393.29	$ 58.15	17%	$ 19.64	5.3%
2005	$ 413.05	$ 441.38	$ 464.05	$ 509.67	$ 116.38	30%	$ 45.62	9.8%
2006	$ 541.16	$ 573.55	$ 603.33	$ 663.31	$ 153.64	30%	$ 59.98	9.9%
2007	$ 707.40	$ 755.51	$ 811.06	$ 830.16	$ 166.85	25%	$ 19.09	2.4%
2008	$ 822.70	$ 812.11	$ 798.16	$ 787.38	$ (42.77)	-5%	$ (10.78)	-1.4%
2009	$ 778.26	$ 765.82	$ 754.77	$ 743.97	$ (43.41)	-6%	$ (10.80)	-1.4%
2010	$ 731.48	$ 715.83	$ 700.43	$ 693.85	$ (50.12)	-7%	$ (6.59)	-0.9%
2011	$ 682.55	$ 666.46	$ 652.78	$ 639.86	$ (53.99)	-8%	$ (12.92)	-2.0%
2012	$ 623.66	$ 610.20	$ 598.60	$ 596.12	$ (43.74)	-7%	$ (2.48)	-0.4%
2013	$ 597.70	$ 594.73	$ 585.40	$ 580.58	$ (15.55)	-3%	$ (4.82)	-0.8%
2014	$ 573.99	$ 576.76	$ 581.73	$ 581.83	$ 1.25	0%	$ 0.09	0.0%
2015	$ 582.60	$ 577.24	$ 567.28	$ 559.20	$ (22.63)	-4%	$ (8.09)	-1.4%
2016	$ 544.63	$ 521.55	$ 499.75	$ 489.52	$ (69.68)	-12%	$ (10.23)	-2.0%
2017	$ 463.14	$ 449.10	$ 452.34	$ 461.11	$ (28.41)	-6%	$ 8.78	1.9%
2018	$ 468.77	$ 474.99	$ 482.47	$ 492.85	$ 31.74	7%	$ 10.38	2.2%

Source: Wells Fargo Securities, LLC, and Intex Solutions, Inc.

In reports released prior to Q3 2011, this series included only deals issued prior to 2009. Beginning with the Q3 2011 release all deals are included regardless of issue date.

COMMERCIAL MORTGAGE-BACKED SECURITIES (CMBS) OUTSTANDING

Billions of Dollars

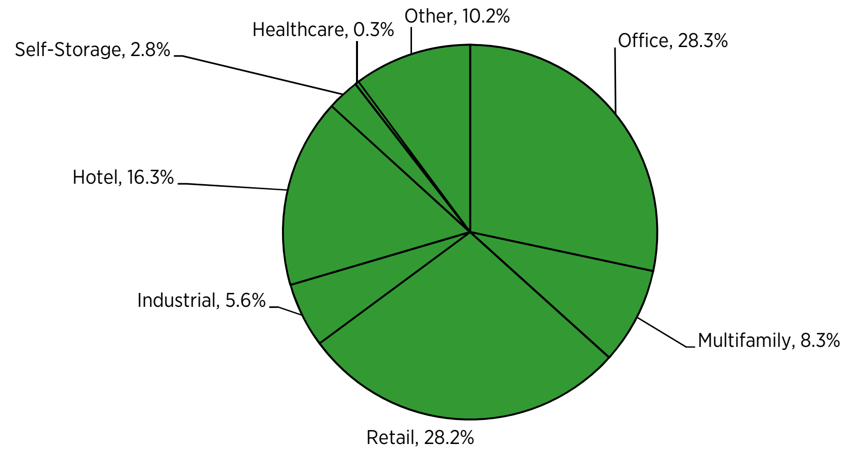


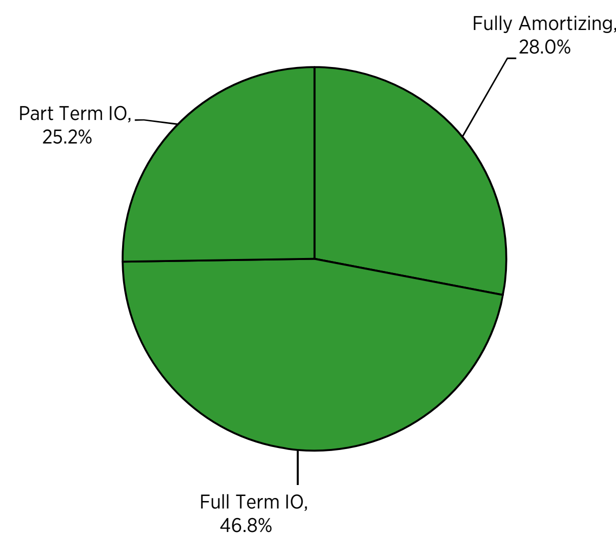
Source: Wells Fargo Securities, LLC, and Intex Solutions, Inc.

COMMERCIAL MORTGAGE-BACKED SECURITIES (CMBS) MARKET COMPOSITION

Composition of CMBS Outstanding, as of December 31, 2018

Total CMBS Outstanding	$ 492.9 billion
By Property Types:	
Office	28.3%
Multifamily	8.3%
Retail	28.2%
Industrial	5.6%
Hotel	16.3%
Self-Storage	2.8%
Healthcare	0.3%
Other	10.2%
By Amortization:	
Fully Amortizing	28.0%
All Interest-Only (IO)	72.0%
Full Term IO	46.8%
Part Term IO	25.2%
By Percent Defeased	3.6%
By Delinquency:	
Current	97.23%
30-day delinquent	0.07%
60-day delinquent	0.07%
90+day delinquent	0.26%
Foreclosure/REO	2.37%

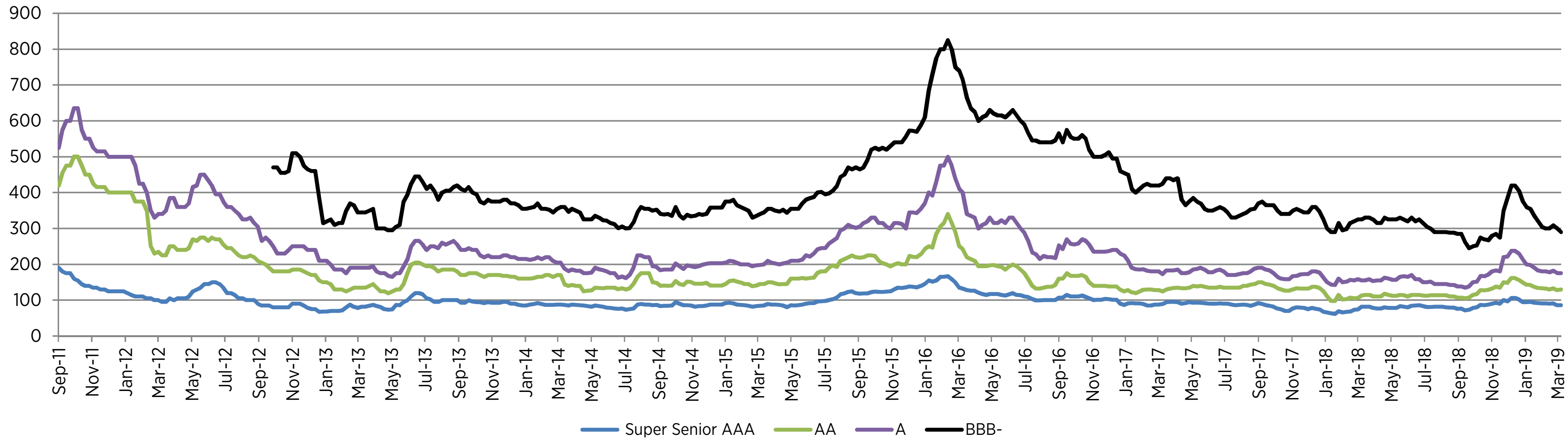




Source: Wells Fargo Securities, LLC, and Intex Solutions, Inc.

CMBS SPREADS
COMMERCIAL MORTGAGE BACKED SECURITIES (CMBS) NEW ISSUE SPREADS TO SWAP RATES

(in Basis Points)



AAA CMBS SPREADS

(in Basis Points)

Source: JP Morgan Securities

CMBS AND OTHER SPREADS
Commercial Mortgage Backed Securities (CMBS) and selected other CRE mortgage bonds
Spreads to Swap Rates

(in Basis Points)

	New Issue CMBS						
	Super Senior AAA	AA	A	BBB-	Legacy Super Senior AAA	10/9.5 DUS	10yr Freddie K A1
End of Q4 2016	101	138	240	495	140	76	54
End of Q1 2017	94	130	183	440	140	67	44
End of Q2 2017	90	135	183	355	140	68	46
End of Q3 2017	86	145	185	365	N/A	64	49
End of Q4 2017	76	137	180	360	N/A	56	41
End of Q1 2018	82	115	155	330	N/A	52	39
End of Q2 2018	84	115	170	330	N/A	61	39
End of Q3 2018	72	105	135	260	N/A	56	39
End of Q4 2018	106	162	238	420	N/A	78	53
11-Jan-19	94	149	213	375	N/A	73	53
18-Jan-19	94	143	200	360	N/A	72	51
25-Jan-19	95	142	198	355	N/A	72	51
1-Feb-19	93	137	190	335	N/A	69	49
8-Feb-19	92	134	183	320	N/A	67	48
15-Feb-19	91	133	180	305	N/A	65	47
22-Feb-19	91	132	180	300	N/A	64	45
1-Mar-19	90	130	178	300	N/A	64	50
8-Mar-19	91	133	182	308	N/A	64	50
15-Mar-19	86	128	175	300	N/A	63	49
22-Mar-19	86	130	175	290	N/A	63	49

Source: JP Morgan Securities

5. Recent Commercial/Multifamily Research Releases from MBA

The following reports can be found at www.mba.org/crefresearch. If you have trouble locating these or other MBA reports, email crefresearch@mba.org

3/28/2019

MBA Releases 2018 Rankings of Commercial/Multifamily Mortgage Firms' Origination Volumes

The MBA study is the only one of its kind to present a comprehensive set of listings of 135 different commercial/multifamily mortgage originators, their 2018 volumes and the different roles they play. The MBA report, Commercial Real Estate/Multifamily Finance Firms - Annual Origination Volumes, presents origination volumes in more than 140 categories, including by role, by investor group, by property type, by financing structure type, and by the location of the originating office.

3/14/2019

Commercial/Multifamily Mortgage Debt Climbs 6.8 Percent to $3.39 Trillion in 2018

The level of commercial/multifamily mortgage debt outstanding at the end of 2018 was $216 billion (6.8 percent) higher than at the end of 2017, according to the Mortgage Bankers Association's (MBA) latest Commercial/Multifamily Mortgage Debt Outstanding quarterly report.

3/7/2019

Commercial and Multifamily Mortgage Delinquencies Remain Low in the Fourth Quarter of 2018

Commercial and multifamily mortgage delinquencies remained at a low rate in the final three months of 2018, according to the Mortgage Bankers Association's (MBA) latest Commercial/Multifamily Delinquency Report.

2/10/2019

MBA Releases 2018 Commercial/Multifamily Servicer Rankings

The Mortgage Bankers Association (MBA) released its year-end ranking of commercial and multifamily mortgage servicers' volumes (as of December 31, 2018) here today at the 2019 Commercial Real Estate Finance/Multifamily Housing Convention & Expo.

2/10/2019

2018 Ends on a High Note with a 14 Percent Rise in Commercial/Multifamily Borrowing

A strong final three months of the year helped commercial and multifamily mortgage originations increase by three percent in 2018, according to preliminary estimates from the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, released here today at the 2019 Commercial Real Estate Finance/Multifamily Housing Convention & Expo.

2/10/2019

MBA Forecast: Commercial and Multifamily Originations to Hold Firm in 2019

Steady commercial real estate markets, along with equity and debt availability, are expected to keep commercial and multifamily mortgage originations roughly on par with the volumes seen the last two years, according to the Mortgage Bankers Association's (MBA) 2019 Commercial/Multifamily Real Estate Finance Forecast, released here today at the 2019 Commercial Real Estate Finance/Multifamily Housing Convention & Expo.

2/10/2019

Commercial and Multifamily Mortgage Maturity Volumes to Increase 8 Percent in 2019

$110.5 billion of the $1.9 trillion (6 percent) of outstanding commercial and multifamily mortgages held by non-bank lenders and investors will mature in 2019, according to the Mortgage Bankers Association's (MBA) Commercial Real Estate/Multifamily Survey of Loan Maturity Volumes, released here today at the 2019 Commercial Real Estate Finance/Multifamily Housing Convention & Expo. Loan maturities this year will rise 8 percent from the $102.2 billion that matured in 2018.

1/8/2019

2019 CREF Outlook Survey: Majority of Firms Expect Originations to Increase

Commercial and multifamily mortgage originators expect 2019 to be another strong year in lending activity, according to the Mortgage Bankers Association's (MBA) 2019 Commercial Real Estate Finance (CREF) Outlook Survey.

1/8/2019

MBA Releases Third Quarter 2018 Commercial/Multifamily DataBook

The Mortgage Bankers Association has released its third quarter of 2018 Commercial/Multifamily DataBook.

12/13/2018

Commercial/Multifamily Mortgage Debt Climbs to New High in the Third Quarter

The level of commercial/multifamily mortgage debt outstanding rose by $45.4 billion (1.4 percent) in the third quarter of 2018 to an all-time high, according to the Mortgage Bankers Association (MBA).

12/4/2018

Commercial and Multifamily Mortgage Delinquencies Remain Low in the Third Quarter

Delinquency rates for commercial and multifamily mortgage loans remained low in the third quarter of 2018, according to the Mortgage Bankers Association's (MBA) latest Commercial/Multifamily Delinquency Report.

11/16/2018

Commercial/Multifamily Originations Slowed During the Third Quarter

A pullback in lending activity across most property types contributed to a decline in total mortgage loan originations during the third quarter, according to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations.

11/7/2018

2018 Commercial/Multifamily Originations Forecast to Match 2017's Record Year

he Mortgage Bankers Association (MBA) expects commercial and multifamily originations to close the year roughly on par with the record activity seen in 2017.

10/25/2018

MBA: Multifamily Lending Increased 6 Percent to a New High of $285 Billion in 2017

Strong market conditions helped fuel a 6 percent increase in multifamily lending in 2017, as lenders provided a record high $285 billion in new mortgages for apartment buildings with five or more units, according to the Mortgage Bankers Association's (MBA) annual report on the multifamily lending market.

9/27/2018

Second Quarter Commercial/Multifamily Mortgage Debt Increased $52.3 Billion

The level of commercial/multifamily mortgage debt outstanding increased by $52.3 billion in the second quarter of 2018 as all four major investor groups increased their holdings. That is a 1.6 percent increase over the first quarter of 2018.

9/4/2018

Second Quarter Commercial/Multifamily Delinquencies Remain at Low Levels

Delinquency rates for commercial and multifamily mortgage loans were relatively flat in the second quarter of 2018, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

8/30/2018

MBA Releases 2018 Mid-Year Commercial/Multifamily Servicer Rankings

The Mortgage Bankers Association (MBA) today released its mid-year ranking of commercial and multifamily mortgage servicers' volumes as of June 30, 2018. At the top of the list of firms is Wells Fargo Bank, NA, with $654.0 billion in master and primary servicing, followed by PNC Real Estate/Midland Loan Services with $599.7 billion, KeyBank National Association with $229.4 billion, Berkadia Commercial Mortgage LLC with $216.1 billion, and CBRE Loan Services with $177.3 billion.

8/21/2018

Commercial/Multifamily Originations Up in Second Quarter, Remain on Pace with Last Year

According to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, second quarter 2018 commercial and multifamily mortgage loan originations were four percent higher than during the same period last year and 32 percent higher than the first quarter of 2018.

6/26/2018

Commercial/Multifamily Mortgage Debt Outstanding Posts Largest Q1 Increase Since Before Great Recession

The level of commercial/multifamily mortgage debt outstanding increased by $44.3 billion in the first quarter of 2018 as all four major investor groups increased their holdings. That is a 1.4 percent increase over the fourth quarter of 2017.

6/14/2018

First Quarter Commercial/Multifamily Delinquencies Remain at Low Levels

Delinquency rates for commercial and multifamily mortgage loans were relatively flat in the first quarter of 2018, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

6/12/2018

MBA Research Releases Report on Current Trends in Commercial and Multifamily Mortgage Financing

Mortgage Bankers Association (MBA) Research today released a market overview highlighting the current trends in Commercial/Multifamily real estate finance. The report identifies headwinds and tailwinds the market will face in the coming months, summarizes the available data on current market conditions, and discusses the different sources of capital playing a role in the market now.

5/17/2018

Commercial/Multifamily Borrowing Up 1 Percent Year-over-Year

According to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, first quarter 2018 commercial and multifamily mortgage loan originations increased one percent compared to the same period last year and, in line with the seasonality of market, first quarter originations were thirty-three percent lower than the fourth quarter of 2017.

5/3/2018

MBA Forecasts Slight Decline for Commercial/Multifamily Originations in 2018

The Mortgage Bankers Association (MBA) projects commercial and multifamily mortgage originations will decline slightly in 2018, ending the year at $519 billion, down two percent from the 2017 volumes. MBA expects volumes to remain at roughly that level in 2019 as well. MBA forecasts mortgage banker originations of just multifamily mortgages at $231 billion in 2018, with total multifamily lending at $257 billion. After strong growth in recent years, multifamily lending is expected to hold roughly steady in 2019.

4/10/2018

Mortgage Bankers Close Record $530 Billion in Commercial/Multifamily Originations in 2017

Commercial and multifamily mortgage bankers closed a record $530.1 billion of loans in 2017, according to the Mortgage Bankers Association's (MBA) 2017 Commercial Real Estate/Multifamily Finance Annual Origination Volume Summation.

3/27/2018

MBA Releases 2017 Rankings of Commercial/Multifamily Mortgage Firms' Origination Volumes

The MBA study is the only one of its kind to present a comprehensive set of listings of 131 different commercial/multifamily mortgage originators, their 2017 volumes and the different roles they play. The MBA report, Commercial Real Estate/Multifamily Finance Firms - Annual Origination Volumes, presents origination volumes in more than 140 categories, including by role, by investor group, by property type, by financing structure type, and by the location of the originating office.

3/20/2018

Commercial/Multifamily Mortgage Debt Rose over $200 Billion in 2017

The level of commercial/multifamily mortgage debt outstanding at the end of 2017 was $3.18 trillion, $200.3 billion higher than at the end of 2016, or an increase of 6.7 percent, according to MBA's latest Commercial/Multifamily Mortgage Debt Outstanding report released today. The fourth quarter of 2017 saw an increase of $73.6 billion, or 2.4 percent, over the third quarter, as all four of the major investor groups increased their holdings.

3/6/2018

Fourth Quarter Commercial/Multifamily Delinquencies Remain Low, Bank Delinquencies Lowest on Record

Delinquency rates for commercial and multifamily mortgage loans were relatively flat in the fourth quarter of 2017, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

2/11/2018

Volume of Commercial and Multifamily Mortgages Maturing Drops 42 percent in 2018

According to the Mortgage Bankers Association's 2017 Commercial Real Estate/Multifamily Survey of Loan Maturity Volumes, 6 percent, or $102.2 billion, of the $1.8 trillion outstanding commercial and multifamily mortgages held by non-bank lenders and investors will mature in 2018, a 42 percent decrease from the $175.9 billion that matured in 2017.

2/11/2018

Commercial/Multifamily Borrowing Up 15 percent Year-over-Year

Commercial and multifamily mortgage originations were up 15 percent for the full year 2017 over 2016, according to preliminary estimates from the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations. Data for the fourth quarter of 2017 shows a 9 percent increase in originations over the third quarter, and a 10 percent increase compared to the fourth quarter of 2016.

2/11/2018

MBA Releases 2017 Year-End Commercial/Multifamily Servicer Rankings

The Mortgage Bankers Association (MBA) today released its year-end ranking of commercial and multifamily mortgage servicers' volumes as of December 31, 2017. At the top of the list of firms is Wells Fargo Bank NA with $633.0 billion in master and primary servicing, followed by PNC Real Estate/Midland Loan Services with $566.9 billion, KeyBank National Association with $214.8 billion, Berkadia Commercial Mortgage LLC with $205.9 billion, and CBRE Loan Services with $164.5 billion.

2/11/2018

MBA Forecasts Commercial and Multifamily Origination Volume at $549 Billion in 2018

The Mortgage Bankers Association (MBA) projects commercial and multifamily mortgage originations will decline slightly in 2018, ending the year at $549 billion, down three percent from the 2017 volumes. MBA expects volumes to remain at roughly that level in 2019 as well. MBA forecasts mortgage banker originations of just multifamily mortgages at $248 billion in 2018, with total multifamily lending at $271 billion. After strong growth in recent years, multifamily lending is expected to hold roughly steady in 2019.

1/4/2018

MBA Releases 2018 CREF Outlook Survey

Commercial and multifamily mortgage originators expect another strong year according to the 2018 MBA CREF Outlook Survey. Nearly four-in-five (78 percent) of the top commercial/multifamily firms expect originations to increase in 2018, with almost one-quarter (22 percent) expecting an overall increase of 5 percent or more across the entire market. When forecasting just their own firm's originations, almost half (47 percent) expect to see an increase of 5 percent or more in 2018.

12/12/2017

Commercial/Multifamily Mortgage Debt Rises to $3.11 Trillion; CMBS Debt Outstanding Reverses Years-Long Decline

The level of commercial/multifamily mortgage debt outstanding increased by $45.4 billion, or 1.5%, to $3.11 trillion in the third quarter of 2017 as all four major investor groups, including Commercial Mortgage Backed Securities (CMBS), increased their holdings over the second quarter.

11/9/2017

Commercial/Multifamily Borrowing Up 21 Percent Year-over-Year

According to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, third quarter 2017 commercial and multifamily mortgage loan originations were 21 percent higher than during the same period last year and 8 percent higher than the second quarter of 2017.

10/26/2017

MBA Forecasts Commercial/Multifamily Originations Flat in 2018

The Mortgage Bankers Association (MBA) projects commercial and multifamily mortgage originations will increase in 2017, ending the year at $515 billion, up 5 percent from the 2016 volumes. MBA expects volumes to remain at roughly that level in 2018. MBA forecasts mortgage banker originations of just multifamily mortgages at $235 billion in 2017, with total multifamily lending at $271 billion. After strong growth in 2017, multifamily lending is expected to slow slightly in 2018.

10/19/2017

Multifamily Lending Up 8 Percent in 2016

Multifamily lending was up 8 percent year over year in 2016, with nearly three thousand different multifamily lenders providing a total of $269.2 billion in new mortgages for apartment buildings with five or more units, according to a new report from the Mortgage Bankers Association (MBA).

9/27/2017

Commercial/Multifamily Mortgage Debt Rises to $3.06 Trillion

Total commercial and multifamily mortgage debt outstanding rose to $3.06 trillion at the end of the second quarter of 2017, as three of the four major investor groups increased their holdings, according to the Mortgage Bankers Association (MBA)'s Commercial/Multifamily Mortgage Debt Outstanding report.

9/26/2017

Second Quarter Delinquencies Remain Low, CMBS Increases Slightly

Delinquency rates for commercial and multifamily mortgage loans were relatively flat in the second quarter of 2017, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

8/1/2017

Commercial/Multifamily Borrowing Up 20 Percent Year-over-Year

According to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, second quarter 2017 commercial and multifamily mortgage loan originations were 20 percent higher than during the same period last year and 28 percent higher than the first quarter of 2017.

6/22/2017

MBA Forecasts Commercial/Multifamily Mortgage Originations to Decline in 2017

The Mortgage Bankers Association (MBA) projects commercial and multifamily mortgage originations will be down slightly in 2017, ending the year at $478 billion, a decrease of 3 percent from the 2016 volumes. Mortgage banker originations of just multifamily mortgages are forecast at $206 billion in 2017, with total multifamily lending at $245 billion.

6/13/2017

Commercial/Multifamily Mortgage Debt Tops $3 Trillion

Total commercial/multifamily debt outstanding rose to $3.01 trillion at the end of the first quarter of 2017, the first time it has broken the $3 trillion mark. Multifamily mortgage debt outstanding rose to $1.17 trillion, an increase of $23.4 billion, or 2.0 percent, from the fourth of quarter of 2016.

6/1/2017

First Quarter Commercial/Multifamily Delinquencies Remain Low

Delinquency rates for commercial and multifamily mortgage loans were flat or decreased in the first quarter of 2017, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

5/4/2017

Commercial/Multifamily Borrowing Up 9 Percent from Last Year

According to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations, first quarter 2017 commercial and multifamily mortgage loan originations increased 9 percent compared to the same period last year, and in line with the seasonality of market, first quarter originations were twenty-seven percent lower than the fourth quarter of 2016.

4/6/2017

Mortgage Bankers' Commercial/Multifamily Originations Totaled $491 Billion in 2016

Commercial and multifamily mortgage bankers closed $490.6 billion of loans in 2016, according to the Mortgage Bankers Association's (MBA) 2016 Commercial Real Estate/Multifamily Finance Annual Origination Volume Summation released today.

3/23/2017

MBA Releases 2016 Rankings of Commercial/Multifamily Mortgage Firms' Origination Volumes

According to a set of commercial/multifamily real estate finance league tables prepared by the Mortgage Bankers Association (MBA), Wells Fargo; JP Morgan Chase & Company; HFF, L.P.; Eastdil Secured; PNC Real Estate; CBRE Capital Markets, Inc.; Key Bank; Meridian Capital Group; Capital One Financial Corp.; and JLL were the top commercial/multifamily mortgage originators in 2016.

3/21/2017

Commercial/Multifamily Mortgage Debt Ends Year Strong, Despite CMBS Decline

The level of commercial/multifamily mortgage debt outstanding increased by $46.0 billion in the fourth quarter of 2016, as three of the four major investor groups increased their holdings. That is a 1.6 percent increase over the third quarter of 2016. On a year-over-year basis, the amount of mortgage debt outstanding at the end of 2016 was $162.0 billion higher than at the end of 2015, an increase of 5.8 percent.

3/9/2017

Commercial/Multifamily Delinquencies Remain Low in Fourth Quarter, CMBS Continues to Increase

Delinquency rates for commercial and multifamily mortgage loans remained low in the fourth quarter of 2016, according to the Mortgage Bankers Association's (MBA) Commercial/Multifamily Delinquency Report.

2/20/2017

MBA Forecasts Growth in Commercial/Multifamily Real Estate Finance in 2017

The Mortgage Bankers Association (MBA) projects commercial and multifamily mortgage originations will grow to $515 billion in 2017, an increase of 3 percent from the 2016 estimated volumes of $502 billion. Mortgage banker originations of multifamily mortgages, specifically, are forecast at $219 billion in 2017, with total multifamily lending at $267 billion.

2/20/2017

Commercial and Multifamily Loan Maturities Down in 2017

Ten percent, or $175.9 billion, of $1.7 trillion of outstanding commercial and multifamily mortgages held by non-bank lenders and investors will mature in 2017. This represents a 4 percent decrease from the $183.3 billion that matured in 2016, according to today's release of the Mortgage Bankers Association's 2016 Commercial Real Estate/Multifamily Survey of Loan Maturity Volumes.

2/20/2017

MBA Releases 2016 Year-End Commercial/Multifamily Servicer Rankings

The Mortgage Bankers Association (MBA) today released its year-end ranking of commercial and multifamily mortgage servicers' volumes as of December 31, 2016. At the top of the list of firms is PNC Real Estate/Midland Loan Services with $517.5 billion in U.S. master and primary servicing, followed by Wells Fargo Bank N.A. with $505.2 billion, Berkadia Commercial Mortgage LLC with $221.7 billion, KeyBank National Association with $205.6 billion, and CBRE Loan Services with $112.0 billion.

2/20/2017

Year-over-Year Commercial Mortgage Originations Down in Q4

Commercial and multifamily mortgage originations increased 20 percent between the third and the fourth quarters of 2016, and were down seven percent compared to the fourth quarter of 2015, according to the Mortgage Bankers Association's (MBA) Quarterly Survey of Commercial/Multifamily Mortgage Bankers Originations. MBA's commercial/multifamily mortgage bankers' originations index provides a preliminary estimate that originations for the full year 2016 were one percent lower than in 2015.

1/5/2017

Survey: Commercial and Multifamily Originators Expect Strong, Steady Market in 2017

Commercial and multifamily mortgage lending is expected to increase in 2017, as lenders' appetites to place new loans and borrowers' appetites to borrow both remain strong, according to a new Mortgage Bankers Association survey of the top commercial and multifamily mortgage origination firms. Nearly two-thirds (63 percent) of the top firms expect originations to increase in 2017, with one-quarter (26 percent) expecting an increase of 5 percent or more. A full half (50 percent) expect their own firm's originations to increase by 5 percent or more.

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