CUSHMAN & WAKEFIELD

CELEBRATING 100 YEARS

The Great Recession: 10 Year Retrospective

December 2017

U.S. Great Recession Anniversary

10 years ago, the U.S. economy was booming

- Nonfarm employment was at an all-time high (138.4 million)
- Real GDP was growing at a 2% pace, but slowing from nearly 3% in 2006
- Commercial real estate values were at record highs and rising rapidly

But there were cracks beneath the surface

- Home prices were falling for almost three years
- Sub-prime mortgages were starting to become delinquent at alarming rates
- Investors in these instruments were facing major losses
- Runs on shadow banks were manifesting in the traditional banking sector

Although we didn’t know it at the time, the U.S. economy was about to enter the worst recession since the Great Depression

- The job loss during the Great Recession was greater than anything the U.S. had experienced since World War II
- The collapse of several major financial institutions brought the global financial system to its greatest crisis in more than 70 years

U.S. Great Recession Anniversary

Depth of the decline

- From the peak in 2007, U.S. payroll employment fell by 8.7 million jobs; by comparison, the previous Post-WWII record for job losses in a recession was 2.8 million in 1982
- At its worst, real GDP was plunging at an unprecedented annual rate of -8.2%
- The market cap of the S&P 500 fell by $5 trillion, or almost 40%, between 2007 and 2008—alongside extraordinary declines in total market capitalization

Magnitude of the response

- Record fiscal stimulus (tax cuts and spending increases, credit programs, purchase of troubled assets)
- Most aggressive monetary policy response since the Federal Reserve was created, including a near-zero federal funds rate and three rounds of quantitative easing
- Federal Reserve also invoked a rarely used emergency clause—Section 13(3)—in the Federal Reserve Act multiple times in an attempt to save the economy from the failure of shadow banks or systemically important financial institutions
- Unprecedented *global* monetary policy easing

Aftermath

- The recovery took far longer than any previous recovery
- Payrolls did not reach pre-recession levels for more than four years after the recession ended
- New regulatory environment for financial sector
- Housing still has not fully recovered
- Huge expansion of government credit and federal budget

Post WWII U.S. Recessions

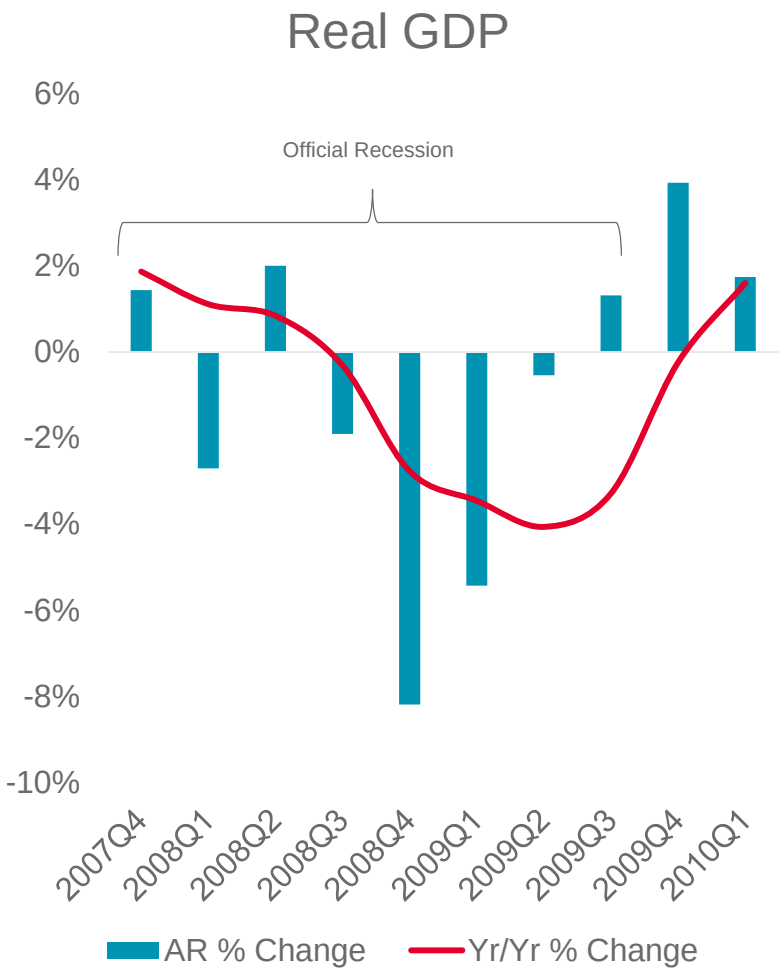
Third longest expansion – will it be the longest?

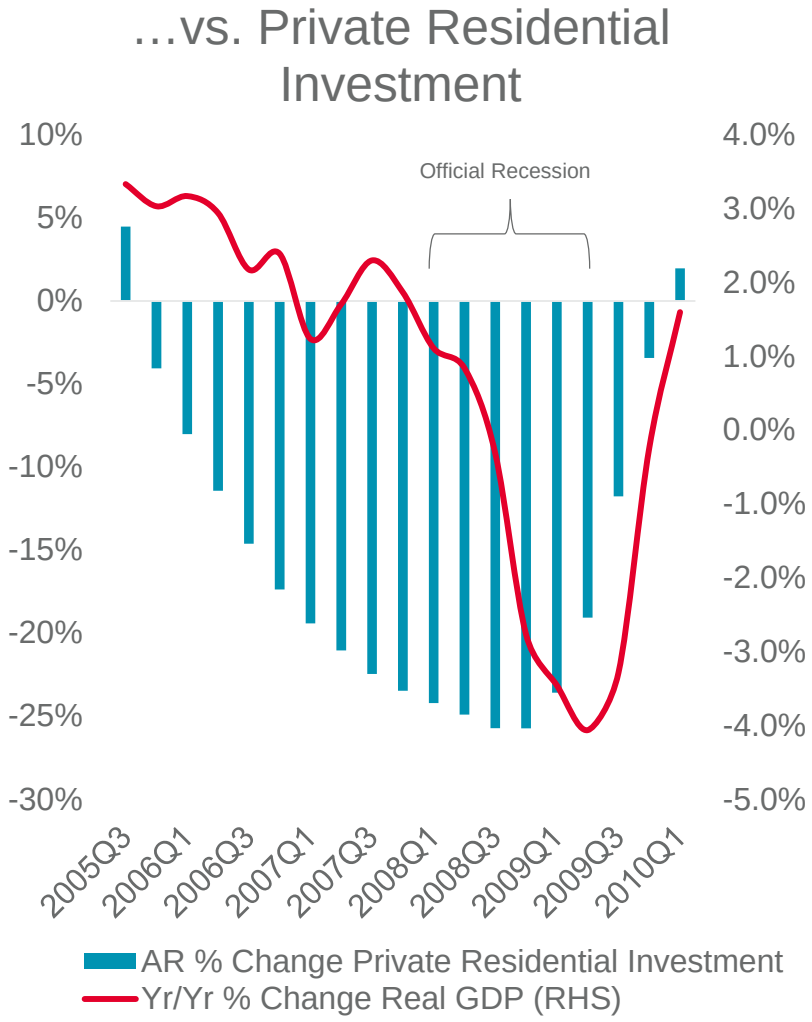
	Start of Recession	End of Recession	Months in Expansion (Previous Trough to this Peak)
	February 1945	October 1945	80
	November 1948	October 1949	37
	July 1953	May 1954	45
	August 1957	April 1958	38
	April 1960	February 1961	24
#2	December 1969	November 1970	106
	November 1973	March 1975	36
	January 1980	July 1980	58
	July 1981	November 1982	12
	July 1990	March 1991	92
#1	March 2001	November 2001	120
	December 2007	June 2009	73
#3	Current Cycle	…	101 (as of Dec 2017)

Source: NBER, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics

The Economy

10 years ago, the U.S. economy officially entered a recession





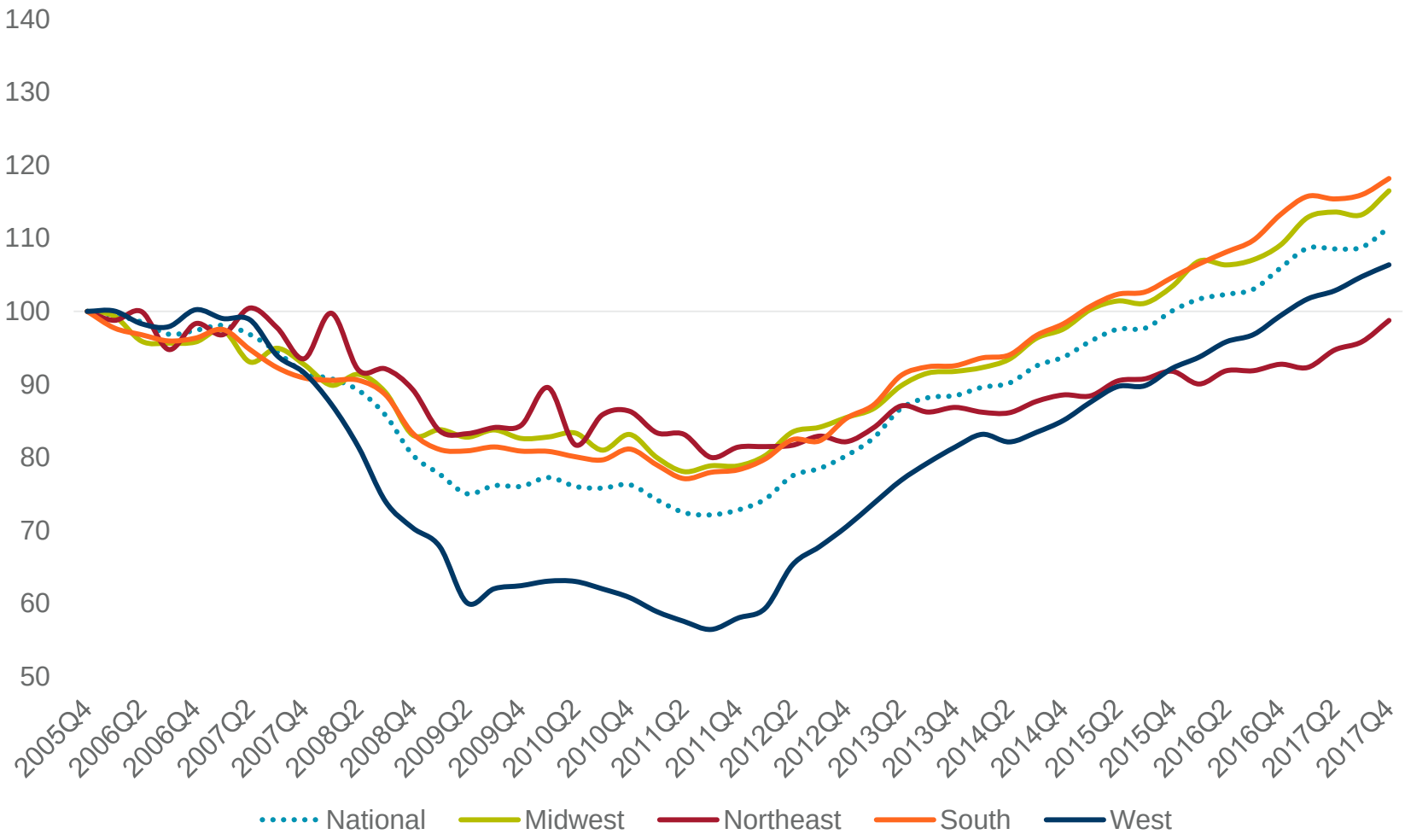
Key Points

- U.S. real GDP fell at its fastest rate, an -8.2% annualized rate, in 2008Q4
- The sharp contraction in private residential investment led the downturn by 24 months
- Real GDP did not surpass peak 2007Q4 levels until 2011Q3, almost four years later
- Drop in real GDP precipitated by major decline in national house prices

Source: U.S. Bureau of Economic Analysis

House Prices Plummet

Median U.S. existing single-family house prices (2005Q4 = 100)



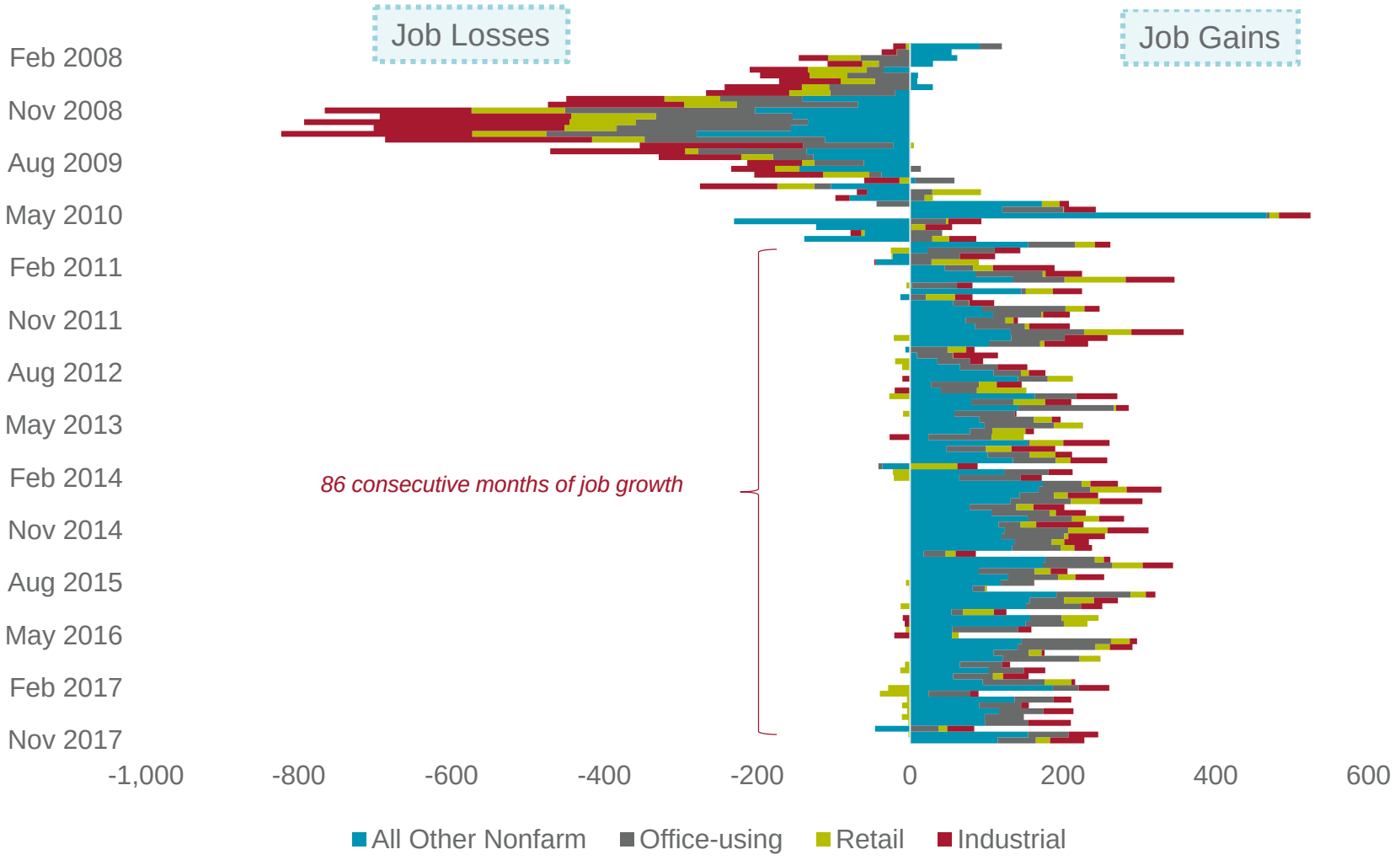
Key Points

- National home prices fell by 28%
- Regionally, the West saw the steepest decline, which bottomed out 44% below 2006Q1 peak levels
- The only region to not fully recover is the Northeast—prices are currently at 99% of their prior peak value
- Many mortgage borrowers owed more than their houses were worth

Source: National Association of Realtors

Employment Starts to Fall

Change in employment (thousands)



Key Points

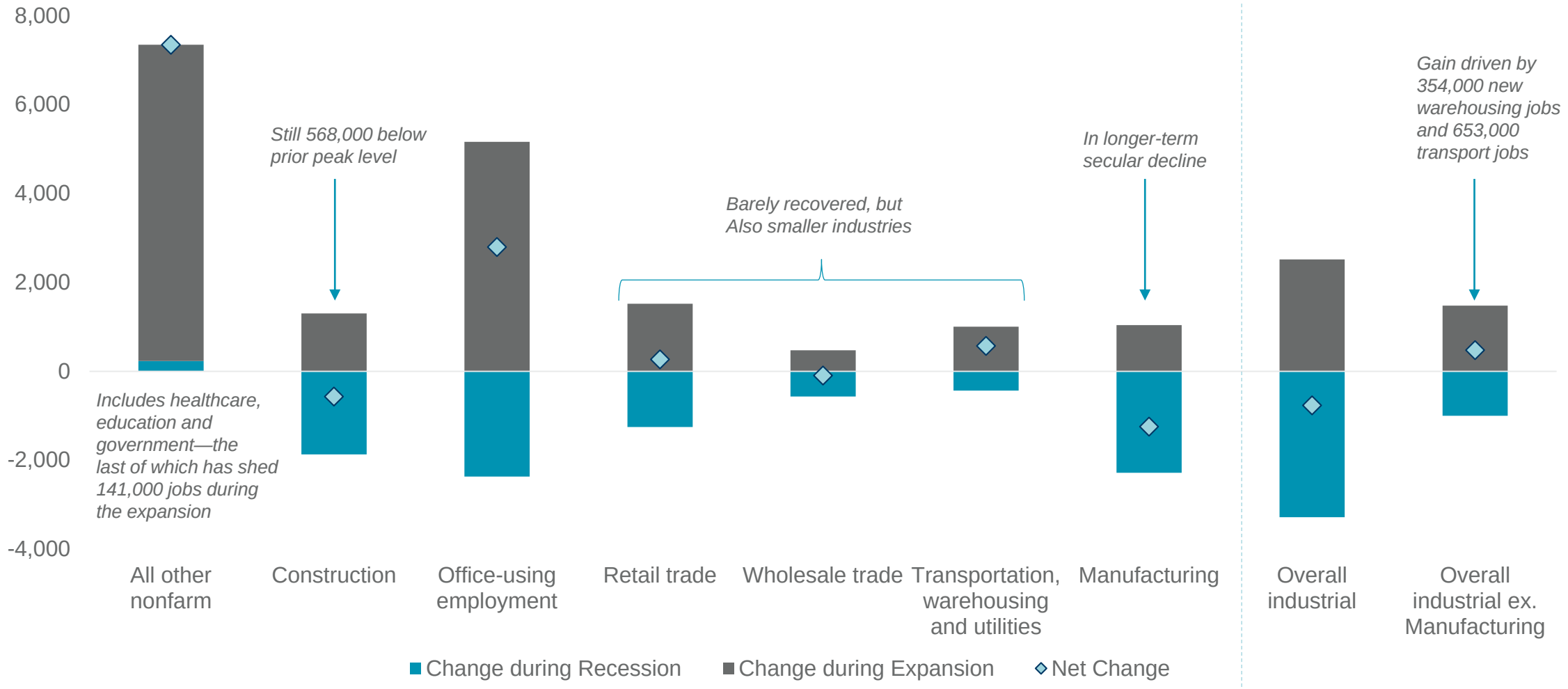
- Between December 2007 and June 2009, more than 8.5 million jobs were lost
- Job losses did not end with the recession in June 2009 but continued into 2010
- Of the 8.5 million lost jobs:
  - 1.9 million were construction jobs
  - 2.4 million were office-using jobs
  - 1.25 million were retail jobs
  - 3.3 million were industrial-related jobs
  - All other industries combined actually gained jobs, offsetting the total loss
- Since January 2010, 17.2 million jobs have been created
- Employment is now 8.7 million nonfarm jobs higher than its prior peak

Source: U.S. Bureau of Labor Statistics

Note: All other nonfarm excludes only the office-using, retail, and industrial sectors.

Not All Sectors Have Recovered

Change during recession vs. change during expansion (thousands)

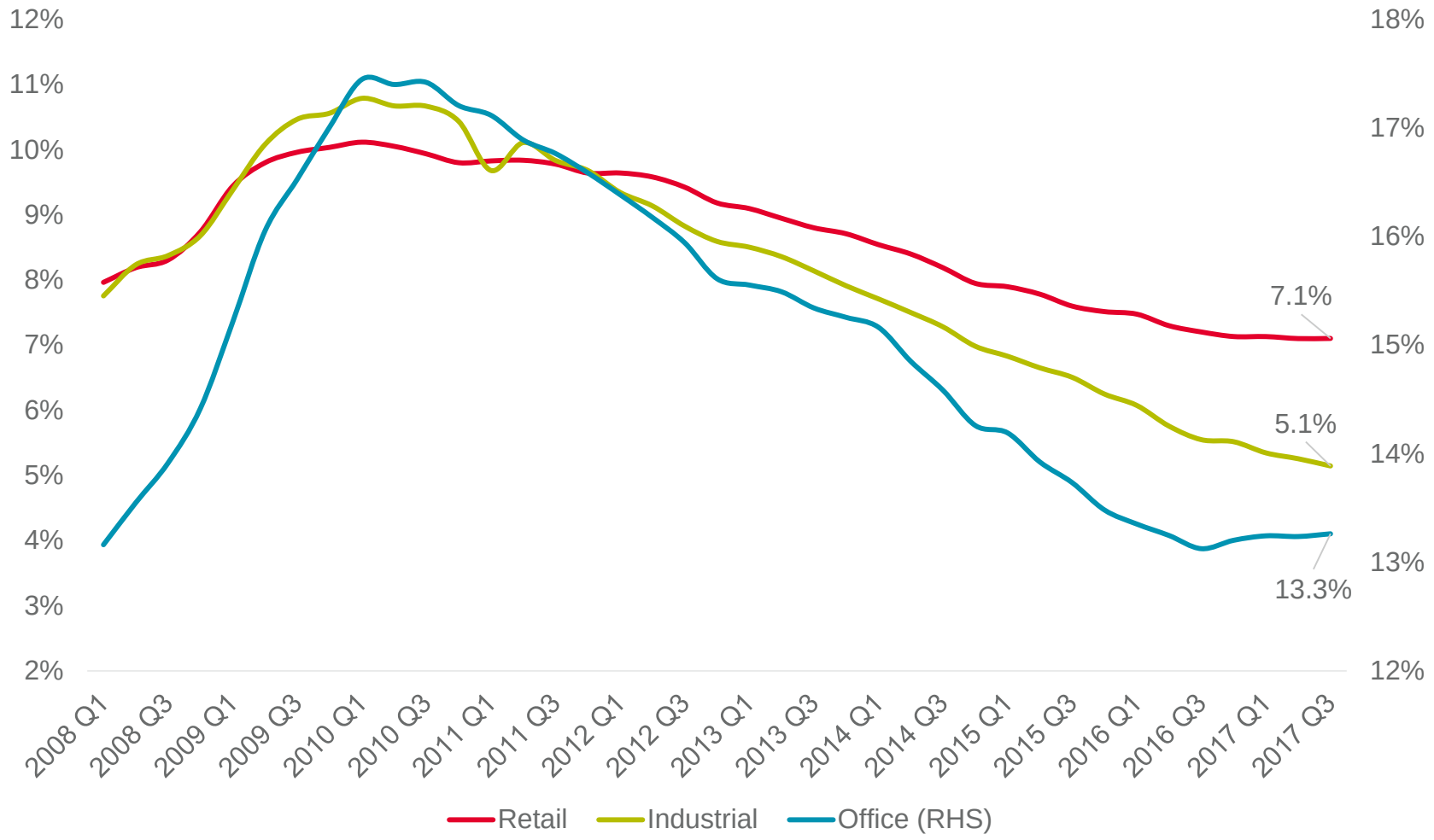


Source: U.S. Bureau of Labor Statistics

Note: All other nonfarm excludes construction, office-using, retail, wholesale, transportation/warehousing/utilities, and manufacturing employment.

Leasing Fundamentals Tight Across Property Types

Vacancy rates starting to inflect due to construction uptick



Key Points

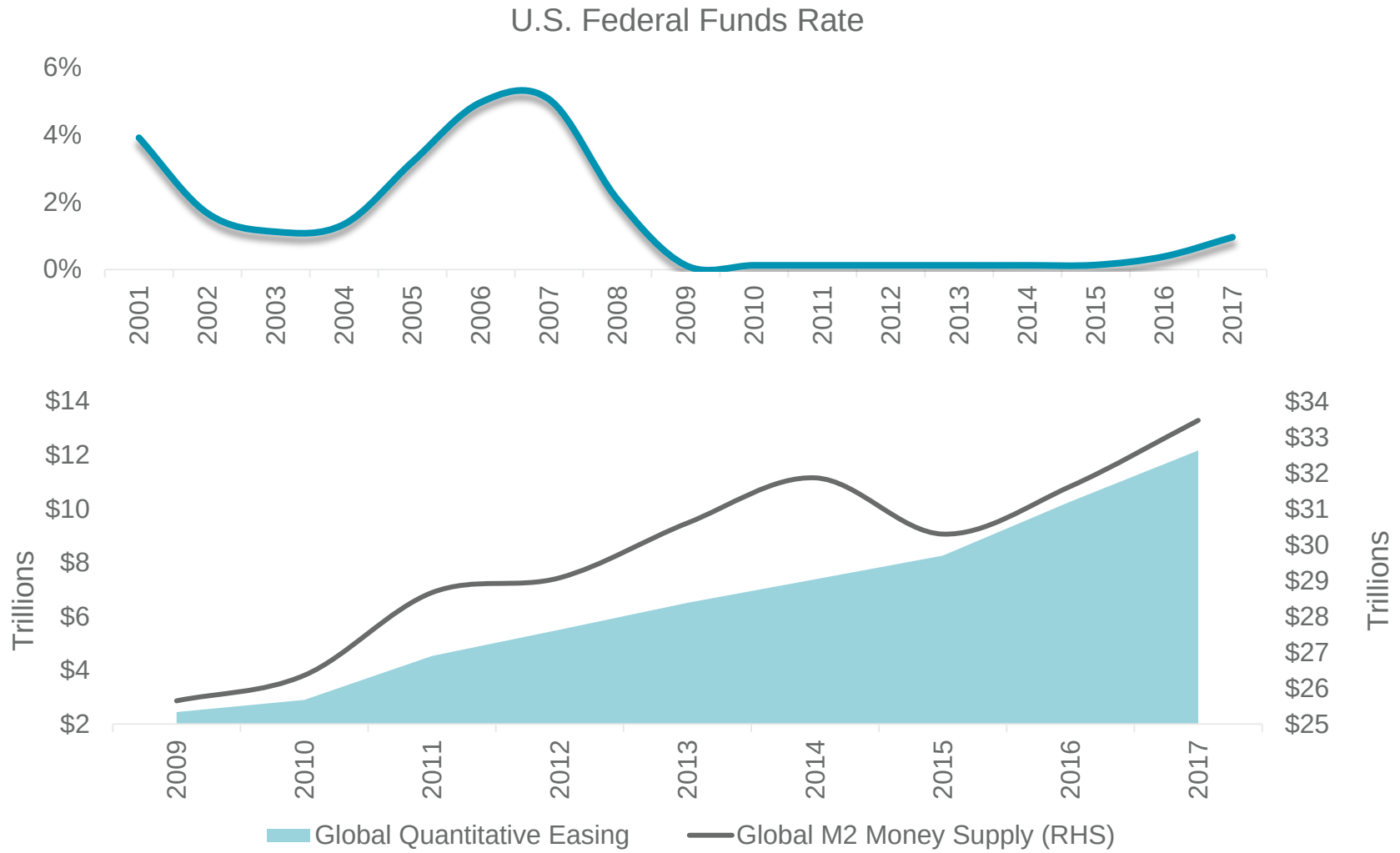
- With the exception of office, vacancy rates are below the low point achieved at the peak of the last cycle
- Industrial vacancy is at a 20-year low (5.1%) as new drivers emerge, particularly in the warehouse/distribution space
- Shopping center vacancies largely immune from eCommerce-driven headwinds, and have been consistently hovering at the 7% market for the past four quarters
- New supply will start to push vacancies higher moving forward in the office and industrial sectors
- Vacancy rate increases will be moderated by continued demand as the economic cycle matures

Source: Cushman & Wakefield, CoStar

Note: Retail data is for shopping centers only.

Monetary Policy Response Substantial

From interest rates to QE, CRE impacted by monetary policy



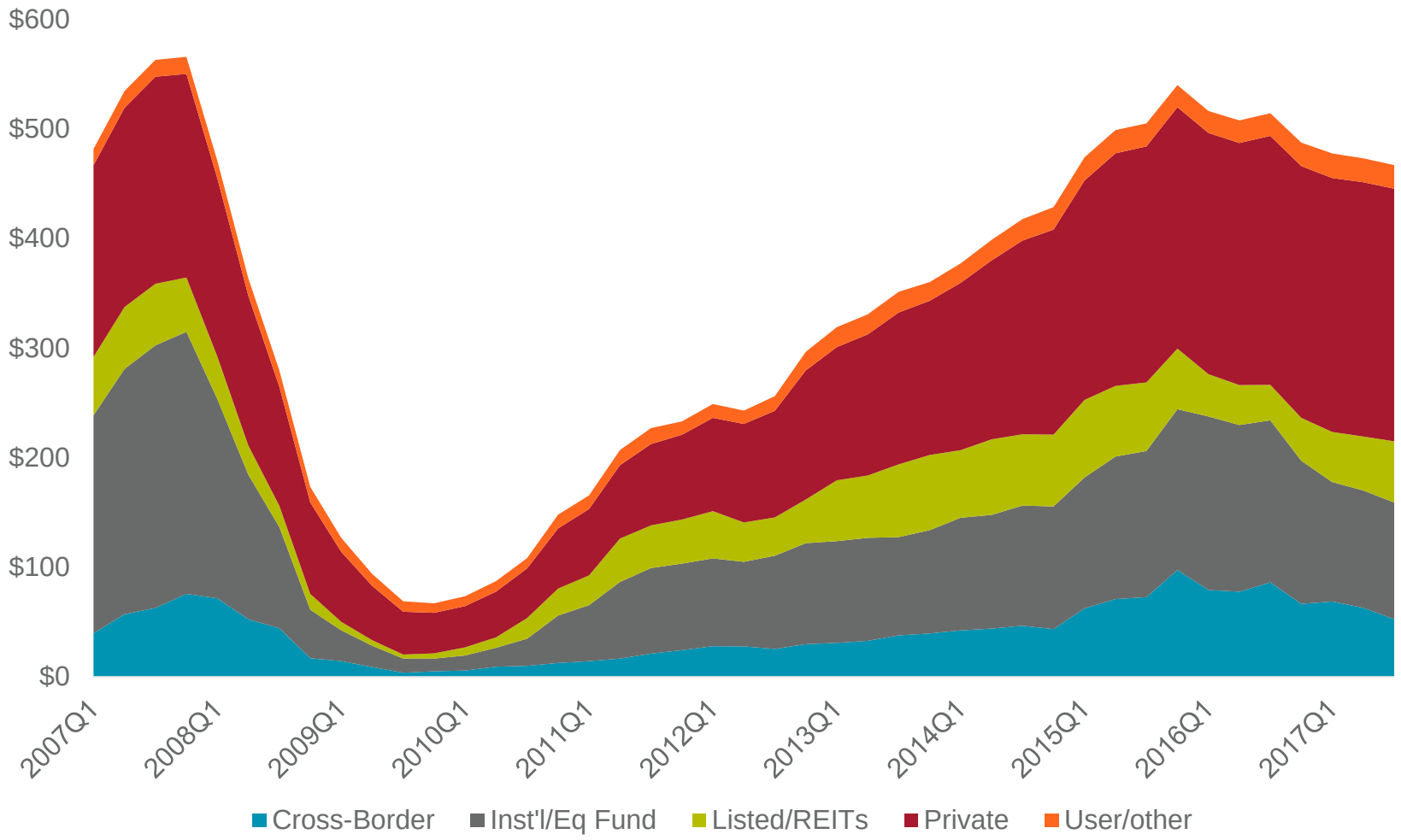
Key Points

- The Federal Open Market Committee (FOMC) lowered interest rates to only 0.125% from 5.1% between 2007 and 2009, the lowest rate on record
- The FOMC held the fed funds rate at 0.125% for seven full years before raising it once in 2015 and twice in 2016
- Global central banks have increased bank reserves—called Quantitative Easing or QE—by more than $11 trillion since 2008
- More bank reserves have led to an increase in the monetary base (currency + reserves)
- Combined with low interest rates, this has increased the amount of capital targeting CRE assets
- The global appetite for yield has depressed asset returns, like cap rates, to new low points

Source: Federal Reserve, Oxford Economics, Bank of Japan, Bank of England, European Central Bank, and 16 other central banks

Foreign Capital Swoops in as Global QE Unfolds

Rolling 4-quarter transaction volume by investor type (billions)



Key Points

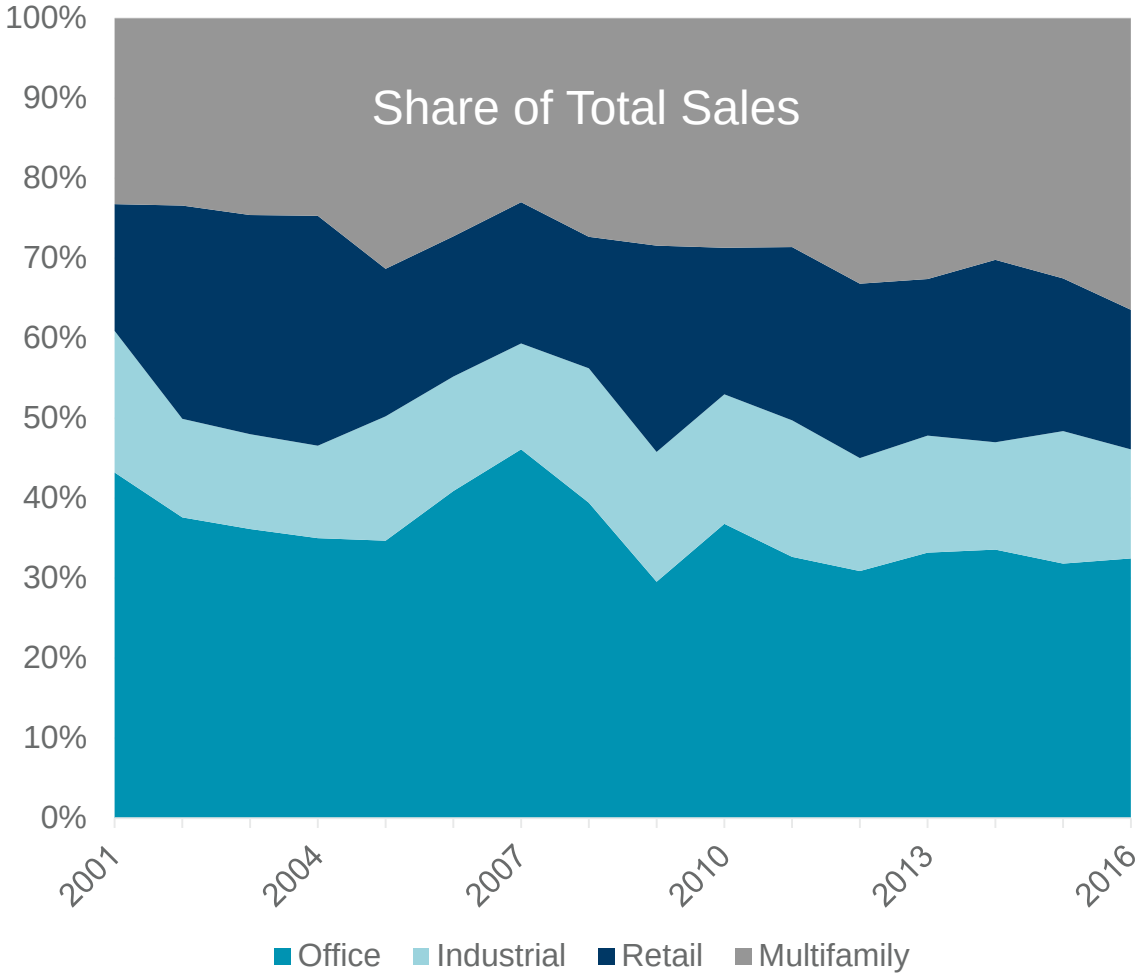
- Cross-border investment sales peaked in:
  - 2007 at $237 billion in the U.S. or an 15% share
  - 2015 at $304 billion in the U.S. or an 18% share
- Institutions "got out of the game" during the real estate downturn and due to capital requirements are finding it harder to compete with private investors
- International buyers are not persistently more prevalent than in 2007
- Deceleration in trade activity has been largely due to a lack of available product in key gateway markets, where most trophy assets have traded once (or more) this cycle
- Nevertheless, dry powder targeting North America's CRE reached a record in December 2017, at $153 billion, or nearly twice the $84 billion observed in 2007 and 2008

Source: Real Capital Analytics, Preqin

Note: 2017 data is YTD (through Q3).

Investment Patterns Shifted

Changing demographics and preferences also drive target asset classes



	2001-2008	2009-2016
Office	39%	33%
Industrial	14%	15%
Retail	21%	21%
Multifamily	26%	31%

Average Share of Total Sales

Key Points

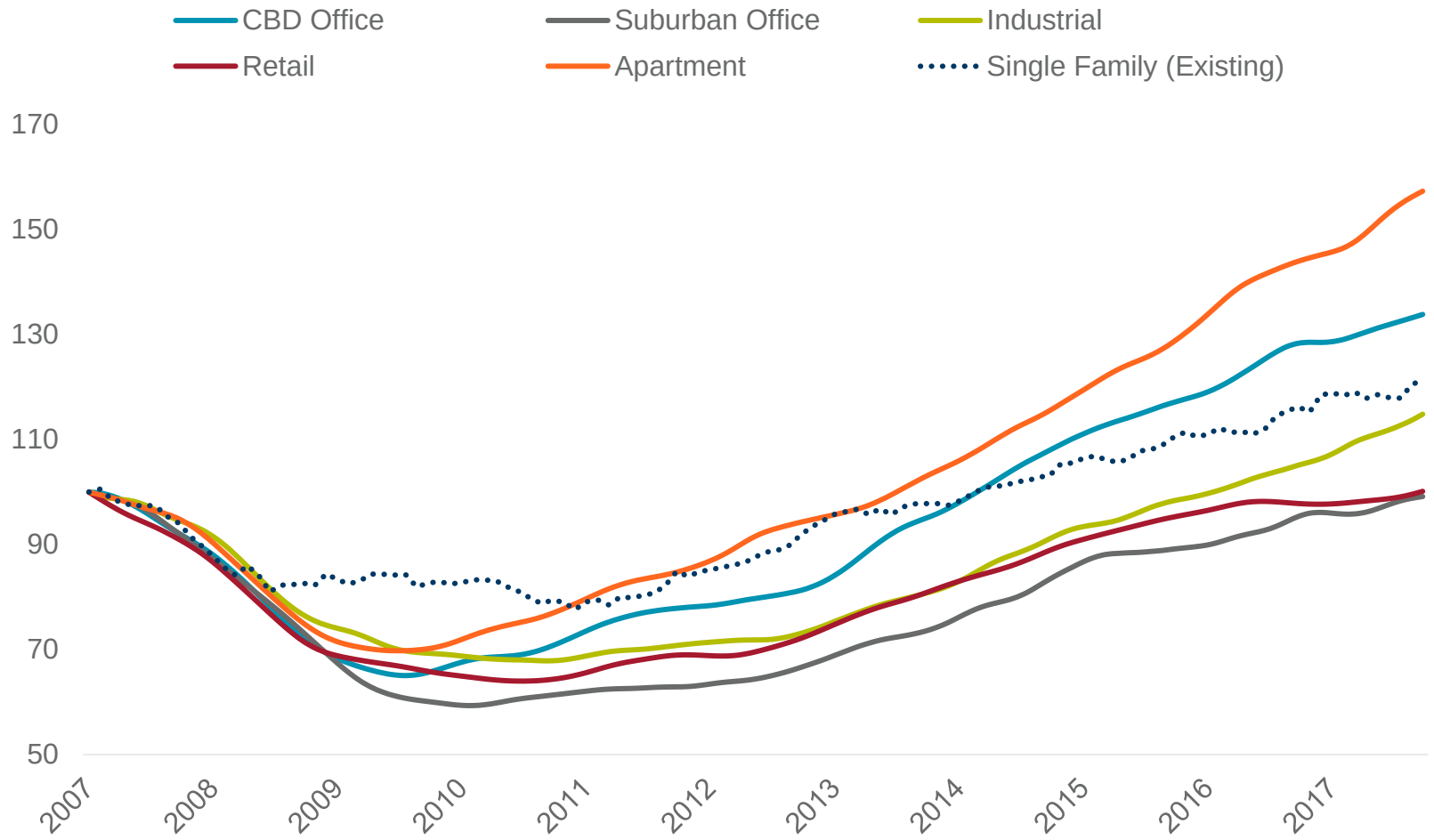
- Sales volumes fell from a peak of $460 billion in 2007 to under $70 billion in 2009
- This cycle, sales peaked in 2015, at $473 billion
- Shifting investment from office to multifamily has been a new trend
- A decline in suburban office's market share has been more dramatic than for CBD office
- Mid/high-rise sales account for most of multifamily new market share

Source: Real Capital Analytics

Note: Share of total sales excludes hotel and land development from total.

Price Indices Show Role of Trophies

Office CBD and apartments outpace all product types (2007=100)



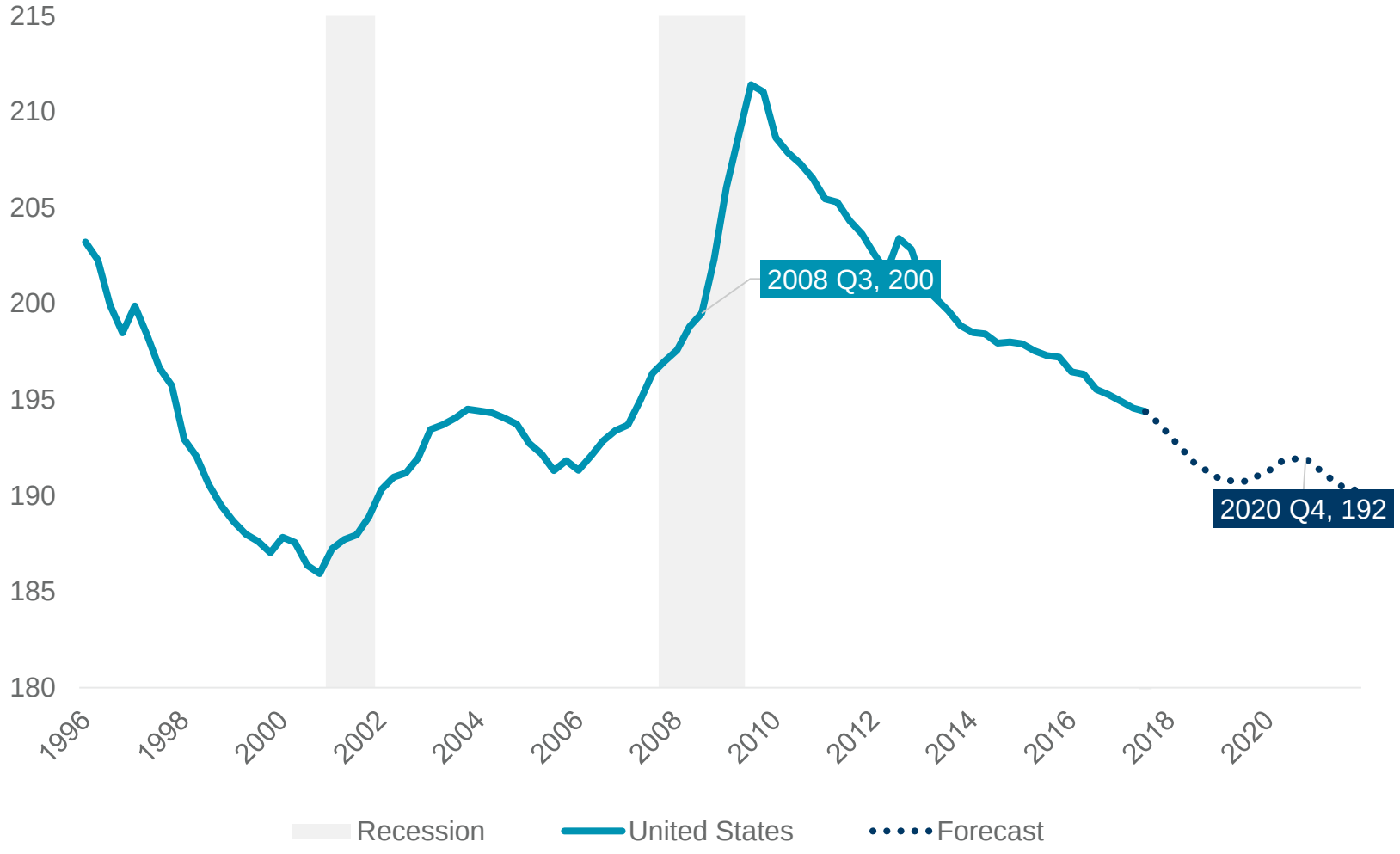
Key Points

- All commercial property prices fell more precipitously than single-family house prices
- CBD office and apartment prices are 30% and 60% above their December 2007 peak prices, respectively
- Widening spreads between suburban and CBD office as well as more idiosyncratic returns in a maturing market may lead to increased interest in core-plus and value-add plays
- Capital values drove total unlevered NCREIF returns (on all property types) into the red for the first time in 15 years in 2008-2009, falling by 6.5% and 16.8% respectively
- NCREIF income returns have never been negative on an annual basis, allowing NOI to offset movements in headline prices throughout all real estate and economic cycles

Source: Real Capital Analytics

Industry Shake-ups Abound

Office sector faces densification (square feet per employee)



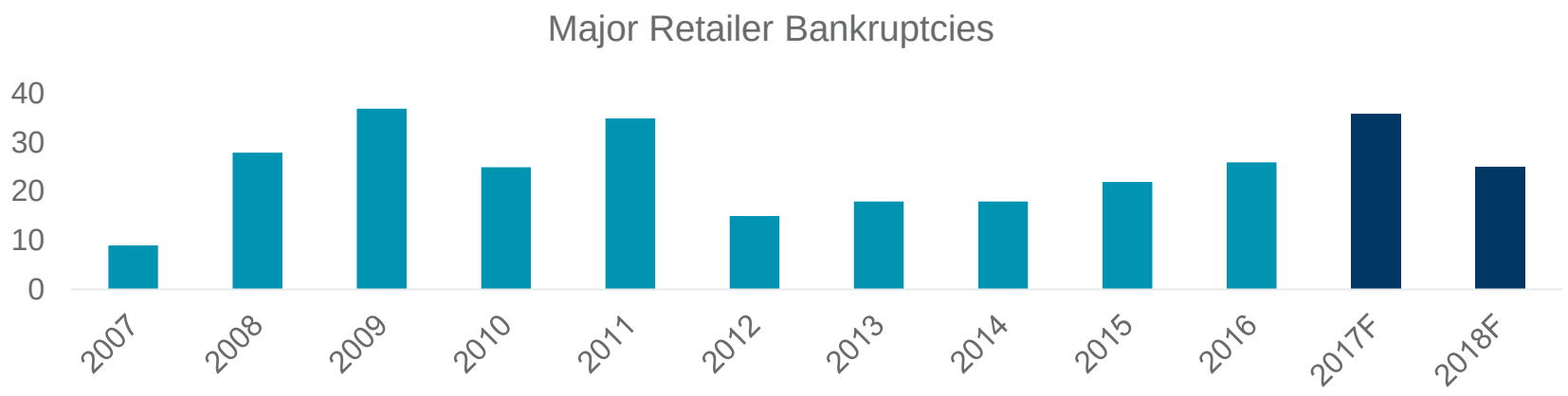
Key Points

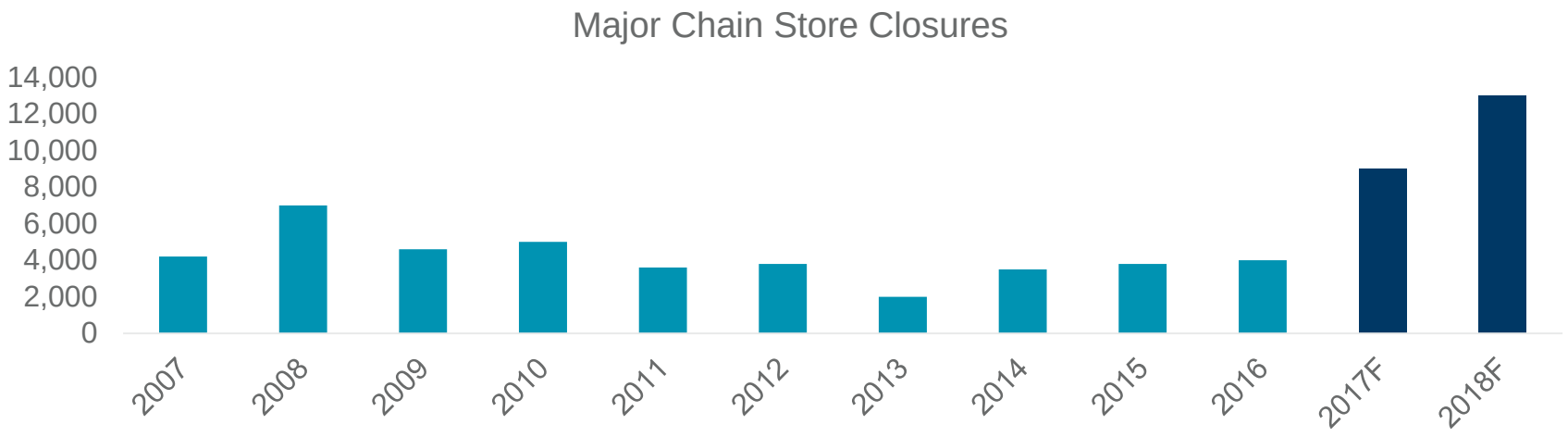
- During the "Great Recession" the square footage utilized per office employee increased dramatically as occupiers reduced payrolls faster than they could offload real estate space
- Since then, the average square footage per employee has decreased by 8.1% or 17 square feet (sf) per employee
- Cushman & Wakefield expects this trend to continue with density across the U.S. hitting 190 sf per employee by the end of 2021

Source: Cushman & Wakefield Research; U.S. Bureau of Labor Statistics; Moody's Forecast Analytics

A Rising Tide Does Not Always Lift *All* Boats

2017 retail bankruptcies hitting levels reached during great recession (#)





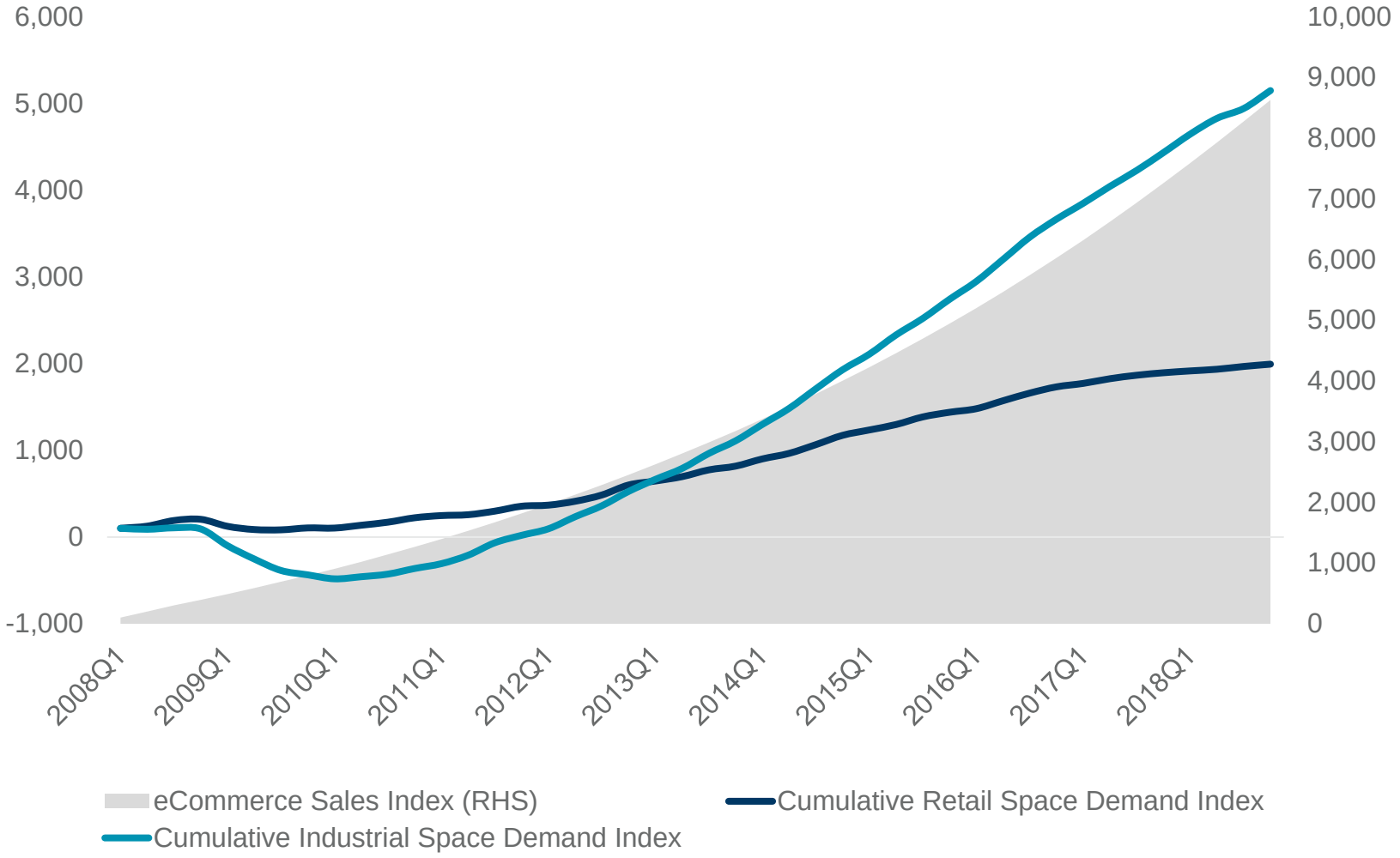
Key Points

- Retailer bankruptcies driven by shifting preferences (apparel/groceries categories) in current cycle vs. weak/indebted/vulnerable GAFO categories during the Great Recession
- Major chain store closures expected to surpass those observed during the Great Recession
- Convergence of Four Factors:
  - Acceleration of newCommerce
  - Over-retailed marketplace
  - Rise of off-price
  - Millennials spending differently than past generations

Source: PNC Bank, Moody's Analytics, Cushman & Wakefield

New Demand Reflects eCommerce Dominance/Rise

eCommerce vs. industrial/retail demand (2008Q1 = 100)



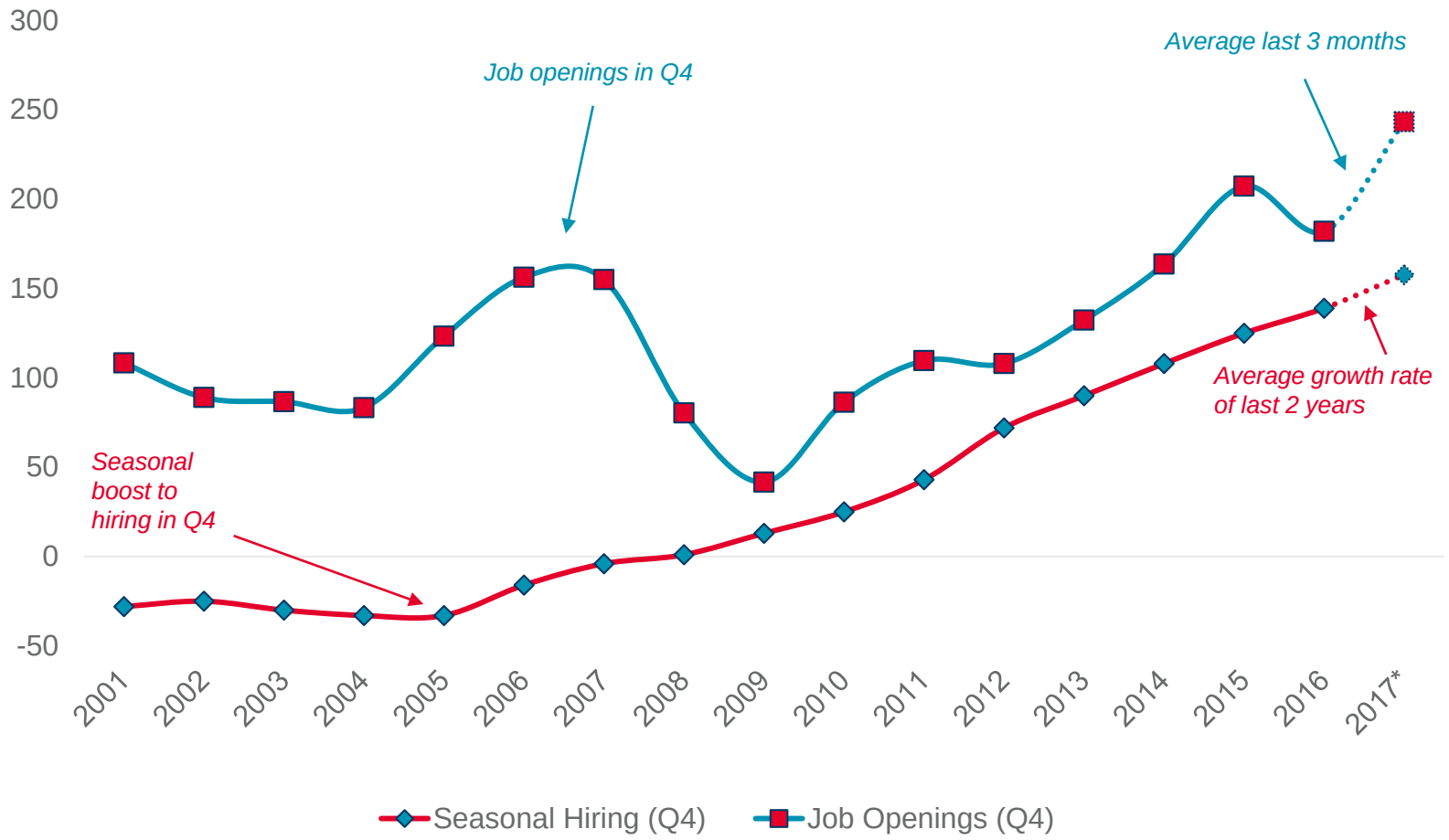
Key Points

- Industrial demand has traditionally been driven by:
  - Home goods/furniture
  - Electronics/appliances
  - Housing/construction
  - Hard/durable goods
  - Groceries
  - Auto-related
  - Postal/delivery
  - Third-party logistics (3PLs)
  - Healthcare (products)
- eCommerce now accounts for roughly one-fifth of new demand
- Prior to the Great Recession, eCommerce players did not account for a significant share of leasing

Source: U.S. Census Bureau, Cushman & Wakefield

Consumer and Industrial Connection Intensifies

Q4 Job openings vs. seasonal hiring (thousands)



Key Points

- In 2017, for the first time ever, consumers reported that they intended to shop more online than in stores during the holiday season
- Job openings have been trending up and are currently on pace to land between 225,000 and 250,000 for the transportation, warehousing and utilities sectors combined
- The Q4 seasonal effect on hiring was negative before the crisis, averaging -27,500 per year between 2001 and 2006
- Since then, not only did seasonal hiring become positive for these sectors, but it reached almost +140,000 in 2016
- While some of this change has been due to seasonal needs for warehouse workers, the lion's share has been driven by messenger/courier transportation industries—known for their 'last mile' nature

Source: U.S. Bureau of Labor Statistics JOLT Survey

Note: Transportation, warehousing and utilities sectors only.

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