

The Virginia Tech – U.S. Forest Service

November 2015

Housing Commentary: Part B



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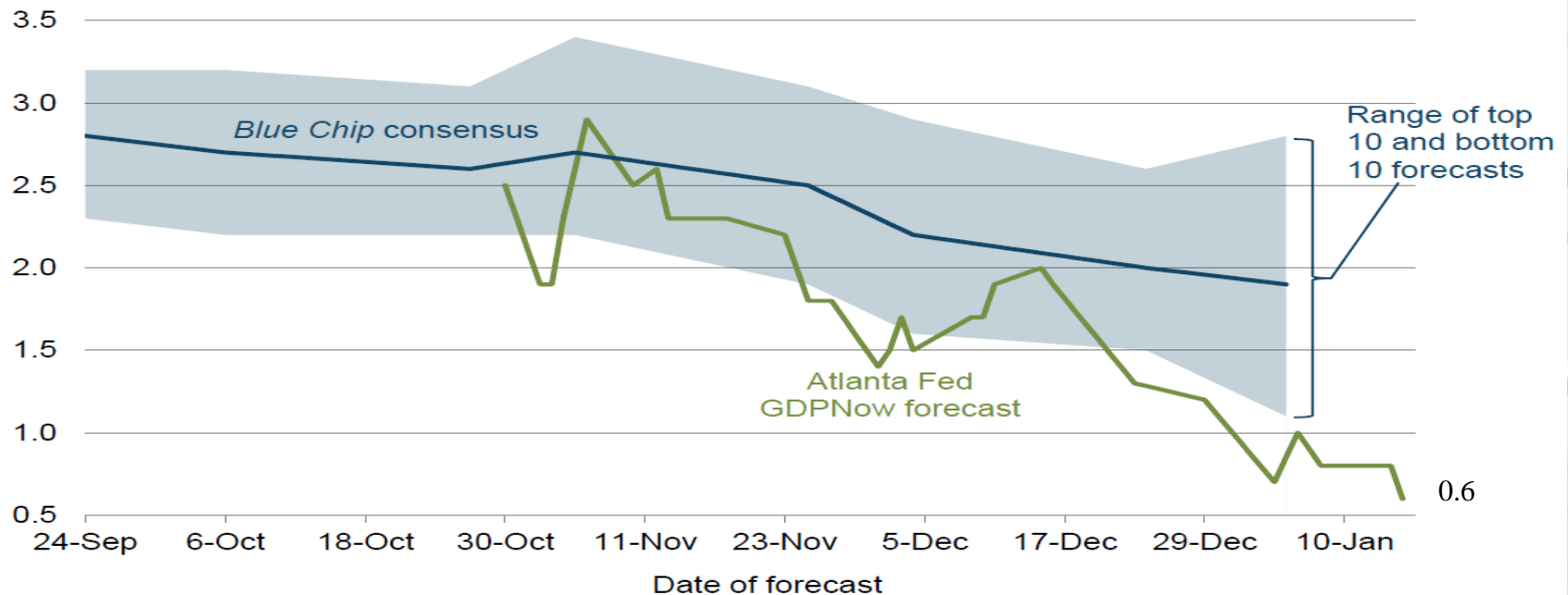
The background of the slide is a grayscale photograph of a complex wooden roof structure, likely from a large building or bridge. The image shows numerous wooden beams and trusses intersecting at various angles, creating a dense, geometric pattern. The lighting is soft, highlighting the textures of the wood.

Federal Reserve System and Private Indicators

Atlanta Fed: GDPNow™

Evolution of Atlanta Fed GDPNow real GDP forecast for 2015: Q4
Quarterly percent change (SAAR)

GDPNow™



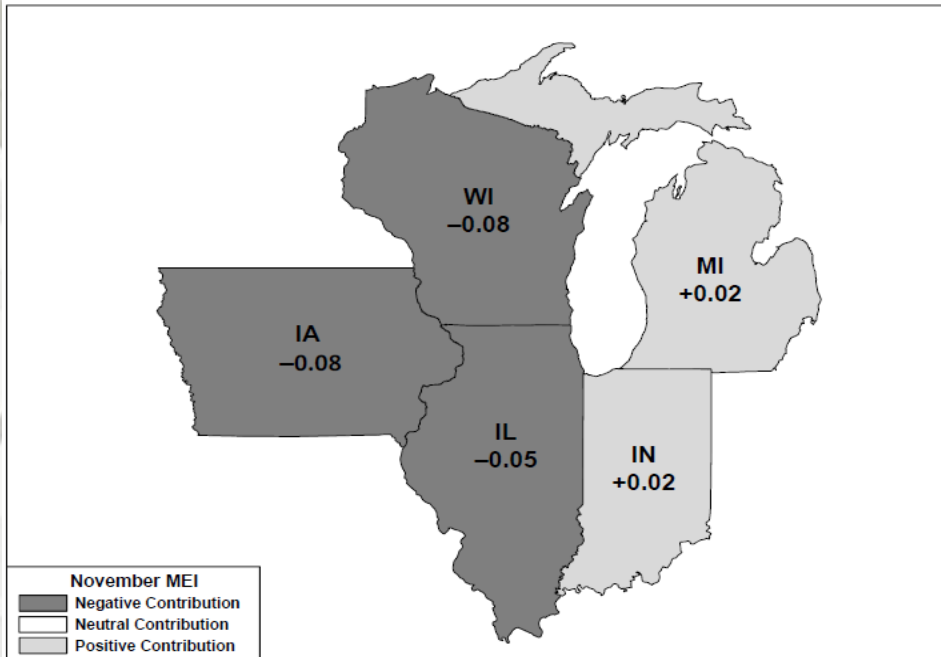
Sources: *Blue Chip Economic Indicators* and *Blue Chip Financial Forecasts*



“The GDPNow model forecast for real GDP growth (seasonally adjusted annual rate) in the fourth quarter of 2015 is 0.6 percent on January 15, down from 0.8 percent on January 8. The forecast for fourth quarter real consumer spending growth fell from 2.0 percent to 1.7 percent after this morning's retail sales report from the U.S. Census Bureau and the industrial production release from the Federal Reserve.” – The Federal Reserve Bank of Atlanta

U.S. Economic Indicators

MEI and the Seventh Federal Reserve District States



Note: The map's shading summarizes the most recent contribution to growth in Midwest economic activity from each of the five states in the Seventh Federal Reserve District (Illinois, Indiana, Iowa, Michigan, and Wisconsin).

Midwest Economy Index **Index shows Midwest growth decreased slightly in November**

“The Midwest Economy Index (MEI) moved down to -0.17 in November from -0.14 in October. The relative MEI rose to $+0.13$ in November from -0.32 in October.

November's value for the relative MEI indicates that Midwest economic growth was slightly higher than what would typically be suggested by the growth rate of the national economy.” – Chicago Fed

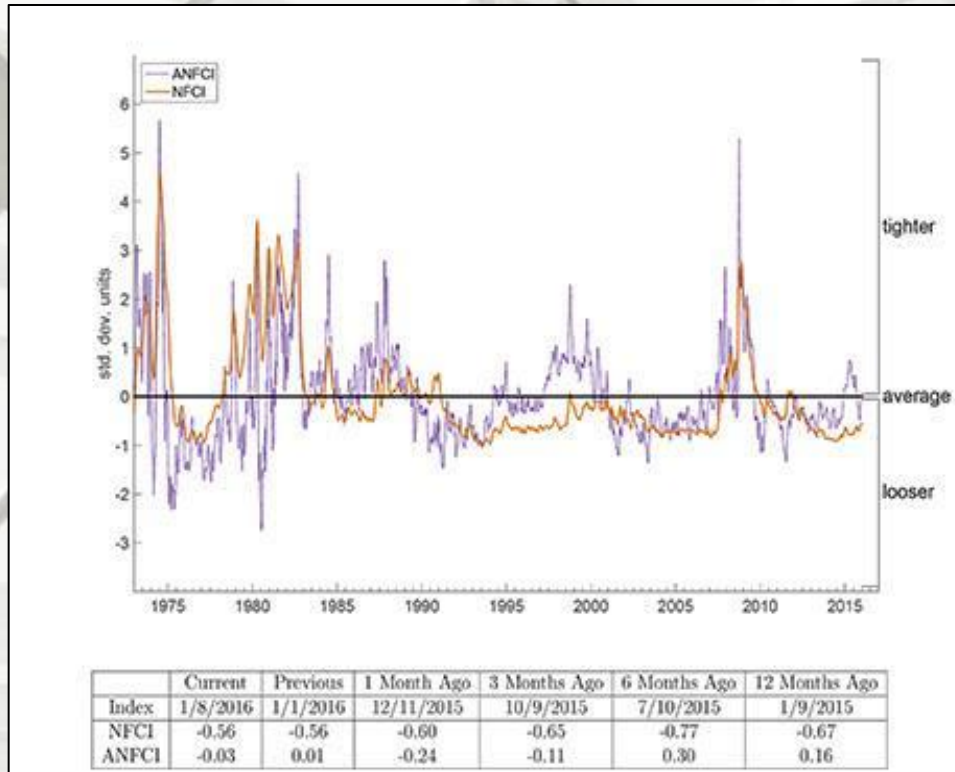
The Federal Reserve Bank of Chicago

“Manufacturing's contribution to the MEI ticked down to -0.18 in November from -0.08 ...
...construction & mining sector's MEI contribution MEI increased to -0.06 in November from -0.14 ...

The service sector's contribution to the MEI unchanged at -0.04 in November ...

The contribution from consumer spending indicators to the MEI increased to $+0.10$ in November from $+0.09$ in October.”

U.S. Economic Indicators



Financial Conditions Little Changed in Week Ending November 27

“The NFCI was unchanged at -0.56 in the week ending January 8.

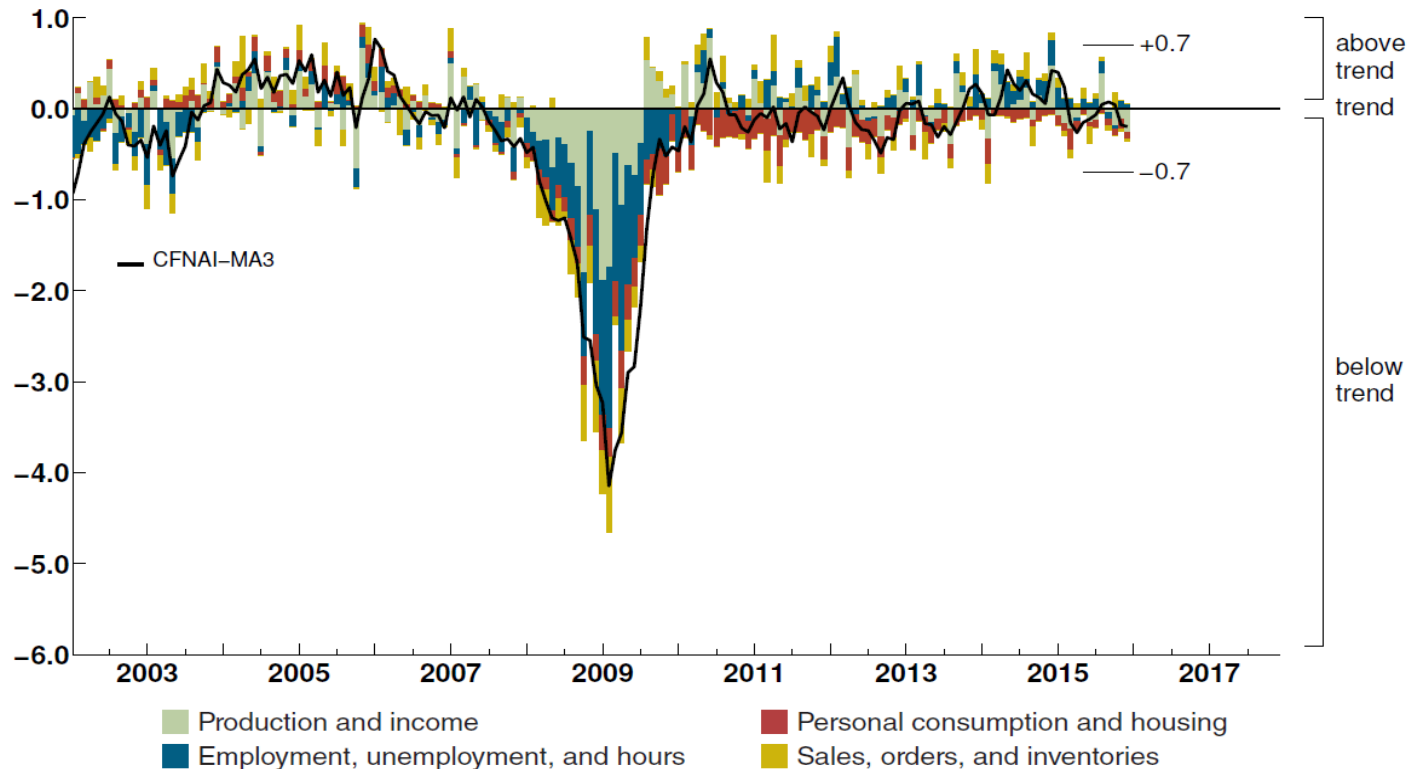
The risk, credit and nonfinancial leverage subindexes ticked up from the previous week, while the leverage subindex ticked down.”

The Federal Reserve Bank of Chicago

“The ANFCI decreased slightly from the previous week, to -0.03 . The current level of the ANFCI indicates that financial conditions in the latest week were roughly consistent with current economic conditions as captured by the three-month moving average of the Chicago Fed National Activity Index (CFNAI-MA3) and three-month total inflation according to the Price Index for Personal Consumption Expenditures (PCE).”

Chicago Fed: National Activity Index

Chicago Fed National Activity Index, by Categories, and CFNAI-MA3

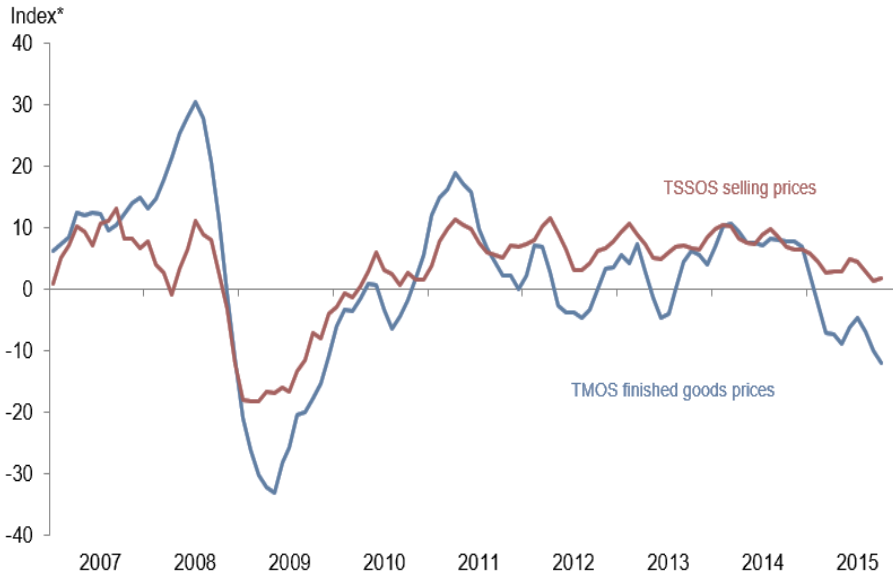


Index shows economic growth slowed in November

“Led by declines in production-related indicators, the Chicago Fed National Activity Index (CFNAI) moved down to -0.30 in November from -0.17 in October. Two of the four broad categories of indicators that make up the index decreased from October, and three of the four categories made negative contributions to the index in November.” – The Federal Reserve Bank of Chicago

U.S. Economic Indicators

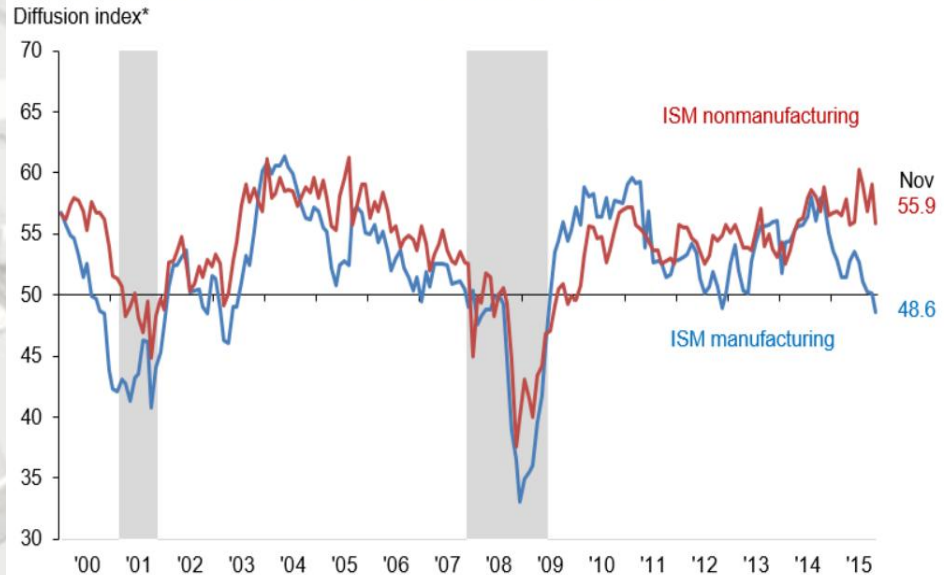
Chart 5
Manufacturing Continues to See Downward Price Pressure



*Seasonally adjusted, three-month moving average.

SOURCE: Federal Reserve Bank of Dallas' Texas Manufacturing Outlook Survey (TMOS) and Texas Service Sector Outlook Survey (TSSOS).

Chart 2
Manufacturing and Service Sectors Continue to Diverge



*50+ = economic expansion.

NOTE: Shaded areas indicate recession.

SOURCES: Institute for Supply Management; National Bureau of Economic Research.

The Federal Reserve Bank of Dallas

Regional Economic Outlook Remains Mixed Going into 2016

“The strong dollar and renewed fall in energy prices have put further downward pressure on prices. TBOS questions on current finished goods prices indicate that manufacturing respondents faced price declines for the 10th consecutive month in November. While service sector prices continue to rise, the number of respondents indicating price decreases has picked up considerably since last year.

Recent data from the Institute for Supply Management suggest that the service sector continued to expand in October and November, while the manufacturing sector dipped into contractionary territory in November.”

U.S. Economic Indicators

The Federal Reserve Bank of Dallas

Texas Manufacturing Activity Rises Again, But Outlook Worsens

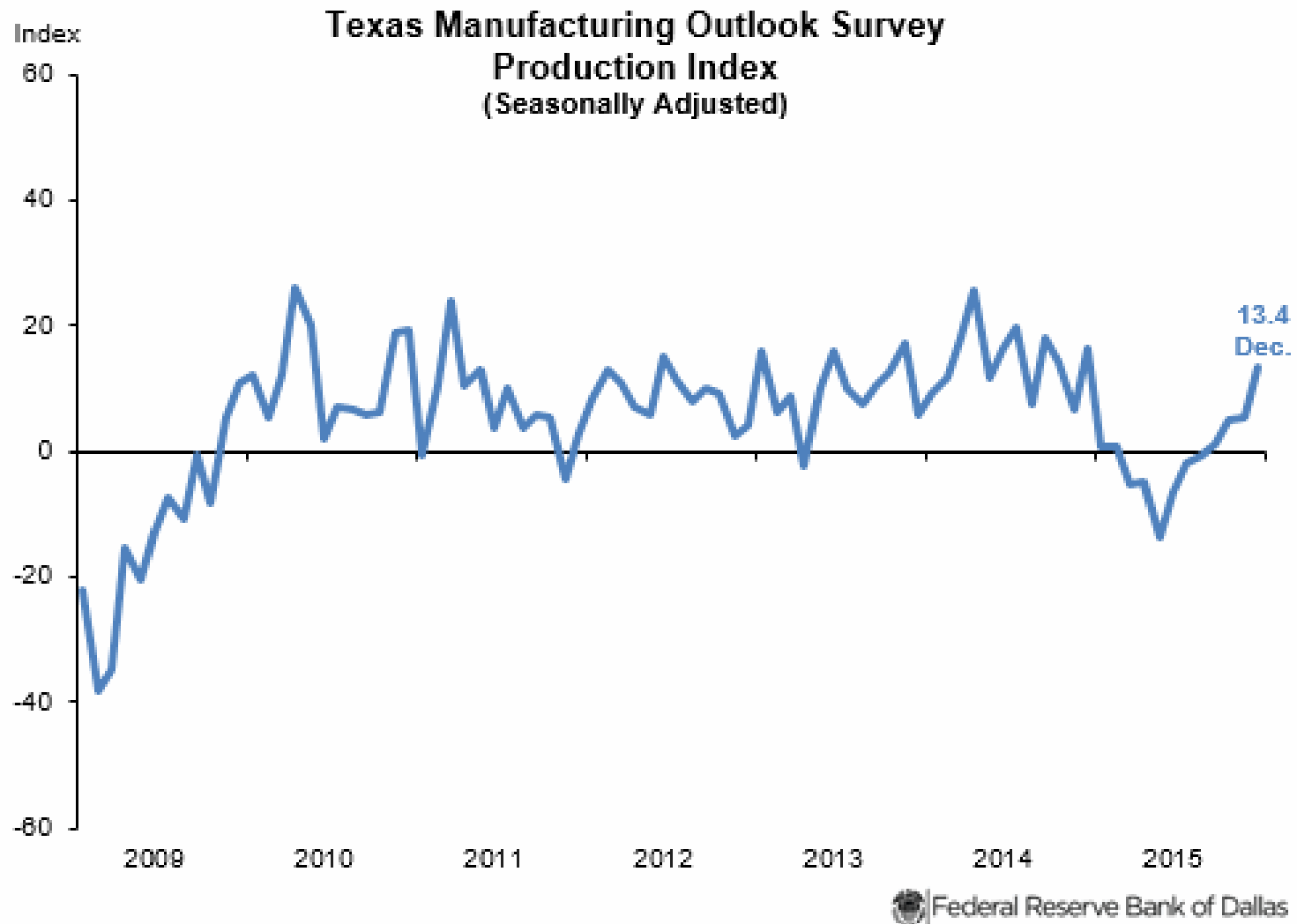
“Texas factory activity increased for a third month in a row in December, according to business executives responding to the Texas... . The production index, a key measure of state manufacturing conditions, rose from 5.2 to 13.4, indicating stronger growth in output.

New orders, an indicator of incoming demand, declined at a faster pace. The index has been below zero for five months and fell to -8.9 in December. The growth rate of orders index has been negative for more than a year and dipped 7 points to -14.3 this month. Meanwhile, the capacity utilization and shipments indexes posted their fourth positive readings in a row and inched up to 7.8 and 7.6, respectively.

Perceptions of broader business conditions weakened markedly in December. The general business activity index has been negative throughout 2015 and plunged to -20.1 this month. After pushing just above zero last month, the company outlook index fell 10 points in December to -9.7, its lowest level since August.

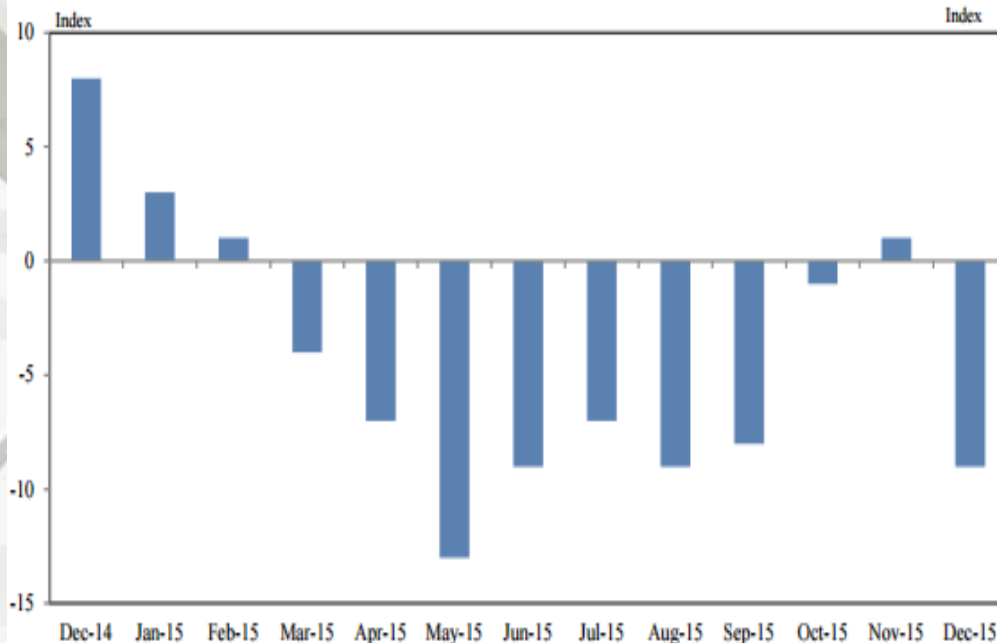
Expectations regarding future business conditions were mixed in December. The index of future general business activity fell 9 points to -1.4, while the index measuring future company outlook fell but remained positive at 6.6. Indexes for future manufacturing activity declined but remained strongly positive.”

U.S. Economic Indicators



U.S. Economic Indicators

Composite Index vs. a Month Ago



“Tenth District manufacturing activity declined moderately in December, reversing gains from the last several months, while producers’ expectations for future activity remained solid. Most price indexes continued to ease further.

The composite year-over-year index fell from -5 to -15, a six-year low, and the production, shipments, new orders, and order backlog indexes also decreased moderately. The employment index dropped from -8 to -14, and the capital expenditures index posted its lowest level since August 2010. Both inventory indexes decreased sharply from the previous month.”

The Federal Reserve Bank of Kansas City

Tenth District Manufacturing Activity Declined Moderately

“The month-over-month composite index was -9 in December, down from 1 in November and -1 in November. The decline came from both durable and nondurable goods factories, particularly for food and beverage, computer and electronic equipment, and machinery production. The weakest activity continues to be in energy-concentrated states. The majority of other month-over-month indexes also decreased. The production index fell from 3 to -8, and the shipments, new orders, and employment indexes dropped modestly. In contrast, the order backlog index improved somewhat from -17 to -2. The raw materials inventory fell from 3 to -16, and the finished goods inventory index also moved further into negative territory.” -- The Federal Reserve Bank of Kansas City

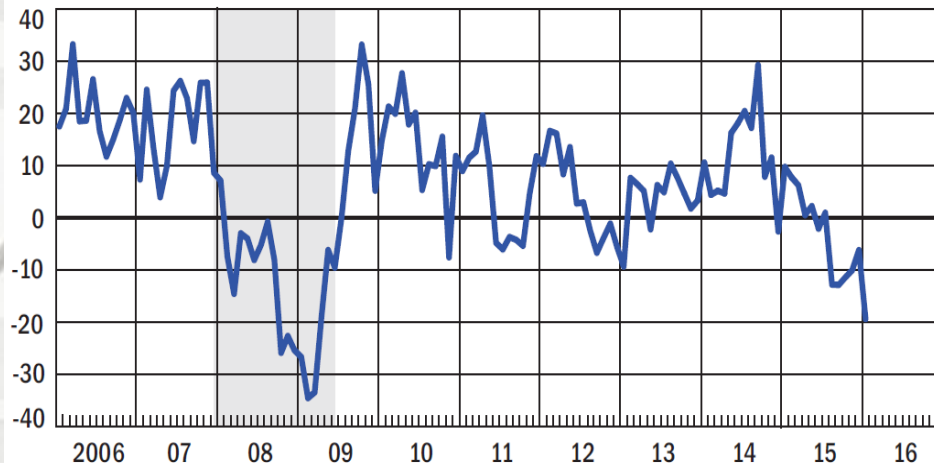
U.S. Economic Indicators

The Federal Reserve Bank of New York

General Business Conditions

Seasonally Adjusted

Diffusion index



Note: The shaded area indicates a period designated a recession by the National Bureau of Economic Research.

Business Conditions at Their Worst since the Great Recession

“Business activity declined for New York manufacturing firms more sharply than at any time since the 2007-09 recession, according to the January 2016 survey.

The general business conditions index remained below zero for a sixth consecutive month...its lowest level since early 2009. The new orders index plunged seventeen points to -23.5, indicating a substantial decline in orders. After rising above zero last month, the shipments index retreated nineteen points to -14.4—evidence of a sizable drop in shipments.”

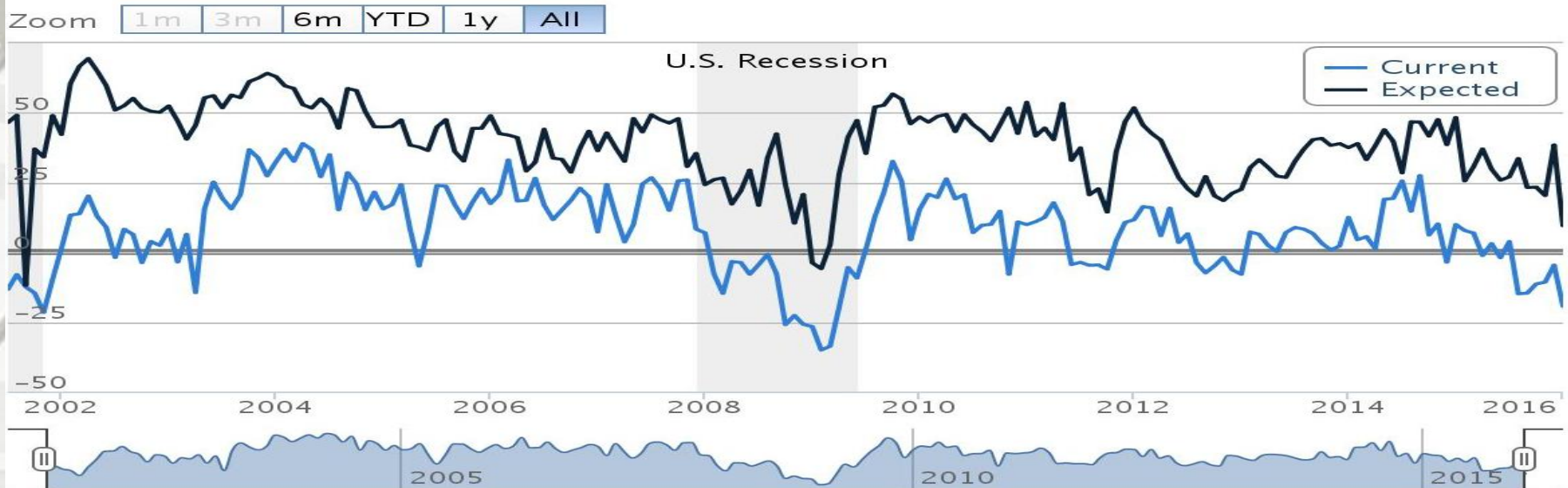
“The January 2016 *Empire State Manufacturing Survey* indicates that business activity declined for New York manufacturers at the fastest pace since the Great Recession. The headline general business conditions index fell thirteen points to -19.4. The new orders and shipments indexes plummeted, indicating a steep decline in both orders and shipments. Price indexes suggested that both input prices and selling prices increased. Labor market conditions continued to deteriorate, with employment indexes remaining in negative territory. The six-month outlook was noticeably weaker, with the index for future general business conditions falling to its lowest level since early 2009.” – The Federal Reserve Bank of New York

U.S. Economic Indicators

The Federal Reserve Bank of New York

Survey Indicators

Diffusion Index of Current and Expected Activity – Seasonally Adjusted



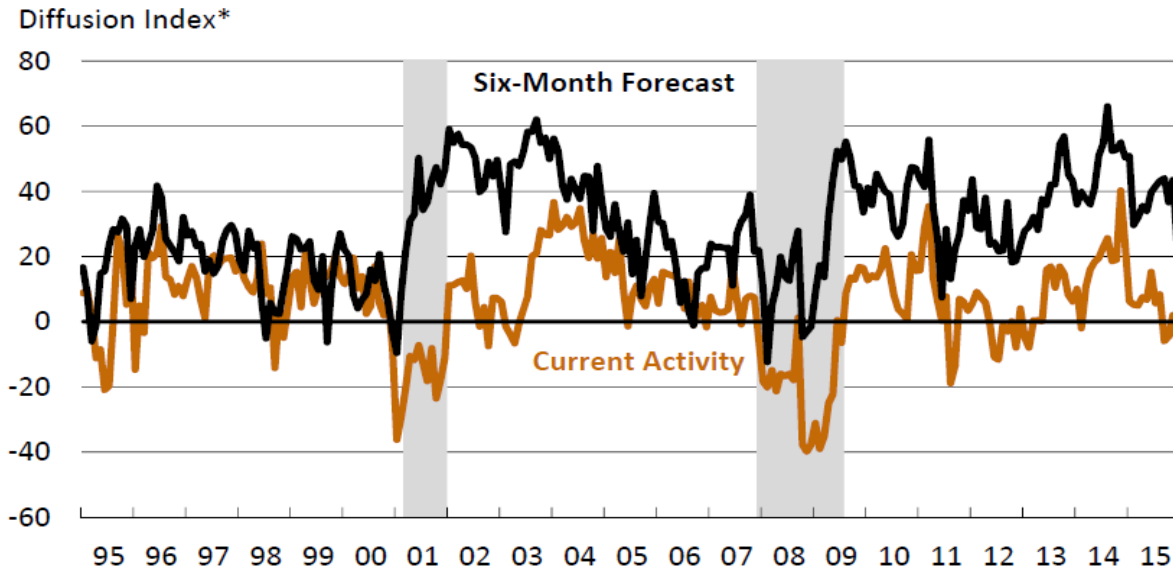
Empire State Manufacturing Survey

Optimism Plummet

“Indexes for the six-month outlook fell sharply this month, suggesting that optimism about future business conditions weakened considerably. The index for future business conditions plunged twenty-six points to 9.5, its lowest level since 2009. The indexes for future new orders and future shipments also fell sharply. Only small improvements in labor market conditions were expected in the months ahead, with the index for expected number of employees falling to 4.0. The capital expenditures index held steady at 15.0, and the technology spending index was unchanged at 9.0.” – The Federal Reserve Bank of New York

U.S. Economic Indicators

Chart 1. Current and Future General Activity Indexes
(January 1995 to December 2015)



* Percentage of respondents indicating an increase minus percentage indicating a decrease

Most Current Indicators Fall

“The diffusion index for current activity returned to negative territory this month, decreasing from 1.9 to -5.9.

This is the third negative reading in the past four months. The index for current new orders remained negative and fell 6 points, to -9.5. However, firms reported higher shipments, as the current shipments index increased 6 points to a reading of 3.7. Firms reported a decline in unfilled orders, with the index falling from 2.4 to -17.7. The current inventories index increased 9 points to its first positive reading in four months.”

The Federal Reserve Bank of Philadelphia

“Manufacturing conditions in the region weakened this month, according to firms responding to the December *Manufacturing Business Outlook Survey*. The indicator for general activity, which was slightly positive last month, fell into negative territory. The indexes for new orders and shipments were mixed. Firms reported slight increases in overall employment this month and an increase in average work hours compared with November. Manufactured goods prices, as well as input prices, declined this month. Nearly all of the survey’s future indicators showed notable weakening this month.”

U.S. Economic Indicators

The Federal Reserve Bank of Philadelphia

Fourth Quarter 2015 Survey of Professional Forecasters

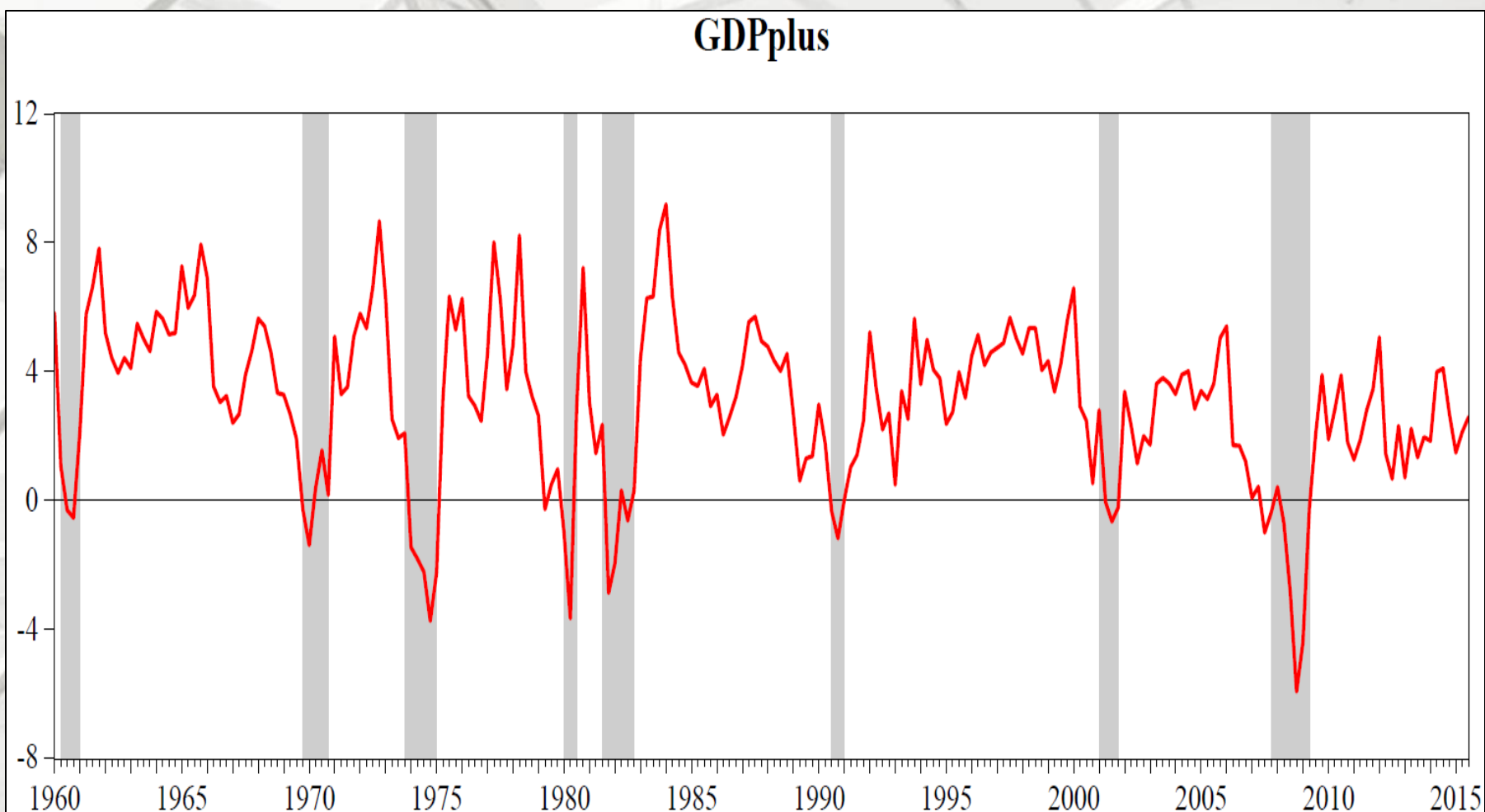
Forecasters Shave Their Growth Estimates for 2016 and 2017

“Growth in real GDP in 2016 and 2017 looks a little slower now than it did three months ago, according to 45 forecasters surveyed by the Federal Reserve Bank of Philadelphia. The forecasters currently see growth in the annual-average level of real GDP at 2.6 percent in 2016 and 2.5 percent in 2017. These current estimates represent downward revisions to the outlook of three months ago, when the forecasters thought 2016 growth would be 2.8 percent and 2017 growth would be 2.6 percent. Notably, the forecasters have raised their growth estimates for 2018. They now see real GDP growing 2.8 percent in 2018, up from the previous estimate of 2.4 percent.”

Median Forecasts for Selected Variables in the Current and Previous Surveys

	Real GDP (%)		Unemployment Rate (%)		Payrolls (000s/month)	
	Previous	New	Previous	New	Previous	New
<i>Quarterly data:</i>						
2015:Q4	2.8	2.6	5.1	5.0	220.4	201.5
2016:Q1	2.8	2.5	5.1	4.9	185.1	188.2
2016:Q2	2.8	2.6	5.0	4.8	191.3	193.5
2016:Q3	2.7	2.9	4.9	4.8	189.5	192.0
2016:Q4	N.A.	2.4	N.A.	4.7	N.A.	181.2

Philadelphia Fed: GDPplus



Note: GDPplus is a measure of the quarter-over-quarter rate of growth of real GDP in annualized percentage points. Shaded bars are NBER recessions. The line plotted was constructed using the latest data available as of December 22, 2015.

U.S. Economic Indicators



The Federal Reserve Bank of Richmond Current Activity

“Overall, manufacturing activity improved this month, compared to a month earlier. The December composite index for manufacturing advanced nine points to a reading of 6. The index for shipments flattened, ending at 0, while the index for new orders climbed 14 points to a reading of 8. Manufacturing employment increased moderately this month to a reading of 12.

Capacity utilization increased mildly in December, with that gauge edging up two points to end at 2. Additionally, vendor lead time lengthened slightly this month, with the index adding four points to end at 3. Backlogs of new orders leveled off this month. The indicator climbed 16 points, finishing at 0. Finished goods inventories rose faster than a month ago. The index advanced seven points to end at 27. Raw materials inventories growth remained solid this month. That gauge moved to 23 from 29.”

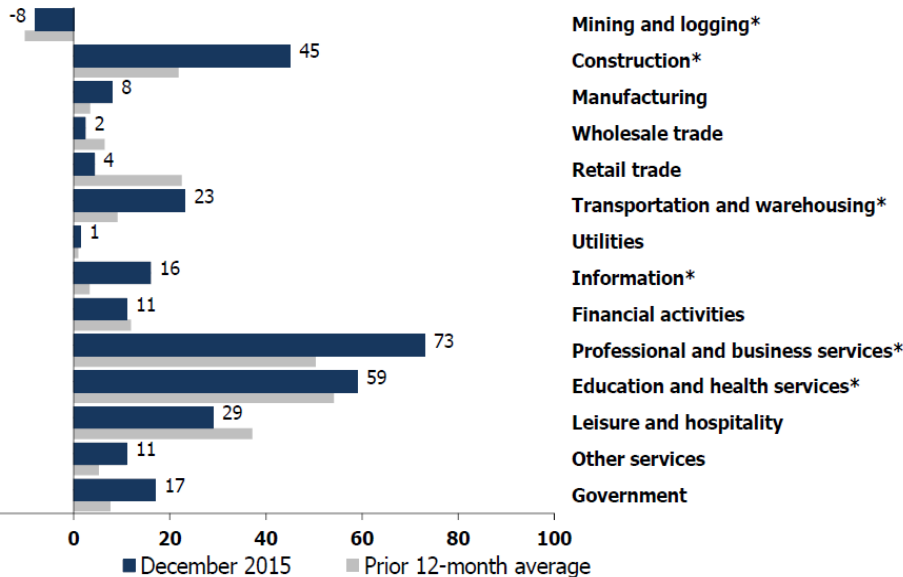
U.S. Economic Indicators

Employment in total nonfarm

Over-the-month change, December 2015

Seasonally adjusted, in thousands

Total nonfarm:
292*



Bureau of Labor Statistics, Current Employment Statistics survey, January 08, 2016.

Data are preliminary.

* denotes significance.

U.S. Bureau of Labor Statistics Month-over-Month change, December 2015

+73,000 Professional and Business Services
+59,000 Education and Health Services
+45,000 Construction
+23,000 Transportation & Warehousing
+29,000 Leisure and Hospitality

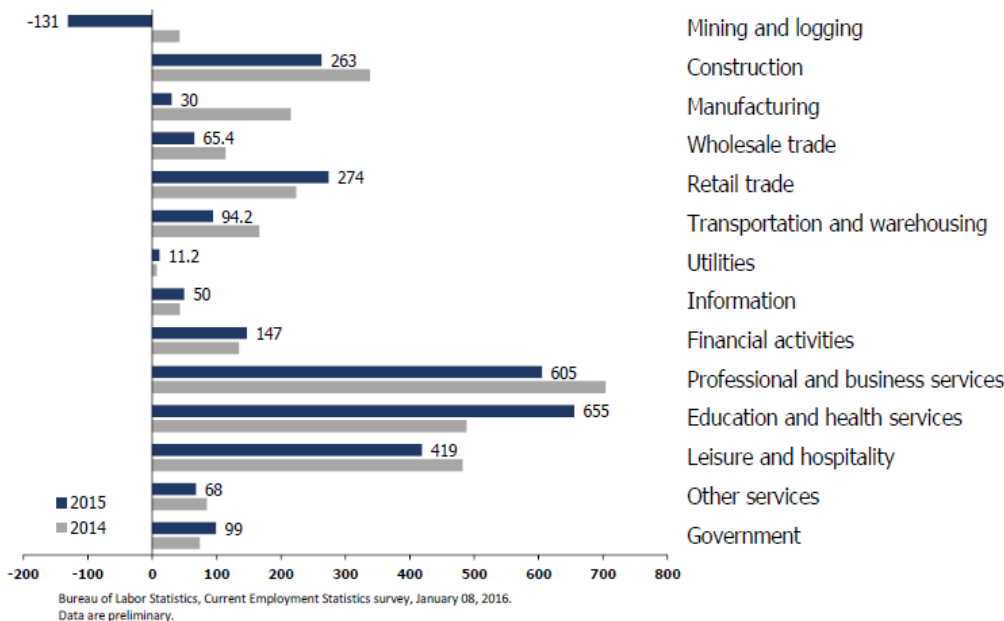
U.S. Bureau of Labor Statistics Month-over-Month change, December 2015

+16,000 Information
+ 2,000 Wholesale Trade
+ 8,000 Manufacturing
+ 1,000 Utilities
+11,000 Other Services

- 8,000 Mining and Logging
+ 4,000 Retail Trade
- 6,000 Machinery
+ 11,000 Financial Activities
+ 17,000 Government

U.S. Economic Indicators

Employment in total nonfarm
Over-the-year change, 2014 and 2015
Seasonally adjusted, in thousands



U.S. Bureau of Labor Statistics Year-over-Year change, 2014 to 2015

+605,000 Professional and Business Services
+475,000 Education and Health Services
+419,000 Leisure and Hospitality
+274,000 Retail Trade
+263,000 Construction

U.S. Bureau of Labor Statistics Year-over-Year change, 2014 to 2015

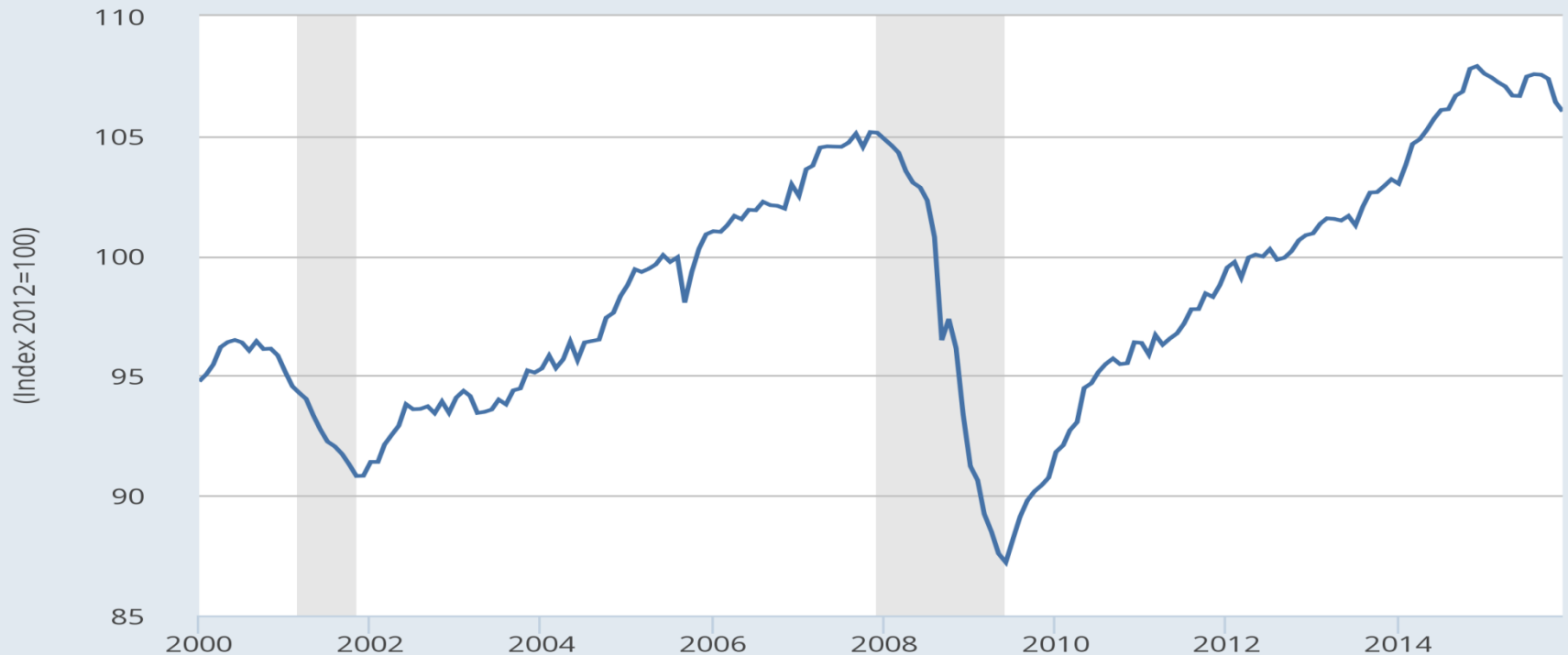
+50,000 Information
+65,000 Wholesale Trade
+30,000 Manufacturing
+11,200 Utilities
+68,000 Other Services

-131,000 Mining and Logging
+ 94,000 Transportation & Warehousing
- 38,000 Machinery
+147,000 Financial Activities
+ 99,000 Government

U.S. Economic Indicators

FRED 

— Industrial Production Index



Source: Board of Governors of the Federal Reserve System (US)
research.stlouisfed.org

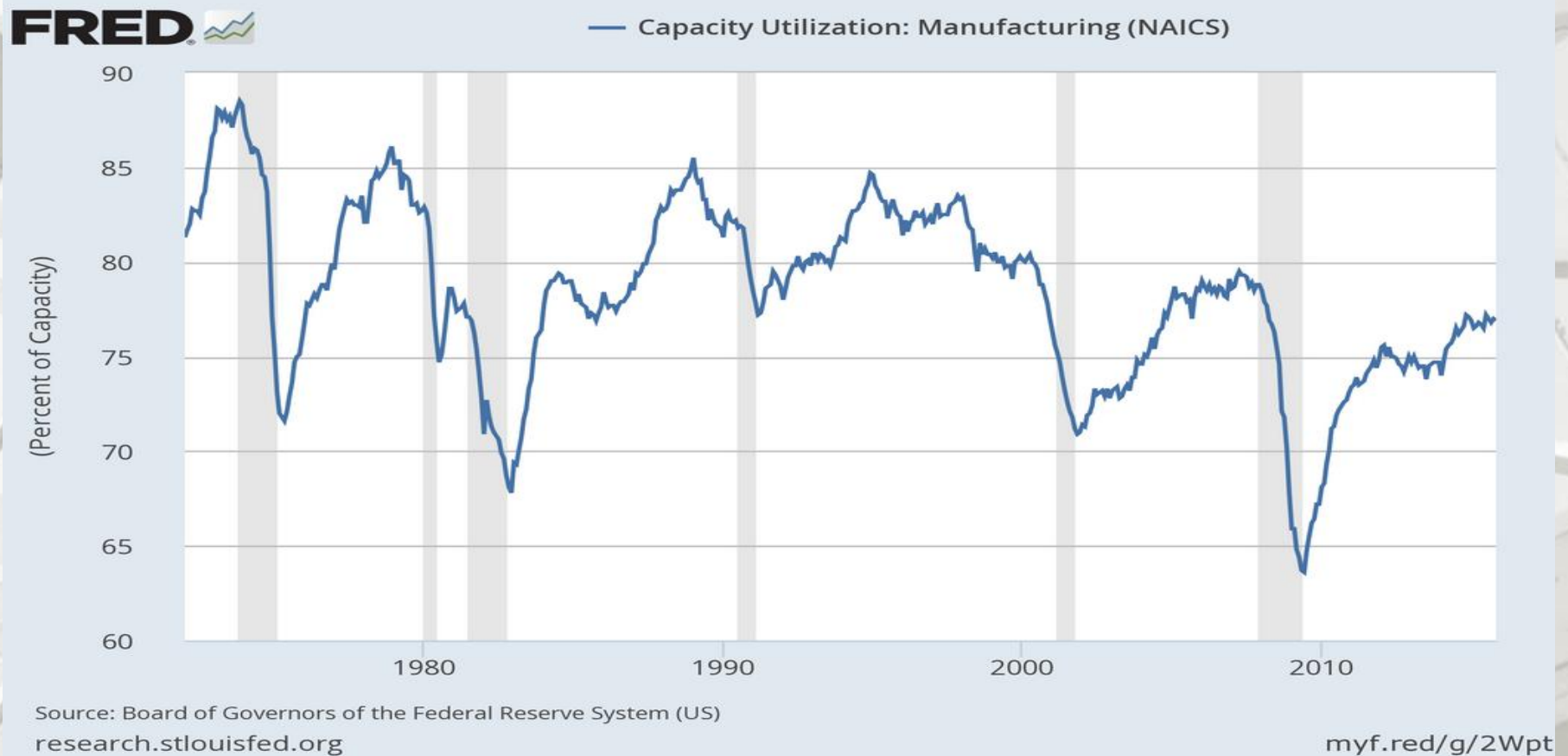
myf.red/g/39va

Industrial Production Index

“The Industrial Production Index (INDPRO) is an economic indicator that measures real output for all facilities located in the United States manufacturing, mining, and electric, and gas utilities (excluding those in U.S. territories).”

Month-over-month and year-over-year capacity utilization decreased -0.36% and -1.75%, respectively.

U.S. Economic Indicators



Capacity Utilization

The manufacturing capacity utilization rate is a rate that measures the utilization of a country's available manufacturing productive volume. It is a measure of potential output and actual output that can indicate slack in manufacturing and it provides a metric for potential output.

Month-over-month and year-over-year capacity utilization decreased -0.26% and -0.65%, respectively.

U.S. Economic Indicators

FRED 

— Industrial Production: Durable manufacturing: Wood product



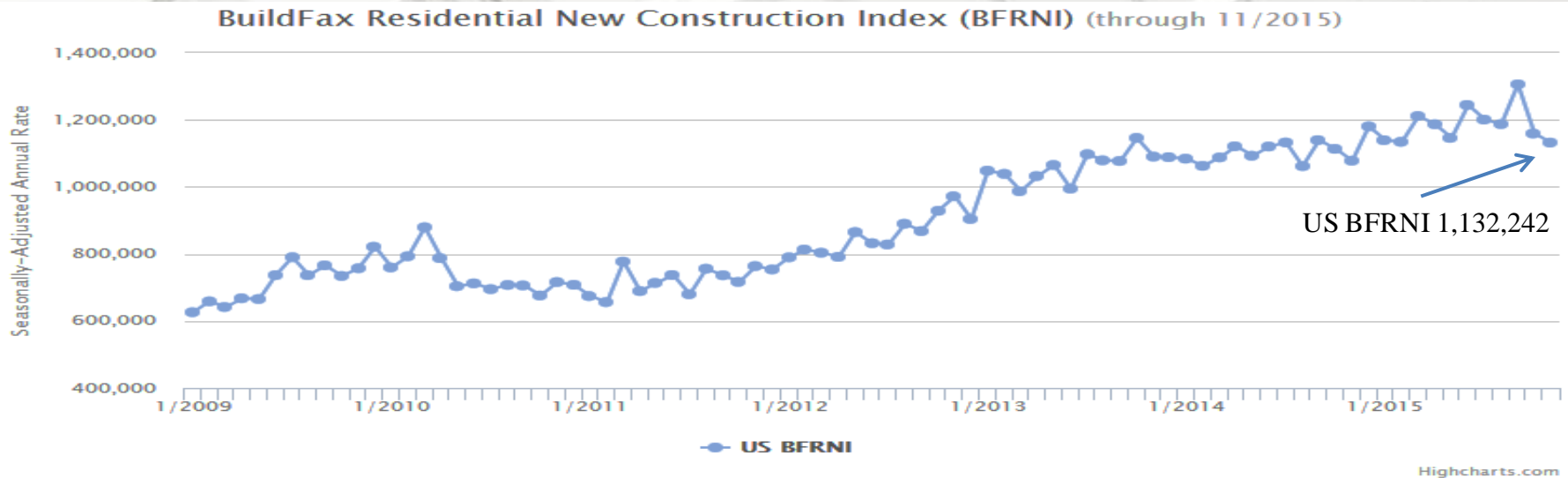
Source: Board of Governors of the Federal Reserve System (US)
research.stlouisfed.org

myf.red/g/39vw

Industrial Production: Durable manufacturing → Wood product

Month-over-month and year-over-year durable manufacturing of wood products increased 0.75% and 1.77%, respectively.

Private Indicators



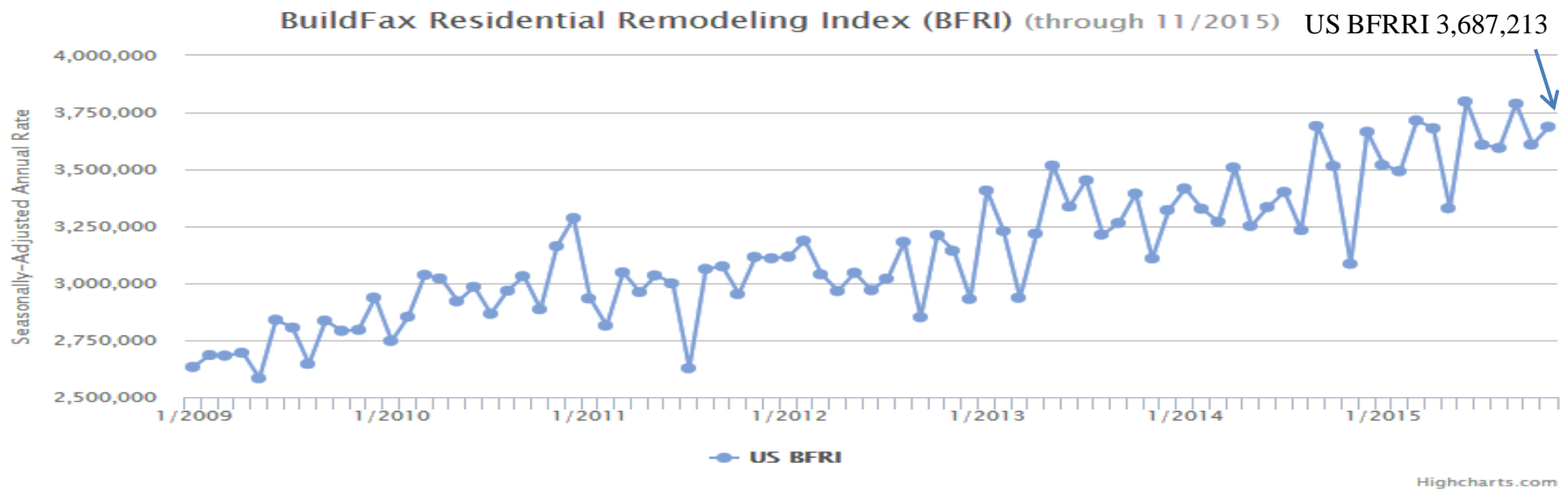
BuildFax Residential New Construction Index

“Residential new construction authorized by building permits in the United States in November were at a SAAR of 1,132,242. This is -2.3% below the revised October rate of 1,159,176 and is 5.0% above the revised November 2014 estimate of 1,078,076. BuildFax reports on total new residential projects, this is unlike the U.S. Census that reports total number of housing units.”

Regional Residential New Construction

“SAARs of residential new construction across the country in November 2015 are estimated as follows: Northeast, 67,889 (up 4.7% from October and up 97.3% from November 2014); South, 591,783 (down 2.5% from October and down 6.0% from November 2014); Midwest, 190,967 (down 5.6% from October and down 2.1% from November 2014); West, 272,690 (down 6.0% from October and up 25.9% from November 2014).”

Private Indicators



BuildFax Residential Remodeling Index

“Residential remodels authorized by building permits in the United States in November were at a SAAR of 3,687,213. This is % below the revised October rate of 3,609,210 and is % above the revised November 2014 estimate of 3,085,400.”

Regional Residential Remodeling

“SAARs of residential remodeling across the country in November 2015 are estimated as follows: Northeast, 1,947,538 (up 4.5% from October and up 39.9% from November 2014); South, 1,543,071 (up 0.04% from October and up 12.9% from November 2014); Midwest, 418,837 (up 1.6% from October and down -16.1% from November 2014); West, 1,003,029 (up 7.3% from October and up 33.6% from November 2014).”

Private Indicators

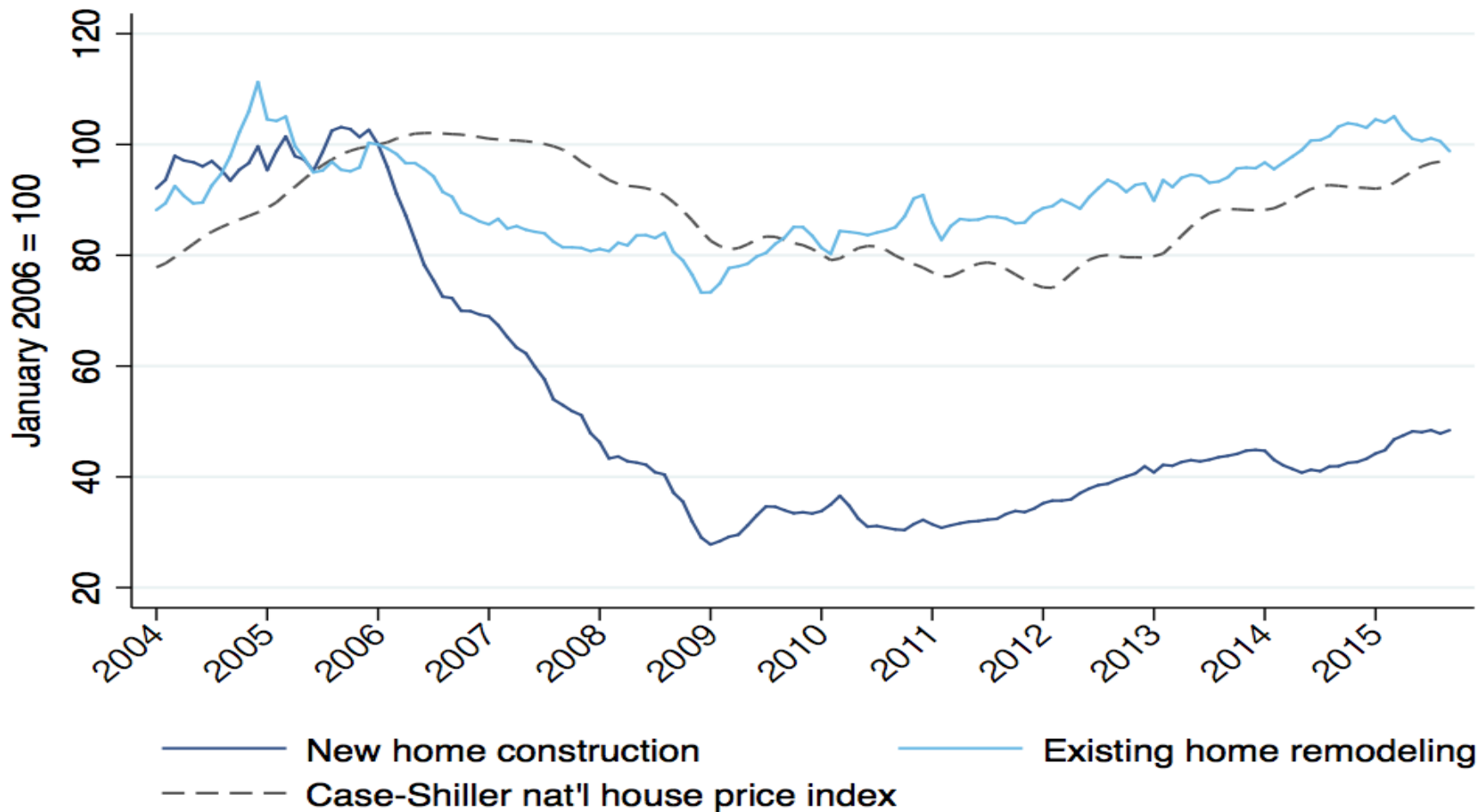
The BuildZoom and Urban Economics Lab Index: Third Quarter 2015

- “Residential remodeling is arguably a better indicator of consumer sentiment than new construction, and is of similar importance as an indicator of national economic health.
- Remodeling of existing homes has fully recovered since the housing bust, and is 3.7% above its 2005 level. In contrast, new home construction is recovering gradually and remains 54.0% below its 2005 level.
- However, year-over-year, residential new construction increased by 15.9% while residential remodeling decreased by 1.7%.

The remodeling of existing homes is an indicator of economic activity whose importance is on par with new home construction. The size of the remodeling market is about \$300 billion a year, not far from the \$340 billion value of residential construction put in place last year. Unlike new construction, which captures the outlook of homebuilders, remodeling more directly captures consumer confidence. Moreover, new construction paints a picture of the economy that is skewed towards conditions in high-growth metropolitan areas – and on their outermost fringe at that – whereas remodeling reflects the state of the economy across a more evenly distributed geography, which better represents the nation as a whole.”

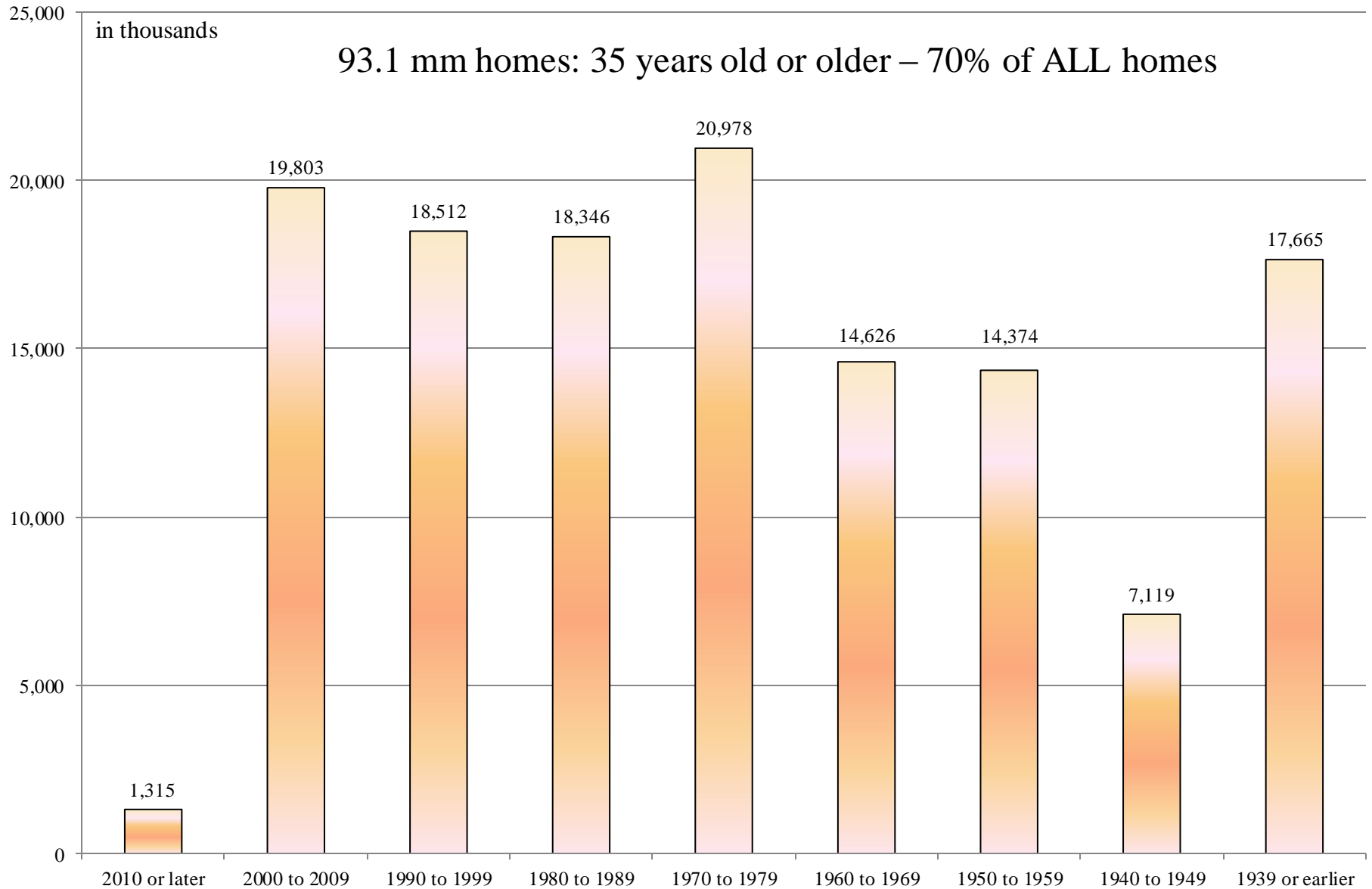
Private Indicators

National Indices for New Home Construction and Existing Home Remodeling (Seasonally adjusted)



Source: BuildZoom; Case-Shiller index from Standard & Poor's.

United States Remodeling – Opportunity?



Private Indicators

Remodeling Spending Expected to Accelerate into 2016

“After several quarters of slackening growth, home improvement spending is projected to pick-up pace moving into next year, according to the Leading Indicator of Remodeling Activity released by the Remodeling Futures Program at the Joint Center for Housing Studies of Harvard University. The LIRA projects annual spending growth for home improvements will accelerate from 2.4% last quarter to 6.8% in the second quarter of 2016.

Home improvement spending continues to benefit from the last years’ upswing in housing market conditions, including new construction, price gains, and sales. Strengthening housing market conditions are encouraging owners to invest in more discretionary home improvements, such as kitchen and bath remodeling and room additions, in addition to the necessary replacements of worn components such as roofing and siding.

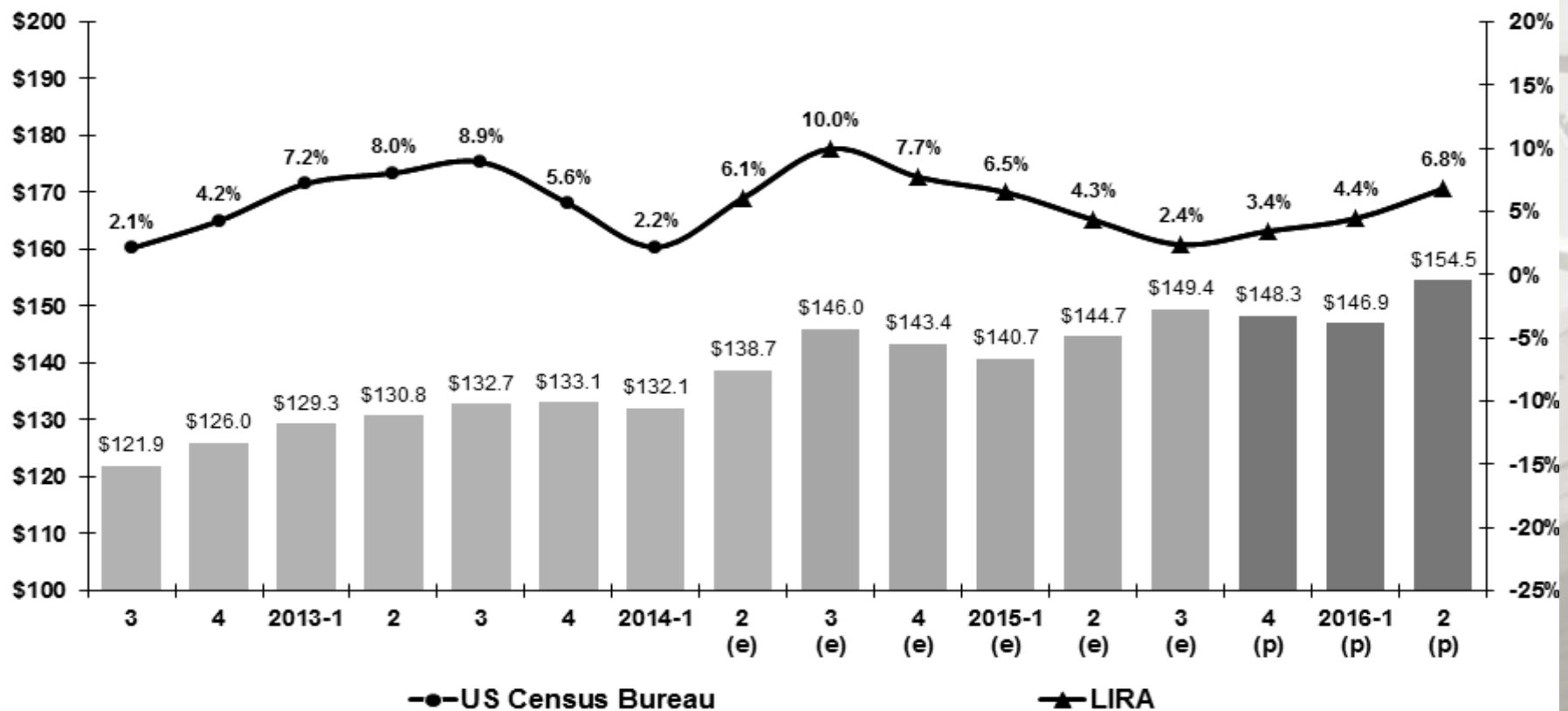
Although we expect remodeling activity to strengthen through the first half of 2016, further gains could be tempered. Current slowdowns in shipments of building materials and remodeling contractor employment trends, as well as restrictive consumer lending environments, are lowering remodeler sentiment and could keep spending gains in the mid-single digit range moving forward.” -- Abbe Will, Research Analyst, Joint Center for Housing Studies, Harvard University

Private Indicators

Leading Indicator of Remodeling Activity – Third Quarter 2015

Homeowner Improvements
Four-Quarter Moving Totals
Billions of \$

Four-Quarter Moving
Rate of Change



Notes: (e) – estimated; (p) – projected. Historical data from the second quarter 2014 onward is estimated using the LIRA.
Source: Joint Center for Housing Studies of Harvard University.

Private Indicators

Remodelers' Confidence Remains Consistent at the End of 2015

“The National Association of Home Builders’ (NAHB) Remodeling Market Index (RMI) posted a reading of 58 in the final quarter of 2015, one point above the previous quarter. This was consistent with similar results over the past year and a half, indicating sustained confidence in the market from remodelers. The RMI and all its components lie on a scale of 0 to 100, where an index number above 50 means more remodelers report that activity has improved (compared to the prior quarter) than report activity has deteriorated.

The overall RMI averages ratings of current remodeling activity with indicators of future remodeling activity. The RMI’s current market conditions index stood at 56, unchanged from the previous quarter. Among its components, major additions and alterations, the slowest-recovering component, rose to 54 from 52 in the previous quarter. The smaller remodeling projects decreased one point to 56 and the home maintenance and repair component of the RMI remained constant at 58.

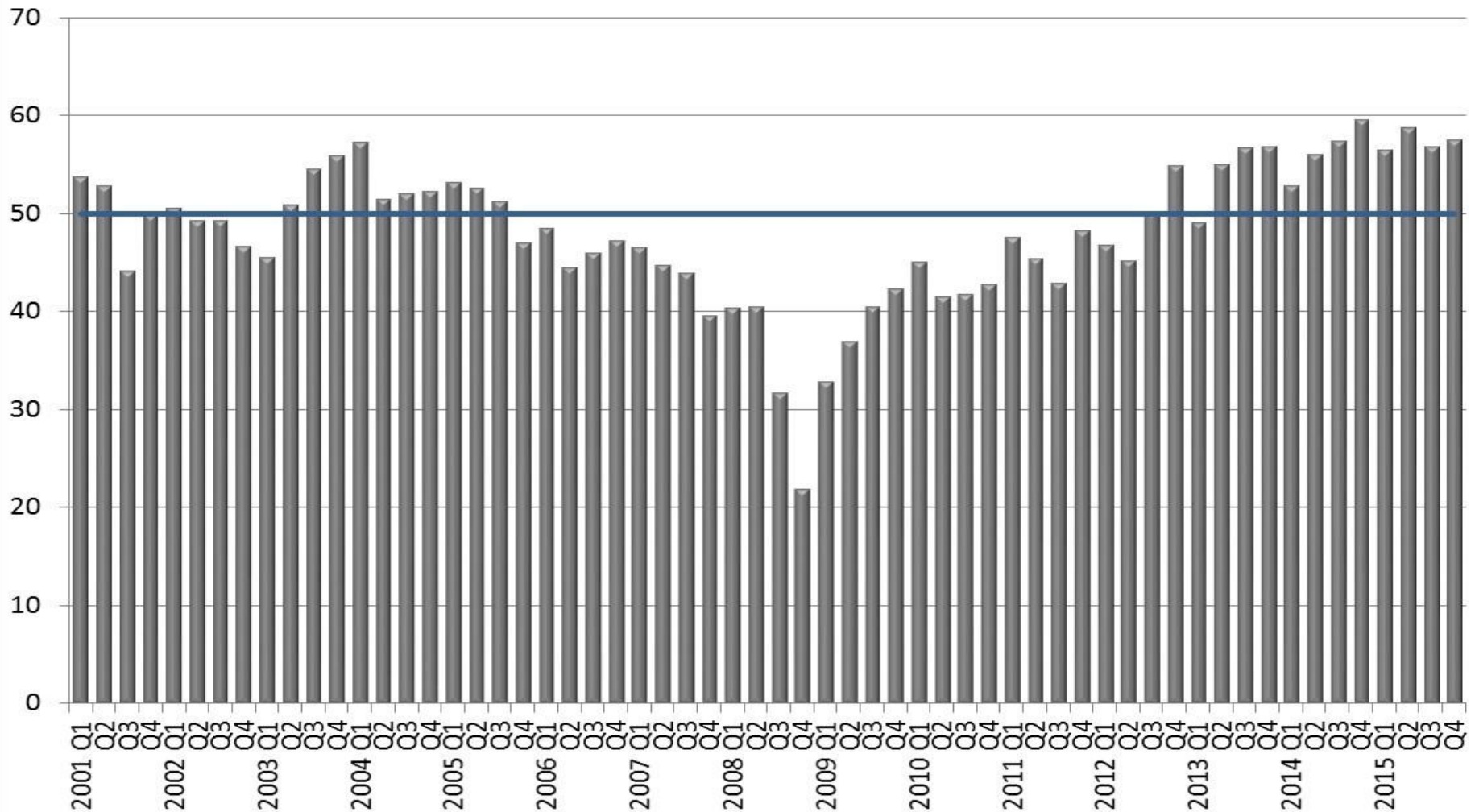
At 59, the RMI’s future market conditions index gained a point from the previous quarter. Among its four components, calls for bids and backlog of jobs each rose one point from the previous quarter — to 58 and 61, respectively. Meanwhile, the amount of work committed and appointments for proposals each rose two points from the previous quarter’s readings — to 57 and 60, respectively.

The steady performance of the RMI over the past six quarters is consistent with NAHB’s projection for continued modest growth in remodeling spending. Constraints to faster growth include labor shortages and home owners who are having trouble obtaining loans for larger projects.” -- Paul Emrath, Economist, National Association of Home Builders

Private Indicators



Remodeling Market Index (RMI)
Overall RMI

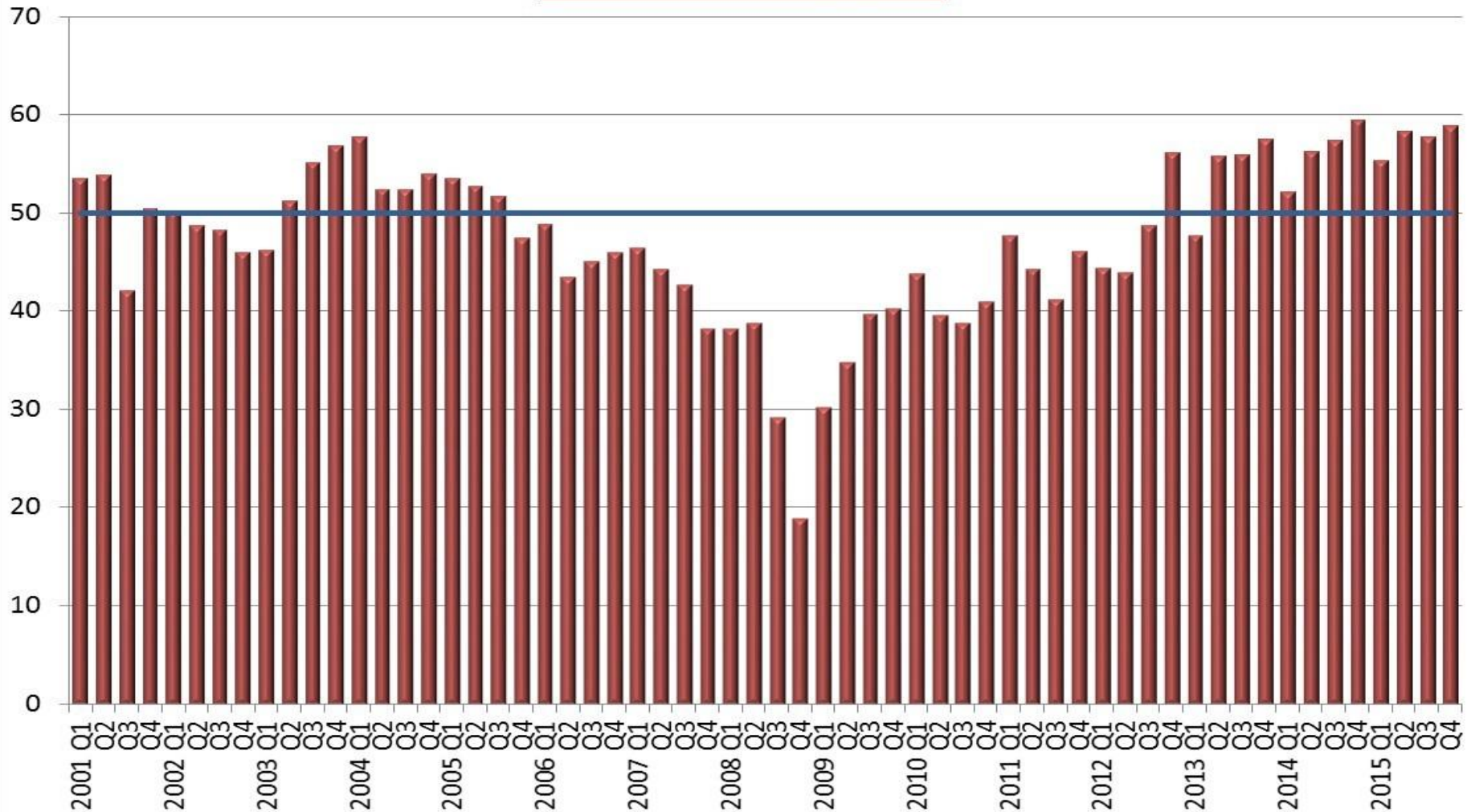


Private Indicators



Remodeling Market Index (RMI)

Future Market Indicators



Private Indicators

2Q's Remodeling Volume Surpassed Old Peak, Latest RRI Finds

“Remodeling and replacement activity nationwide grew 5.5% in the second quarter from the year-earlier period to produce its best showing since at least before the housing boom, according Metrostudy reported with the release of its latest Residential Remodeling Index (RRI).

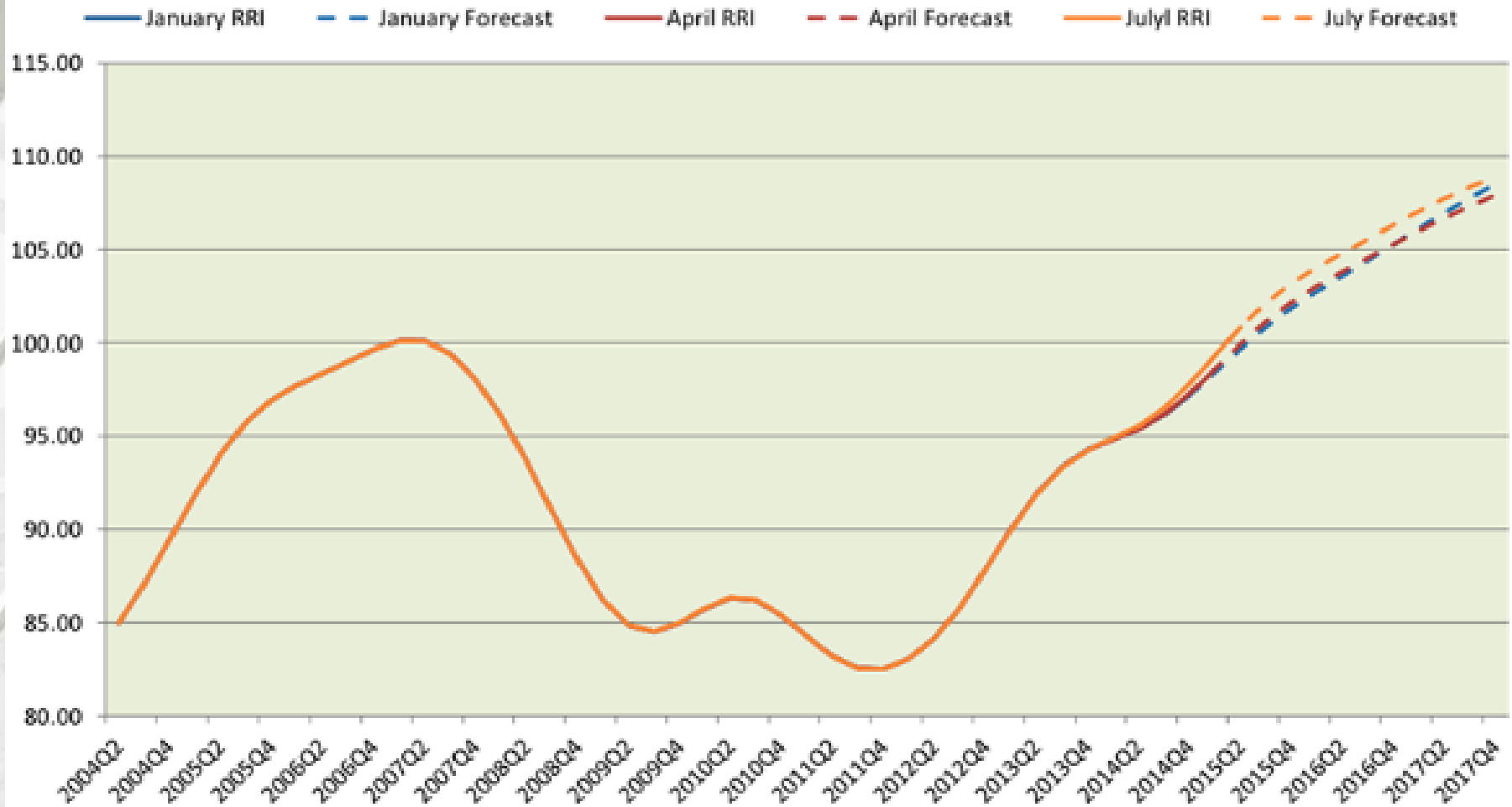
The index of economic indicators hit 100.8 for the April-to-June period, topping the high-water mark of 100 set in the first quarter of 2007. Metrostudy...previously had thought the RRI wouldn't reach 100 until this fall.

Growth through the first two quarters of 2015 is much stronger than what was observed in 2014, when the overall housing market had cooled,” Brad Hunter, Metrostudy's chief economist. “A big driver of recent remodeling activity has been solid job gains, but the industry stands to benefit even more over the next year from existing home sales hitting an eight-and-a-half year high at the end of second quarter. Stronger resales benefits remodeling activity, as recent homebuyers typically spend more on home improvements than other homeowners. Continued home price appreciation is also encouraging people to put money into their homes.

Metrostudy now forecasts year-over-year RRI growth of 5.9% in the third quarter, 5.5% in the fourth quarter, 4.8% in the first quarter of 2016 and 4% in the second quarter of next year. It also believes that the number of pro-worthy projects for all 2015 will total 11.1 million, a 6% gain from 2014.” -- Craig Webb, Editor-in-Chief, *Remodeling*

Private Indicators

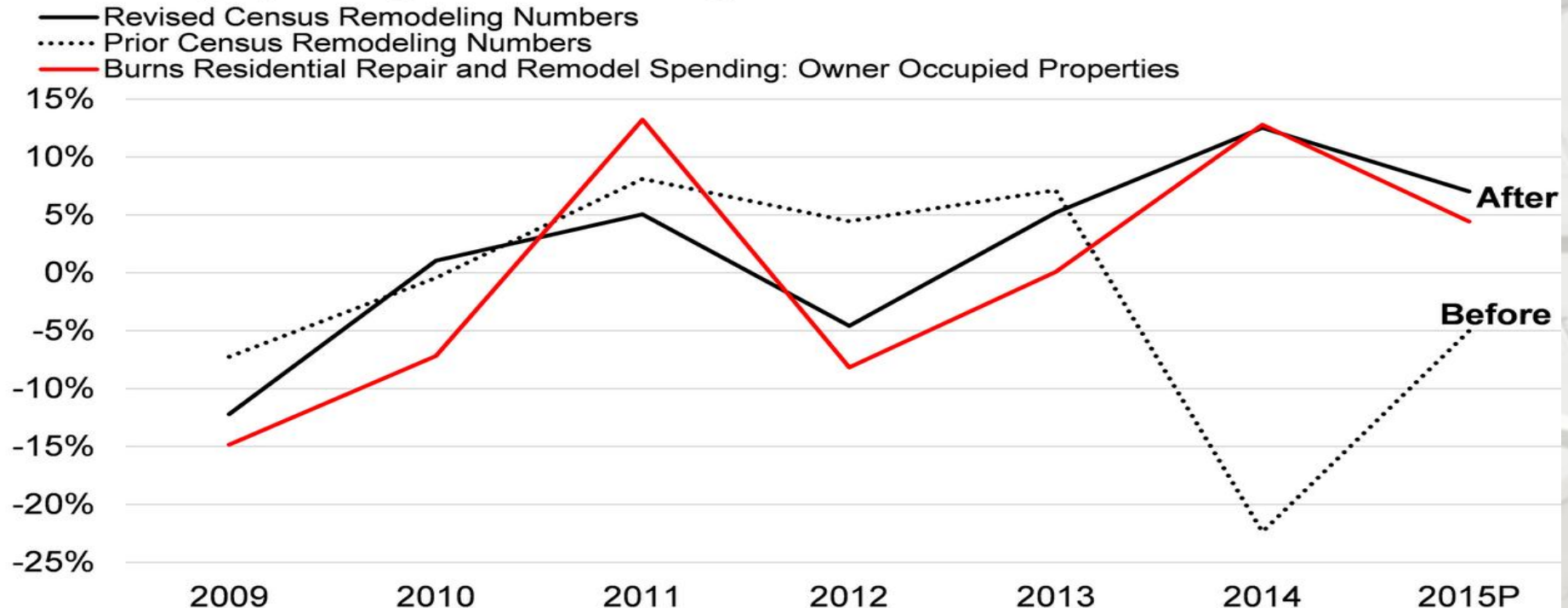
Residential Remodeling Index and Forecast as of July 2015



Source: Metrostudy, July 2015 RRI Report

Private Indicators

Remodeling Spending Growth: Trailing 12 Month



Sources: US Census, John Burns Real Estate Consulting LLC, (Data: Jan 2016)
2015 Census numbers are trailing 12 month totals through November

“Repair and remodeling spending grew 5%+ last year, just as we predicted. On January 4, the Census Bureau announced a significant revision to their residential improvement spending estimates due to a calculation error. Based on our knowledge of the market, we are not surprised by the direction of the revision. In fact, the restated Census growth curve looks a lot more like our Burns Residential Repair and Remodel Spending™ estimates, which we released back in September 2015.” -- Todd Tomalak, Vice President, John Burns Real Estate Consulting LLC

Private Indicators

Home Remodeling Trends for 2016

Biggest Kitchen Remodeling Trends Offer Versatility, Increased Use of Technology, and Blended Looks

“One of the most popular trends in the early stages of 2016, for kitchen remodeling, is in the area of transitional kitchens. So called because they blend elements of traditional and contemporary kitchens, transitionals incorporate modern elements like stainless steel appliances with traditional interior design.

Slide-out shelving is a kitchen strategy which is both clever and functional, making use of available space for necessary storage. Pots, pans, and cleaning accessories can all be stowed under the sink or elsewhere, with sliding shelves that are easily accessed on demand.

Hardwood flooring is becoming a strong alternative to recently favored systems like laminates and tiles, and is appearing in planks six inches wide and more. Antique wooden flooring for the kitchen is also trending significantly in 2016.

Shaker-style cabinets are enjoying a revival of popularity, due to their adaptability with almost any style of kitchen, including country, traditional, and contemporary.” -- Sergei Kaminskiy, Kaminskiy Design and Remodeling

Private Indicators

November Architecture Billings Index Architecture Billings Index Hits another Bump

“As has been the case a few times already this year, the Architecture Billings Index (ABI) dipped in November. As a leading economic indicator of construction activity, the ABI reflects the approximate nine to twelve month lead time between architecture billings and construction spending. The American Institute of Architects (AIA) reported the November ABI score was 49.3, down from the mark of 53.1 in the previous month. This score reflects a decrease in design services (any score above 50 indicates an increase in billings). The new projects inquiry index was 58.6, up just a nudge from a reading of 58.5 the previous month.” -- Caroline Massie, Assistant Editor, AIA

“Business conditions at firms located in the Northeast remained soft in November, as they have for nearly the entire year. Billings also slipped modestly at firms located in the South, although they remained positive at firms located in the Sunbelt regions of the South and West. In addition, firms of all specializations reported billings growth in November, as firms with a residential specialization continue to recover from a seven-month period of softness earlier in the year (figures for sectors and regions are computed as three-month moving averages).” – Jennifer Riskus, Manager of Economic Research, AIA

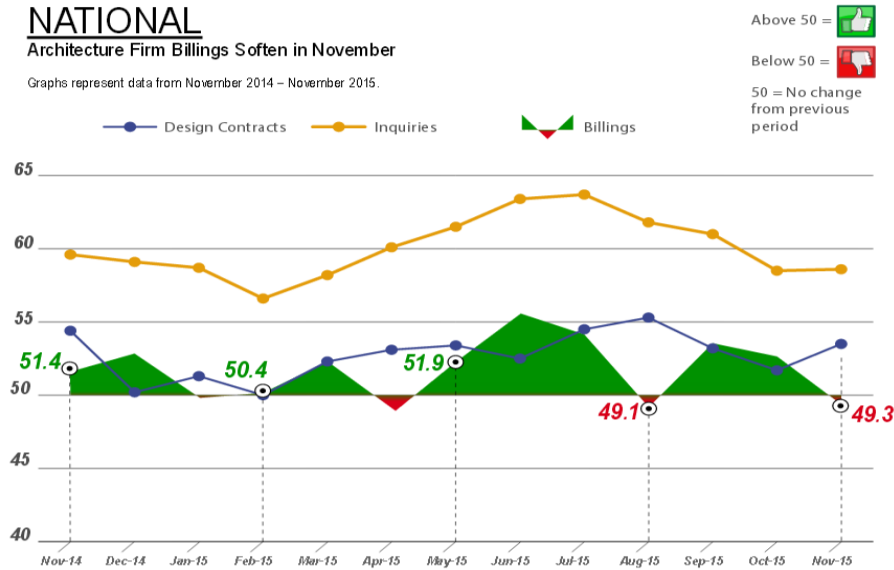
“Since architecture firms continue to report that they are bringing in new projects, this volatility in billings doesn’t seem to reflect any underlying weakness in the construction sector. Rather, it could reflect the uncertainty of moving ahead with projects given the continued tightness in construction financing and the growing labor shortage problem gripping the entire design and construction industries.” -- Kermit Baker, Chief Economist, AIA

Private Indicators

NATIONAL

Architecture Firm Billings Soften in November

Graphs represent data from November 2014 – November 2015.

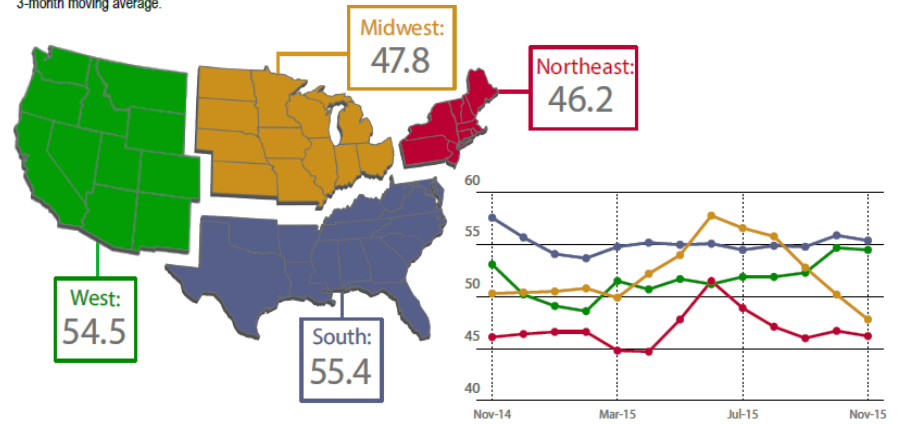


REGIONAL

Business Conditions Remain Depressed in Northeast, Soften in Midwest

Graphs represent data from November 2014 – November 2015 across the four regions.

50 represents the diffusion center. A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.



SECTOR

Firms of All Specializations Seeing Healthy Trends

Graph represents data from November 2014 – November 2015 across the three sectors.

50 represents the diffusion center.

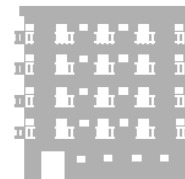
A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.



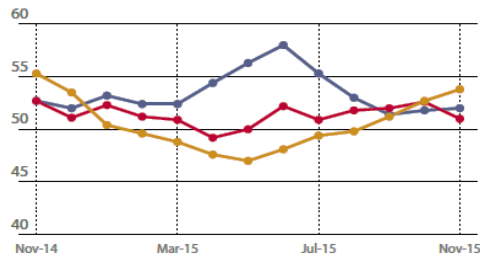
Commercial/Industrial: 51.0



Institutional: 52.0



Residential: 53.8



Private Indicators

November Construction Slides 5 Percent

“At a seasonally adjusted annual rate of \$563.3 billion, new construction starts in November fell 5% from the previous month, according to Dodge Data & Analytics. . . . Decreased activity was also reported for housing in November, while the nonbuilding construction sector (public works and electric utilities/gas plants) held steady. During the first eleven months of 2015, total construction starts on an unadjusted basis were \$597.9 billion, up 8% from the same period a year ago.

Nonresidential building in November dropped 13% to \$175.4 billion (annual rate), following its 33% rebound in October. The commercial building categories as a group have been the cause of much of the volatility over the past two months, sliding 29% in November after soaring 53% in October. Office construction plunged 43% in November after being lifted in October by the start of two very large data centers, valued at \$570 million and \$300 million respectively, and several large office buildings.

Residential building in November decreased 2% to \$257.4 billion (annual rate). Multifamily housing retreated 6% after soaring 43% in October. There were 6 multifamily projects valued at \$100 million or more that reached groundbreaking in November, fewer than the 11 such projects that were reported as construction starts in October, but still a healthy amount.” -- Robert Murray, Chief Economist, McGraw Hill Construction

MONTHLY SUMMARY OF CONSTRUCTION STARTS Prepared by Dodge Data & Analytics

MONTHLY CONSTRUCTION STARTS Seasonally Adjusted Annual Rates, In Millions of Dollars

	<u>November 2015</u>	<u>October 2015</u>	<u>% Change</u>
Nonresidential Building	\$175,384	\$200,749	-13
Residential Building	257,387	261,992	-2
Nonbuilding Construction	<u>130,489</u>	<u>130,589</u>	<u>-0</u>
TOTAL Construction	\$563,260	\$593,330	-5

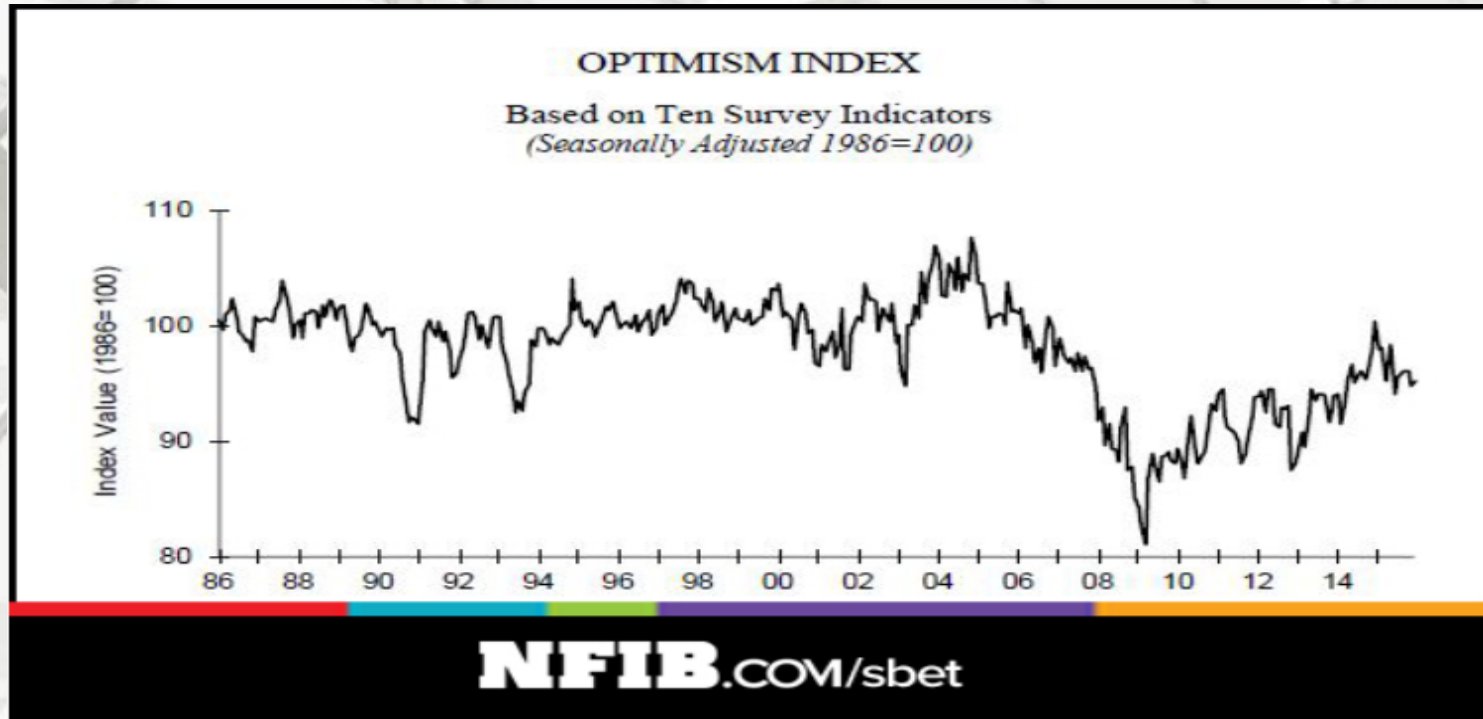
THE DODGE INDEX (Year 2000=100, Seasonally Adjusted)

November 2015...119
October 2015.....125

YEAR-TO-DATE CONSTRUCTION STARTS Unadjusted Totals, In Millions of Dollars

	<u>11 Mos. 2015</u>	<u>11 Mos. 2014</u>	<u>% Change</u>
Nonresidential Building	\$188,817	\$205,610	-8
Residential Building	243,337	213,054	+14
Nonbuilding Construction	<u>165,713</u>	<u>135,006</u>	<u>+23</u>
TOTAL Construction	\$597,867	\$553,670	+8

Private Indicators



NFIB survey remains flat, with small business owners divided on sales outlook, business conditions.

“The Index of Small Business Optimism rose 0.4 points in December, increasing to 95.2. The Index is stuck in a “below average” rut, characterizing the performance of the small business sector. Historically accounting for about half of private GDP, below average growth for small businesses has not been offset by strong growth in large firms. Combined, they are producing 2.5 percent growth overall. With the manufacturing sector in decline, large firms aren’t likely to add as much to growth in 2016. Auto sales have been strong, but will likely fade in 2016. The service industry has also grown with solid spending in health care, so health insurance costs will likely also rise, an unfortunate outcome for small business owners.” -- William Dunkelberg, Chief Economist, NFIB

Private Indicators

America's economic engine Tapping the brakes

In an October/November 2015 survey, 522 US mid-market executives provided input on their expectations, experiences and plans for becoming more competitive in the current economic environment.

Respondents who say they feel "extremely confident" that the US economy will continue to improve over the next 24 months:



56% of companies surveyed report their workforces grew over the past 12 months...

... and 61% expect that growth to continue in 2016.

Main obstacles to growth:



92% report female and minority leaders or managers comprised less than half of the executive leadership at their organizations



Deloitte.

<http://www.deloitte.com/us/dges/tappingthebrakes>

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Private Indicators

America's economic engine: Tapping the brakes

“Our latest survey reveals further moderation — fewer executives expect the economy to expand at a robust rate, a view which is translating into a pullback in expectations for growth in profits, prices, and capital investment.

Among the key findings:

- In the current survey, which closed before the Federal Reserve's rate-hike announcement in December 2015, just over half the respondents are convinced rates will be higher by this time next year.
- More than half of executives (53 percent) cite rising health care costs as the top obstacle to US growth, and more than one-third cite it as the number two issue for company growth, behind the uncertain economic outlook.
- Overall, the economy is still growing, albeit at a more moderate pace; the majority of executives surveyed expect the US economy to grow by at least two percent in the next year.
- Hiring and training take the top spots when identifying a company's biggest investment for the first time since the inaugural survey in 2011. Diversity is also key for long-term business growth, with 63 percent of respondents' companies investing in programs that foster diversity and inclusion.”

-- Roger Nanney, Vice Chairman, National Managing Partner, Deloitte LLP

Private Indicators



US flash PMIs show economic growth rate faltering at year end

“The first US interest rate hike for almost a decade comes in a month during which the pace of economic growth showed signs of faltering, as highlighted by the rate of expansion in output one of the weakest seen over the past three years.

Markit’s Flash Purchasing Managers’ Index™ (PMI™) showed growth of the combined manufacturing and service sectors slowing sharply at the end of the year. With the exception of government shutdown in October 2013, the survey signalled the smallest monthly increase in business activity since December 2012.”

“Manufacturing saw the weaker rate of expansion of the two sectors, with production growth slowing markedly to the weakest for over two years and signalling a near-stalling in the comparable official data series. Factories battled against headwinds of the strong dollar, weak demand in many overseas markets and reduced capex in the energy sector..

However, December also saw a steep downturn in service sector growth, which had so far been holding up far better than in manufacturing but registered the weakest rise for a year. As with last December, some companies again reported adverse weather conditions to have affected business. However, weather appears to have played less of a role in the slowdown this year,” -- Chris Williamson, Chief Economist, Markit®

Private Indicators

U.S. Economic Confidence Index Steady at -12

U.S. Economic Confidence Index Components -- Weekly Averages Since January 2016

Latest results for week ending Jan. 10, 2016



* % (Excellent + Good) minus % Poor

** % Getting better minus % Getting worse

Gallup U.S. Daily tracking

GALLUP

“For the week ending Jan. 10, 25% of adults said the current economy is “excellent” or “good,” while 29% said it is “poor.” This resulted in a current conditions score of -4, consistent with what has been found in recent weeks.

The economic outlook score measured -19 for the week, also level with recent scores. This was the result of 39% of Americans saying the economy is “getting better” and 58% saying it is “getting worse.” Since March 2015, Americans have consistently had a worse view of the outlook for the economy than of current economic conditions.” -- Rebecca Riffkin, Gallup

Private Indicators - Global



Global manufacturing subdued by steepest emerging-Asia downturn on record

“Global manufacturing growth slowed at the end of 2015, ending the worst year since 2012. European countries led the growth rankings, as emerging Asia suffered its worst downturn in more than ten years of data collection.

The JPMorgan Global Manufacturing PMI™, compiled by Markit, fell from 51.2 in November to 50.9 in December, its lowest reading for three months. The survey data are consistent with global manufacturing output expanding at a modest annual pace of just over 1%.”

“At 51.2, the average PMI reading for 2015 is down from 52.3 in 2014 and the lowest – albeit by a small margin – since 2012, a year in which global manufacturing suffered a slight decline. In all, 14 of all 25 countries covered by Markit PMI surveys saw their manufacturing economies expand in 2015, according to average PMI readings, while 11 reported deteriorating business conditions.

Nine of the 14 expanding manufacturing economies were found in Europe, joined by the US and Mexico, with the latter’s exporters benefitting from the ongoing US expansion. However, the US saw a marked easing in its manufacturing performance in 2015 compared to the strong expansion seen in 2014, as did the UK, with producers in both countries struggling in the face of appreciating exchange rates.” -- Chris Williamson, Chief Economist, Markit®

Private Indicators - Global



Global economy ends 2015 on soft note amid emerging market gloom

“The global economy lost some growth momentum in December, according to the JPMorgan Global PMI™, compiled by Markit from its national business survey data. Rates of expansion slowed in both manufacturing and services.

The weak end to 2015 rounded off the worst quarter, albeit by a narrow margin, seen for a year. The Q4 survey data are broadly consistent with global GDP rising at an annual rate of 2% months.”

“Emerging markets remained a major drag on the global economy, slipping back into decline for the fifth time in the past seven months. At 49.5, the Emerging Market PMI indicated less than 4% annual GDP growth, less than half the average seen in the five years prior to the global financial crisis. Of the BRICs, only India saw faster growth, with renewed downturns evident in Russia and China alongside Brazil’s deepening crisis.

Growth meanwhile eased to an 11-month low in the developed world, with the PMI dropping from 54.6 to 53.8 in December, pointing to annual GDP growth of around just 1.5%. While the overall rate of expansion signalled is only modest, the surveys at least point to broad-based growth, with all four largest developed economies firmly in expansion territory, led by the UK with Japan once again lagging behind its peers.” -- Chris Williamson, Chief Economist, Markit®

Private Indicators - Global

FORECAST	REAL GDP		HEADLINE INFLATION	
	2015 ¹	2016 FORECAST	2015 ¹	2016 FORECAST
United States	2.5%	2.0% to 2.5%	0.2%	1.5% to 2.0%
Eurozone	1.5%	1.25% to 1.75%	0.1%	0.75% to 1.25%
United Kingdom	2.4%	2.0% to 2.5%	0.1%	1.25% to 1.75%
Japan	0.6%	0.75% to 1.25%	0.8%	0.5% to 1.0%
China	6.9%	5.5% to 6.5%	1.5%	1.5% to 2.5%
BRIM ²	0.5%	1.25% to 2.25%	8.7%	5.5% to 6.5%
World³	2.6%	2.6%	1.6%	2.1%

¹ Current data for real GDP and inflation represent Bloomberg consensus estimates for 2015
² BRIM is Brazil, Russia, India, Mexico
³ World is the GDP-weighted average of countries listed in table above
Source: Bloomberg, PIMCO calculations.

Inflation, Growth and Politics Will Guide Central Banks' Hands in Europe in 2016

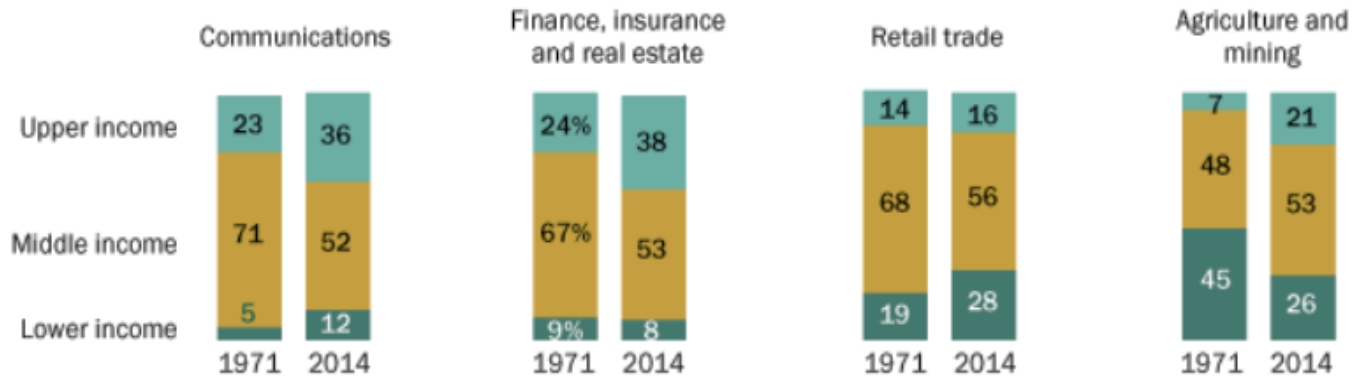
“We can look at the impact of Europe in the global economy from three points of view: growth, inflation and politics. While a 1.5% growth trend is not very exciting in absolute terms, it is an above-trend pace of growth for the eurozone. As a result, the region, at the margin, is expected to provide a positive economic stimulus to the global economy. That said, the stimulus will not be strong, as the economies in the eurozone that could spend (for example, Germany, where the current account surplus keeps rising and is now near 10% of GDP) are not doing enough to boost domestic demand, and other economies cannot afford to spend much.

While net exports should continue to benefit from the cumulative weakening of the euro to date, slower growth in the eurozone's major trading partners may limit the contribution to growth from this source in 2016. “ -- Mike Amey, Andrew Bosomworth, Lorenzo Pagani, PIMCO®

Private Indicators

In most industries, share of workers in 'middle' tier shrank while shares in 'upper' and 'lower' grew

Share of workers who are lower, middle or upper income in selected industries, 1971-2014



Note: Percentages may not sum to 100% due to rounding.

Source: Pew Research Center analysis of the Current Population Survey, Annual Social and Economic Supplements

PEW RESEARCH CENTER

America's middle class is shrinking. So who's leaving it?

“Over the past four decades, the American middle class has been shrinking relative to upper- and lower-income groups, both of which represent bigger shares of the population than at any time since at least 1971.... Among employed adults overall, 55% lived in middle-income households last year, down from two-thirds in 1971. The share of employed adults in upper-income households rose from 18% to 27%; the share in lower-income households edged higher, from 16% to 18%.” -- Drew DeSilver, Senior Writer, Pew Research Center

Private Indicators

Household Income Trends, November 2015

“According to new data derived from the monthly Current Population Survey (CPS), median annual household income in November 2015 was \$56,746, recapturing all of the ground lost since the beginning of the last recession in December 2007 (\$56,714). However, the November 2015 median was not statistically different than the October 2015 median of \$56,688. The Sentier Household Income Index for November 2015 was 98.9 (January 2000 = 100).

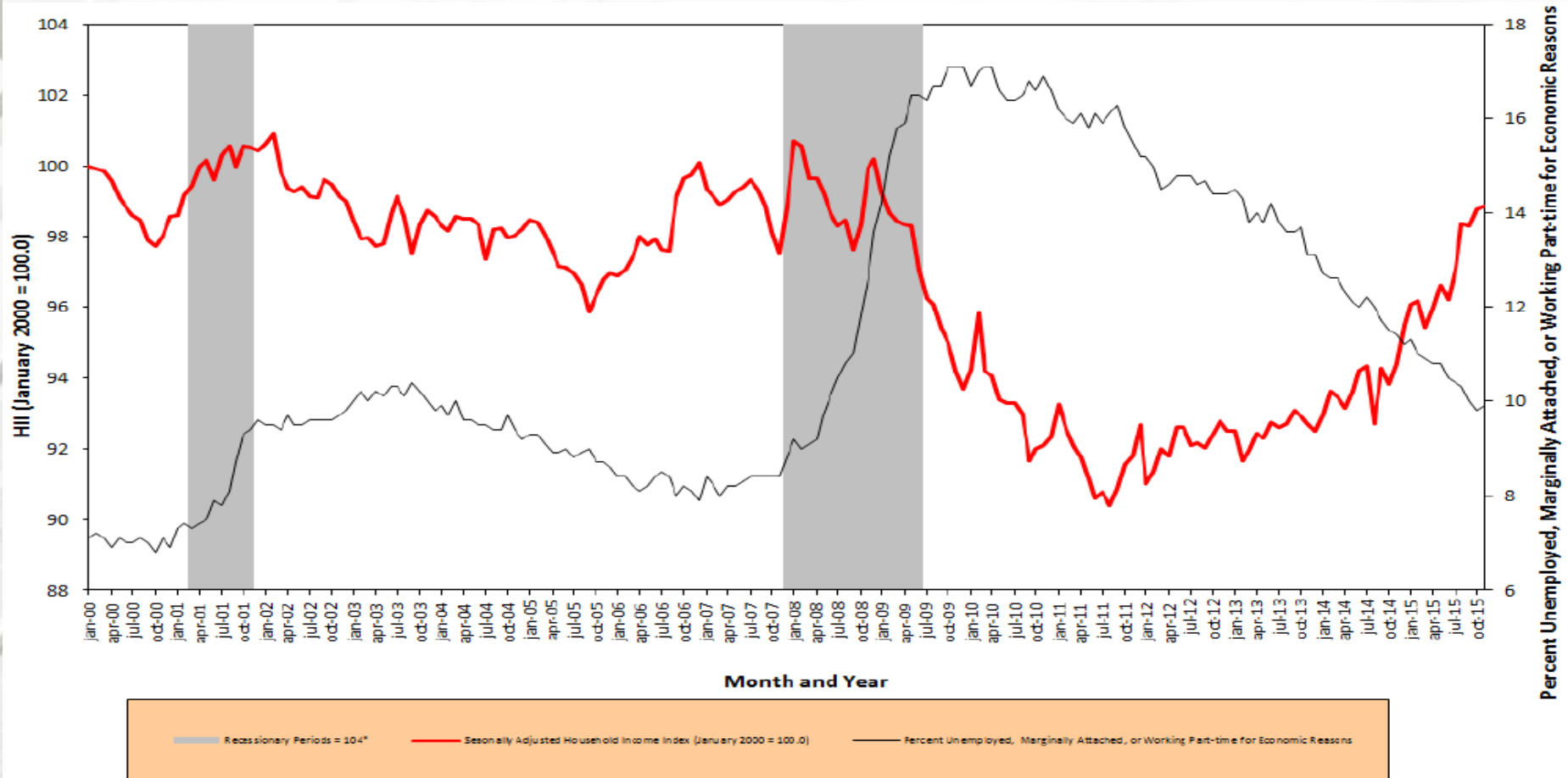
Median income in November 2015 (\$56,746) was 4.8 percent higher than in November 2014 (\$54,172), and 9.4 percent higher than in August 2011 (\$51,875). The period since August 2011 has been marked by an uneven, but generally upward trend in the level of real median annual household income. Many of the month-to-month changes in median income during this period have not been statistically significant. However, the cumulative effect of the various month-to-month changes since August 2011 resulted in the income improvement noted above.

Real median annual household income in November 2015 can be put into broader perspective by comparisons with previous levels of household income since the last recession began and dating back to the start of the last decade. The November 2015 median income of \$56,746 is 1.9 percent higher than the median of \$55,676 in June 2009, the end of the recent recession and beginning of the “economic recovery.”

The November 2015 median has now surpassed the median of \$56,714 in December 2007, the beginning month of the recession that occurred almost eight years ago. And the November 2015 median is now only 1.1 percent lower than the median of \$57,388 in January 2000, the beginning of this statistical series. These comparisons demonstrate that median annual household income has recaptured all of the ground lost since the occurrence of the last recession and most of the ground lost since the beginning of the 20th century.” -- Gordon Green and John Coder, Sentier Research, LLC

Private Indicators

Figure 3. Median Household Income Index (HHI) and Percent Unemployed, Marginally Attached, or Working Part-time for Economic Reasons by Month, January 2000 to November 2015.



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the percent unemployed, marginally attached, or working part-time for economic reasons and the CPI-U: the U.S. Bureau of Labor Statistics.

Demographics

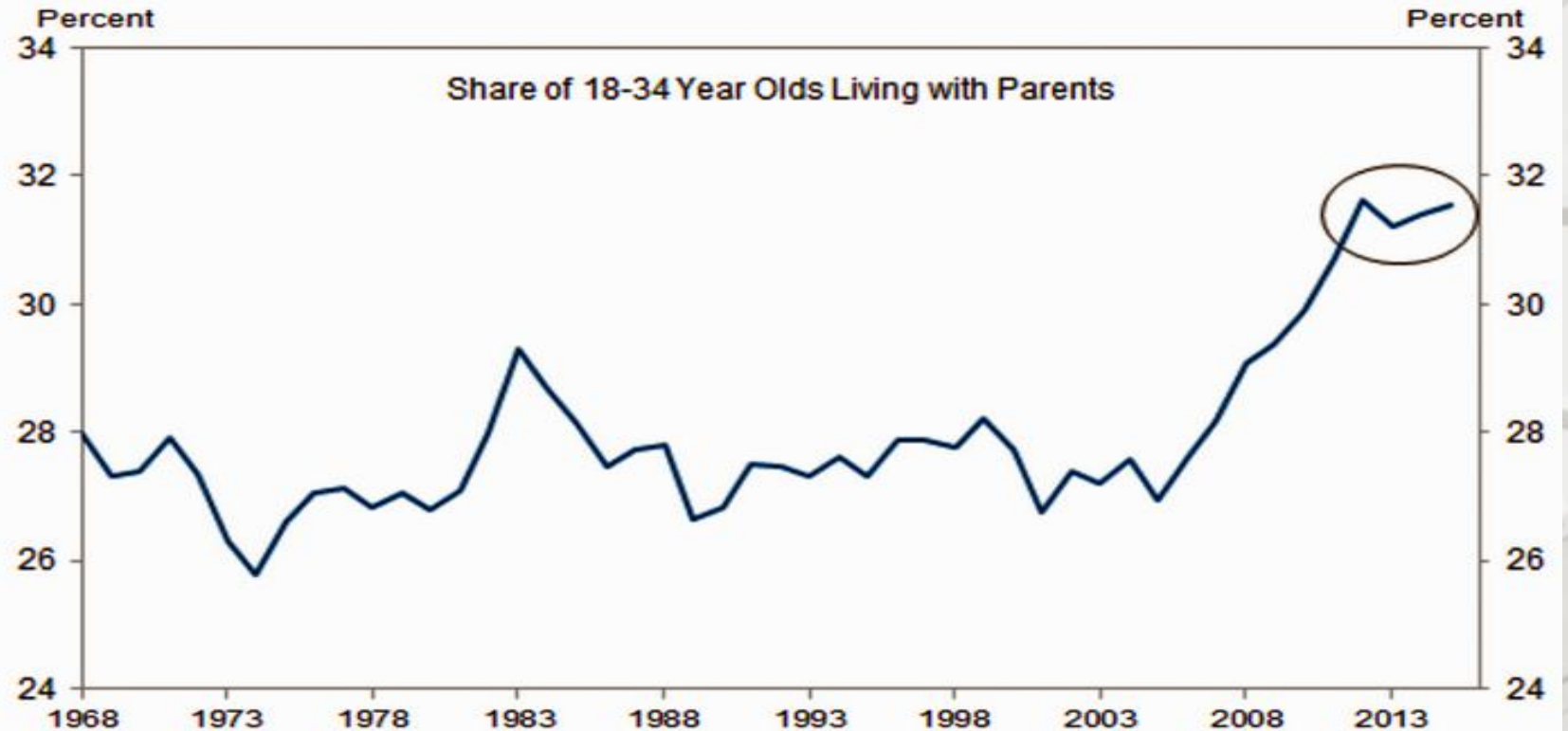
One of the consequences of stagnant real incomes is the increase in the number of offspring that still live with or have move backed into their parents homes.

Of course, jobs and incomes are not the only reasons mentioned. Other factors include changing home ownership preferences, availability of affordable housing units for sale, and location.

The next four slides give insight into this development.

Demographics

Exhibit 1. The Share of 18-34 Year Olds Living with Parents is 4 pp Higher than Historical Averages



Source: IPUMS-CPS, Goldman Sachs Global Investment Research

Goldman Sachs

“The share of young adults living with their parents has risen about 4 percentage points (or 3 million individuals) since house prices peaked in 2006. The share of ‘children in the basement’ has not come down recently despite significant improvements seen in the job market.” -- Hui Shan and Daan Struyven, Goldman Sachs

Demographics

- “First, the share of underemployed young adults fluctuates over the business cycle, but it also appears to have an upward trend in recent decades.”
- “Second, within this group of underemployed, the share living with parents was trending up several years before the downturn, although the pace accelerated after the recession. These two features suggest that some of the increases in the living at home share may be structural.”
- “Third, among those fulltime employed young adults, however, the share living with parents has been relatively stable over the past 15 years.”

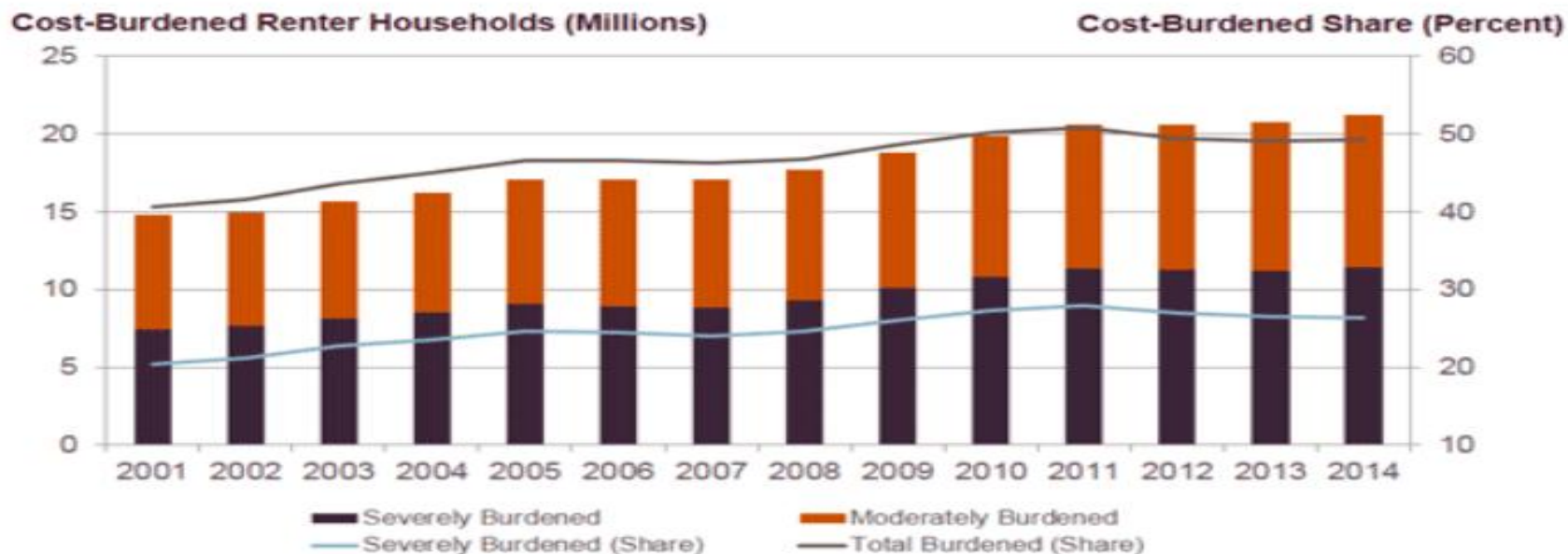
“Despite the strong relationship between the NEET rate and the share living with parents, 70% of the cross-country variation in living with parents cannot be explained by labor market conditions or other observable factors we looked at (e.g., marriage patterns and housing affordability). Cultural factors — which are harder to quantify — thus seem to play an important role too.”

[I]f cultural factors play an important role — as suggested by the international evidence — cyclical upturns could turn into structural shifts if living with parents becomes more socially acceptable over time.” -- Hui Shan and Daan Struyven, Goldman Sachs

Note: NEET ~ Not in Employment, Education, or Training.

Demographics and Housing

Figure 1: Renter Housing Cost Burdens Continue to Climb



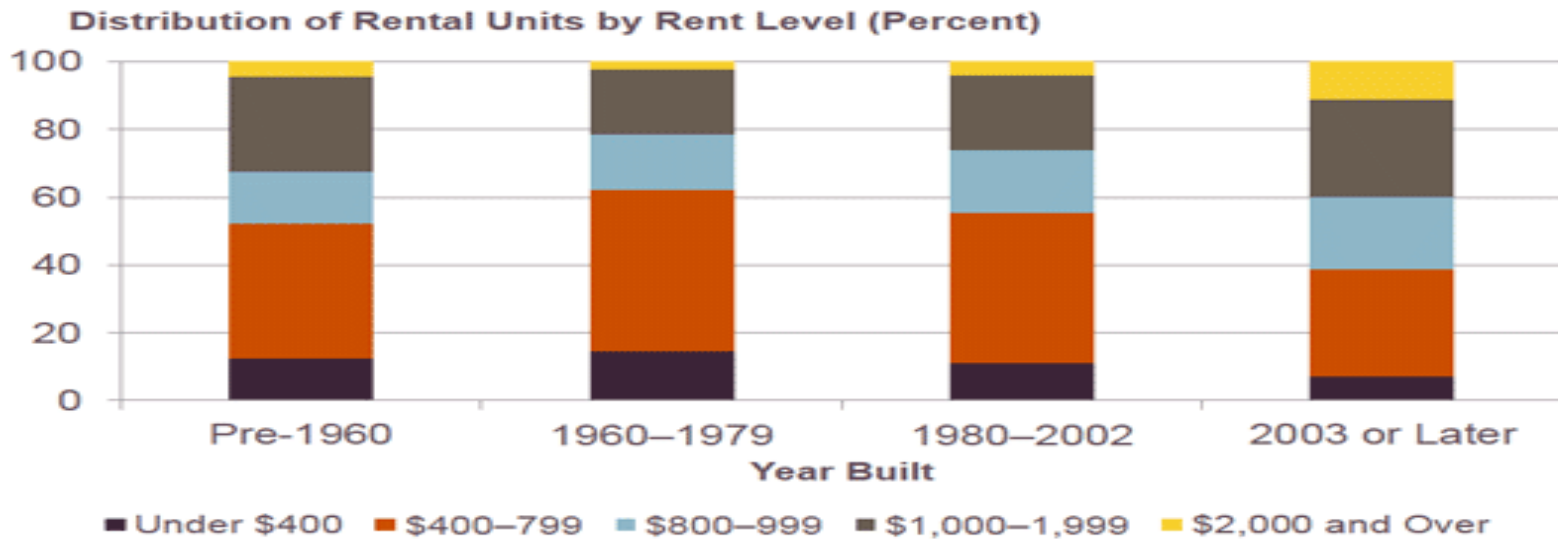
Notes: Moderately (severely) cost-burdened households pay more than 30% and up to 50% (more than 50%) of income for housing. Households with zero or negative income are assumed to have severe burdens, while households paying no cash rent are assumed to be without burdens. Source: JCHS tabulations of US Census Bureau, American Community Surveys.

Housing Cost Burdens Weigh Heavily on Low- and Moderate-Income Renters Across the Country

“As of 2014, just under half (49.3%) of renters were housing cost burdened, spending more than 30% of income on housing costs. This share includes more than one-quarter (26.4%) of renters who were severely cost burdened, spending more than half of their income on housing. The burden percentage rates remain near their peaks reached in 2011. In total, 21.3 million renters were cost burdened in 2014, 11.4 million severely so, both all-time high numbers.” -- Ellen Marya, Research Assistant, Harvard Joint Center for Housing Studies

Demographics and Housing

Figure 1: New Rental Housing is Increasingly Targeted at the Upper End of the Market



Note: Data includes vacant for-rent units and those that are rented but not yet occupied. Excludes no-cash rentals and other rentals where rent is not paid monthly. Source: JCHS tabulations of US Census Bureau, 2013 American Community Survey.

Surge in New Rental Construction Fails to Meet Need for Low-Cost Housing

“Though there has been a ramp-up in rental housing construction, much of this new housing is intended for renters at the upper end of the income spectrum (Figure 1). Indeed, in 2013, four in ten new rentals charged monthly rent of at least \$1,000, compared to less than a quarter of rentals built during the heavy volume of multifamily construction in the 1960s and 1970s, which was largely supported by federal subsidies. In addition, the median asking rent for new market-rate apartments has been rising in recent years, reaching \$1,372 in 2014, up by more than a quarter from 2012.” – Irene Lew, Research Assistant, Harvard Joint Center for Housing Studies.

Source: <http://housingperspectives.blogspot.com/2016/01/surge-in-new-rental-construction-fails.html>; 1/12/16

Demographics and Housing

Multi-Generational Households on the Rise

14% of all US households (16.5 million households!) now live multi-generationally, and the numbers continue to rise for three reasons:

1. Delaying marriage has increased the number of young adults living with their parents.
2. Surging retirement has increased the number of retirees living with their children.
3. Significant immigration from countries where multigenerational living is the norm has also helped boost the numbers.

Most of the US housing stock was not built for multigenerational living, providing a tremendous opportunity for home builders. According to our *Consumer Insights* survey of more than 20,000 new home shoppers, 44% would like to accommodate their elderly parents in their next home. Additionally, 42% of today's shoppers plan on accommodating their 18+ older children in their next home.

This focus on providing housing to extended family or friends may also account for 65% of respondents desiring a bedroom with bath on the ground level and 24% wanting a suite with a kitchenette and small living area.” -- Isabell Kerins, Director, DesignLens

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