

BAUER
COLLEGE OF BUSINESS
UNIVERSITY of HOUSTON

**INSTITUTE FOR
REGIONAL FORECASTING**

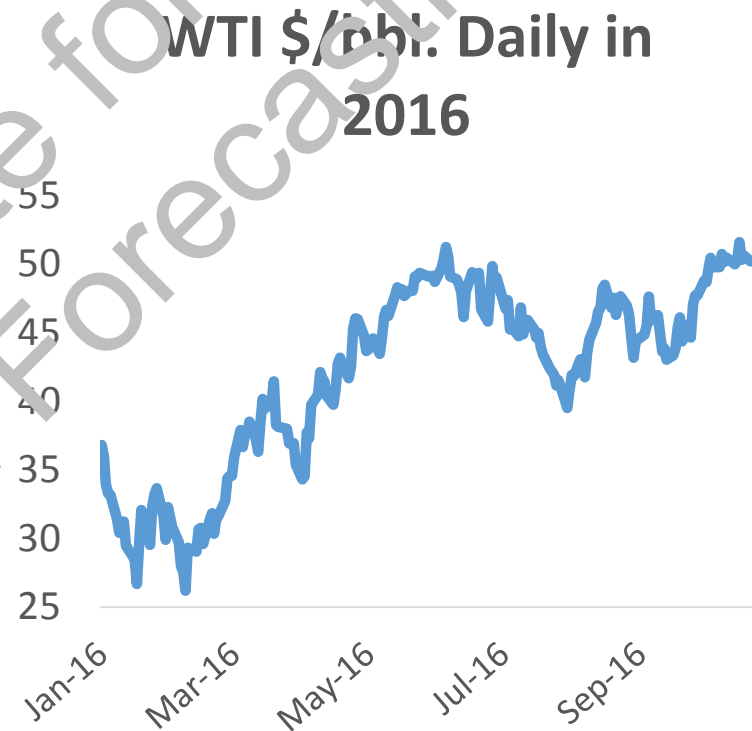
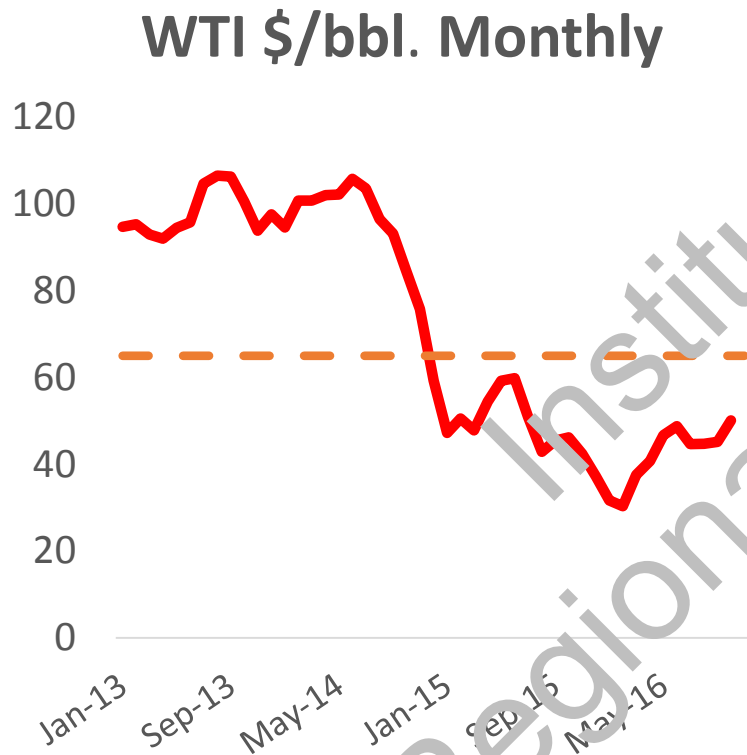
Waiting on Oil Markets: Houston's Economy Seeks Direction

Robert W. Gilmer, Ph.D.
C.T. Bauer College of Business
November 2016

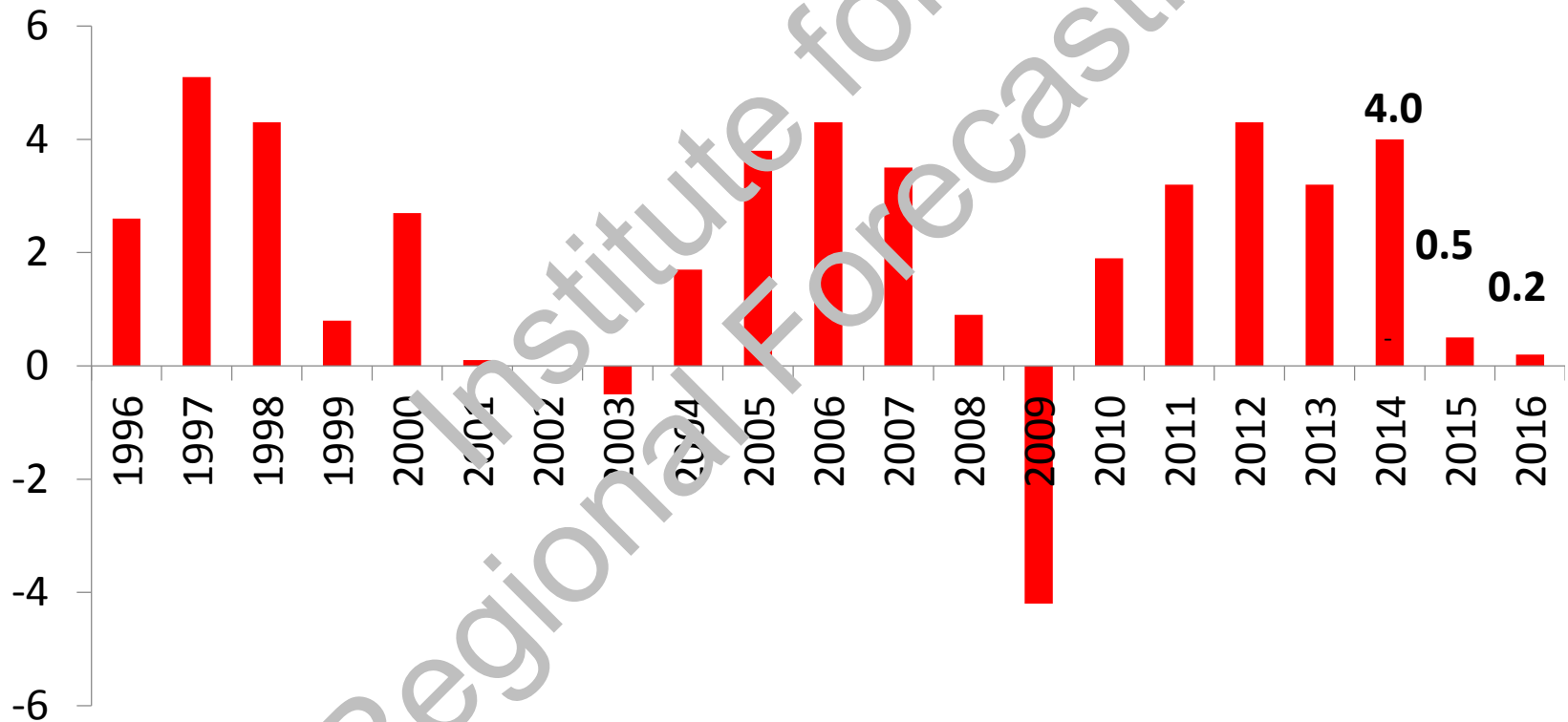
Could It Really Be Over?

- Late 2015 and early 2016 may have been the worst period ever for American oil, and we have now lost about 80,000 local oil-related jobs since December 2014
- The official employment data continue to show Houston's overall labor market growing slowly, adding 26,300 jobs in the last 21 months. But pending revisions to this data paint a bleaker picture of job loss and possible mild recession
- Unlike many other oil downturns, the U.S. economy continues to grow strongly, helping Houston's many employers that sell into national markets. A major expansion of petrochemical plants on the ship channel also continues to bolster the economy
- Optimism has crept into the drilling market, with some conviction that we put the worst behind us. Oil prices have come off the bottom, and the rig count has turned up steadily since finding a bottom in May. Now OPEC adds momentum to oil markets with proposed cuts?
- Could the oil bust be over? U.S. growth? A definitive turn in drilling? The end of petrochemical construction? Adverse data revisions? How does it all add up?

For Houston, Its Problems Have Been All About Oil



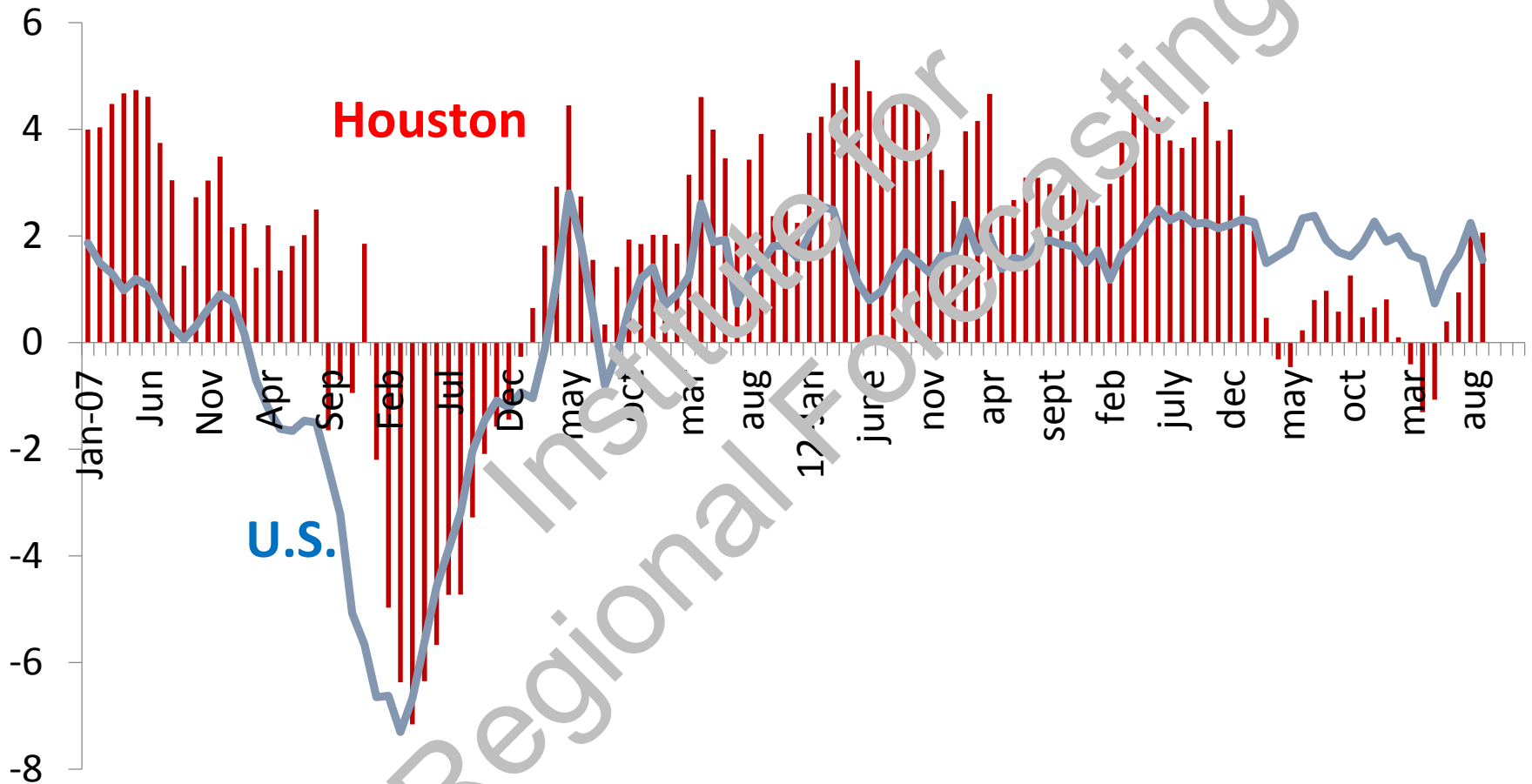
Current Slowdown Marked The End Of A Decade Of Job Growth



Note: December to December changes, except 2016 which is year-to-date, annualized, and seasonally adjusted. TWC estimates.

Slow But Still Positive: Houston Nets 26,300 Jobs In Last 21 Months

(3-month percent change at annual rates)



Texas Workforce Commission and Bureau of Labor Statistics

Official Figures Point To Houston Job Growth That Is Slow Or Slightly Negative

	December to December Changes	
	Jobs	Change*
2012	118,600	4.3%
2013	89,800	3.2%
2014	117,800	4.0%
2015	20,700	0.7%
2016 ... through Sept	5,600	0.2%

Texas Workforce Commission estimates at seasonally adjusted annual rates

Job Losses Are Driven By Energy

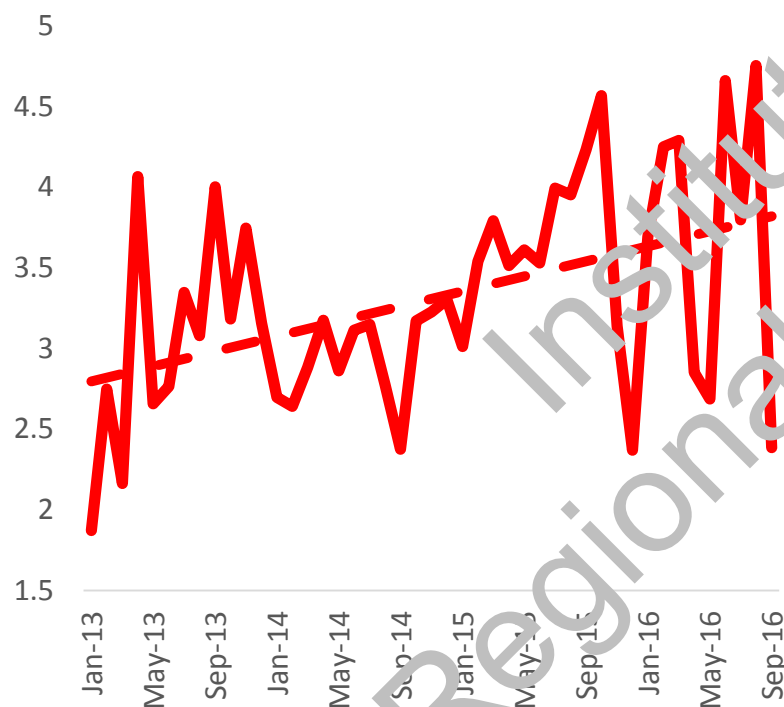
(Net Change in Jobs, seas. adj.)

Sector	In 2015 Dec '14 – Dec '15		So far in 2016 Dec 15 - Sep 16	
	New Jobs	Percent	New Jobs	Percent
Total Payroll	20,700	0.7%	5,600	0.2%
Mining	-17,600	-17.3%	-6,200	-9.1%
Construction	12,100	5.6%	-8,800	-5.6%
Manufacturing	-23,900	-9.6%	-6,000	-3.4%
Machinery	-11,600	-19.6%	-4,800	-13.9%
Fab Metal	-10,600	-17.5%	-1,800	-4.4%
Wholesale Trade	-1,200	-0.7%	-3,600	-2.8%
Prof/Buss Services	-5,700	-1.4%	-4,600	-1.3%

*2016 TWC estimates at seasonally adjusted annual percentage rates

Growth Of Selected Services Remains Strong

Percent 3-month change at annual rates, seas. Adj.



New Jobs Added Since Oil Crisis Begins in Dec 2014

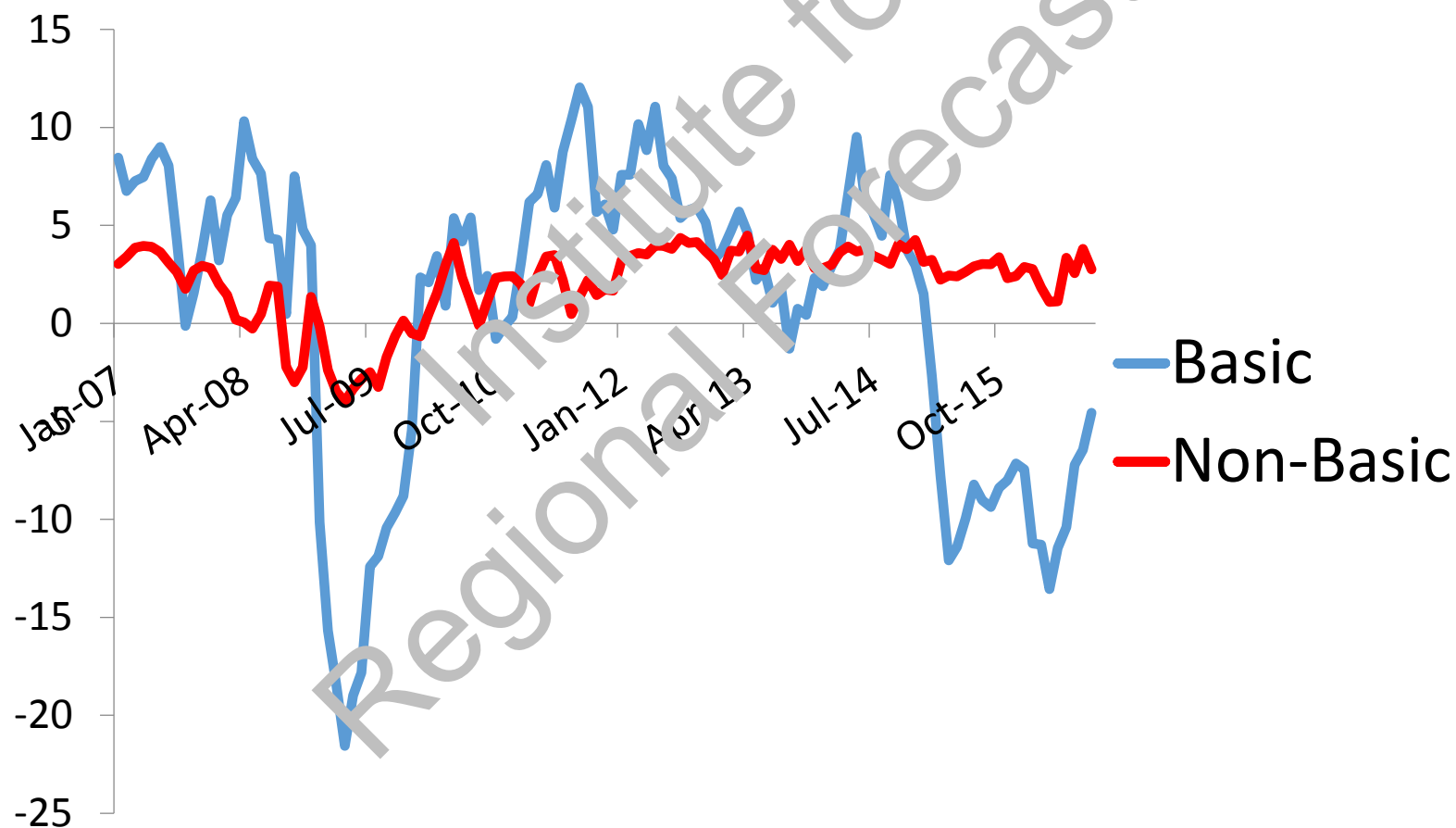
- 29,100 food service
- 25,500 health care
- 18,000 retail trade
- 10,500 public education
- 3,500 entertainment
- 2,000 finance
- 1,400 accommodation

Where Did This Service Sector Growth Come From?

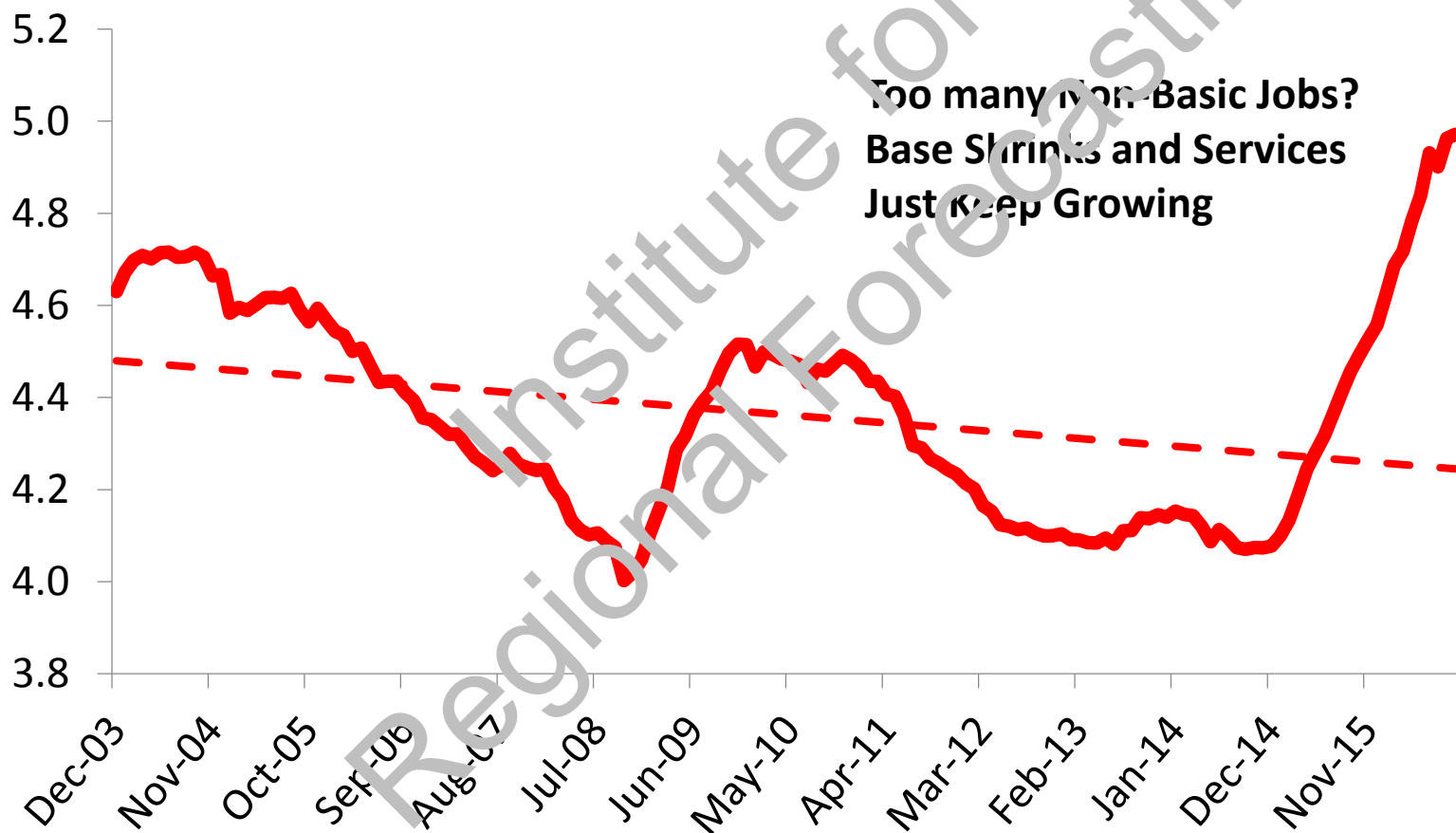
- Where did this services growth come from?
 - Strong national markets: United Airlines, Sysco, AIG, HP
 - Petrochemical construction boom in East Houston
 - Past momentum, built on Houston's 630,000 new jobs from 2004-2014
 - In-migrations continues strongly for several quarters after job growth slows
 - Most direct damage is confined to oil producers, oil services, and manufacturing ... so far
- BUT ... we are now 23 months into this slowdown. The chemical boom is over, momentum has waned, population growth is evaporating. Only the U.S. economy left to help out ... until oil turns up.

Basic Jobs Still In Reverse, Non-Basic Jobs Running Out Of Momentum

(3-mo percent change at annual rate)



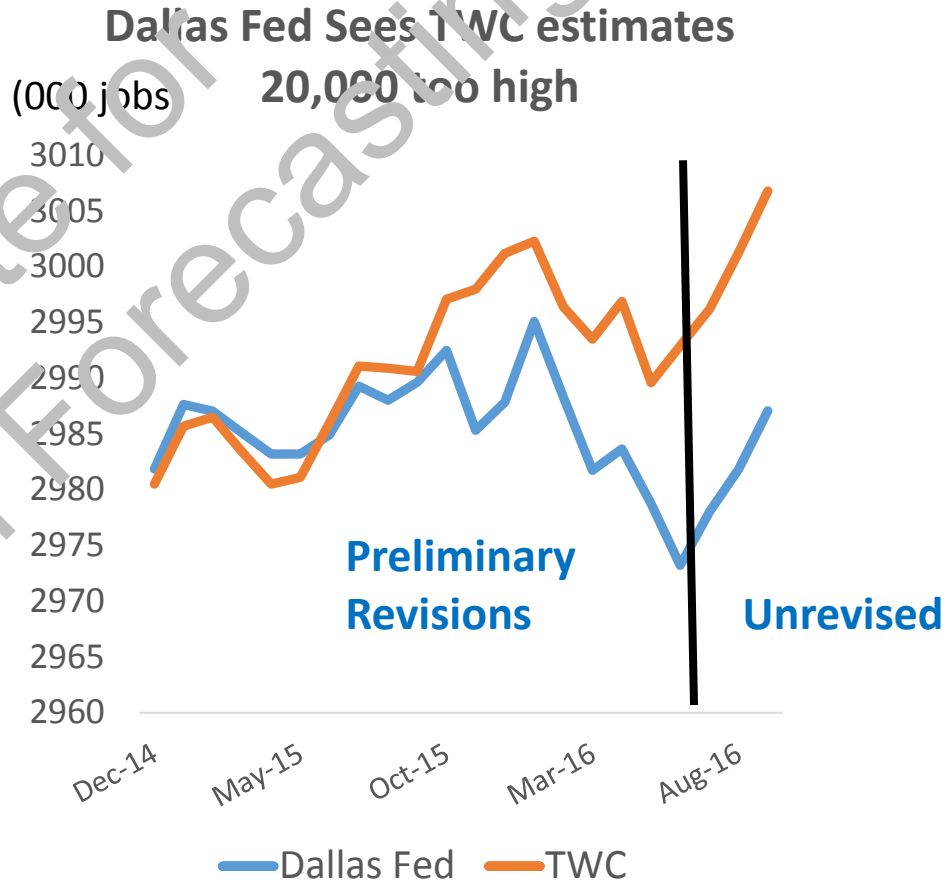
About Four Non-basic Jobs In Houston Supported By Each Base Job



All That Said And Done ... The Jobs Numbers Are Subject To Revision

(Change in Payroll Jobs)

Year	Period	TWC Official Number	Dallas Fed Revised
2015	Dec - Dec	20,700	6,000
2016	Dec - Sep	5,600	-200



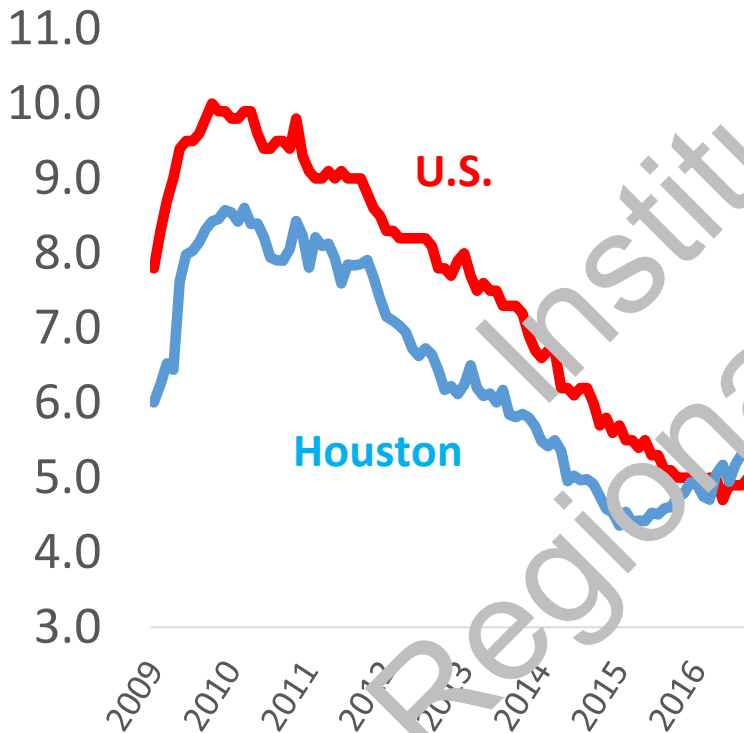
Notable Sectors Where TWC Job Estimates Were High Or Low By June

- Total Over-Estimate = 19,700
- Sectors Over-Estimated
 - Manufacturing = 10,400
 - Leisure and Hospitality = 7,100
 - Wholesale Trade = 6,500
 - Education and Health = 2,200
 - Retail = 2,000
- Sectors Under-Estimated
 - Professional and Business Services = 5,300
 - Transportation = 1,800
 - Information = 1,800
 - Construction and Mining = 1,400

Note: TWC estimate minus Dallas Fed preliminary re-benchmark

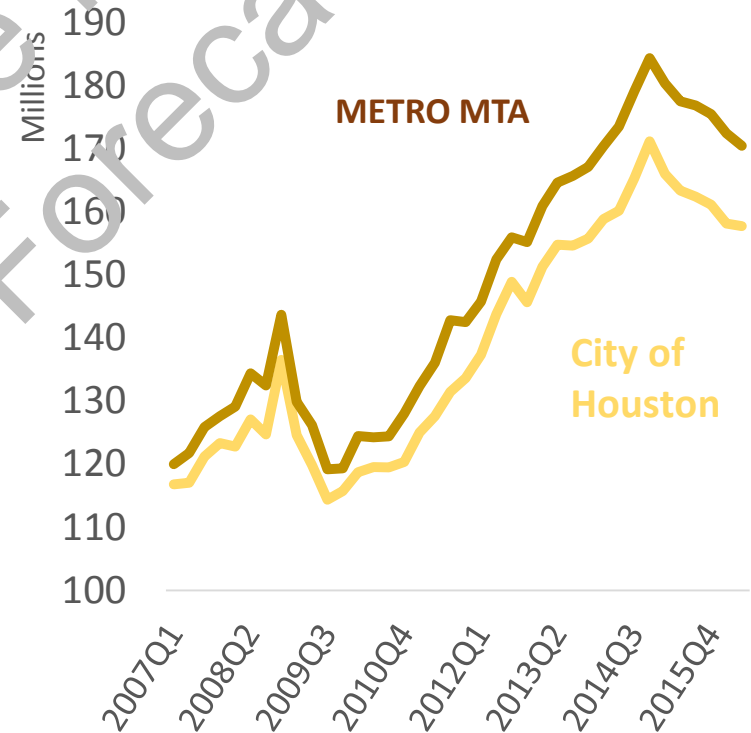
Plenty Of Other Signs Of A Big Slowdown Or Mild Reversal

Houston unemployment rate moves above U.S. to 5.4%



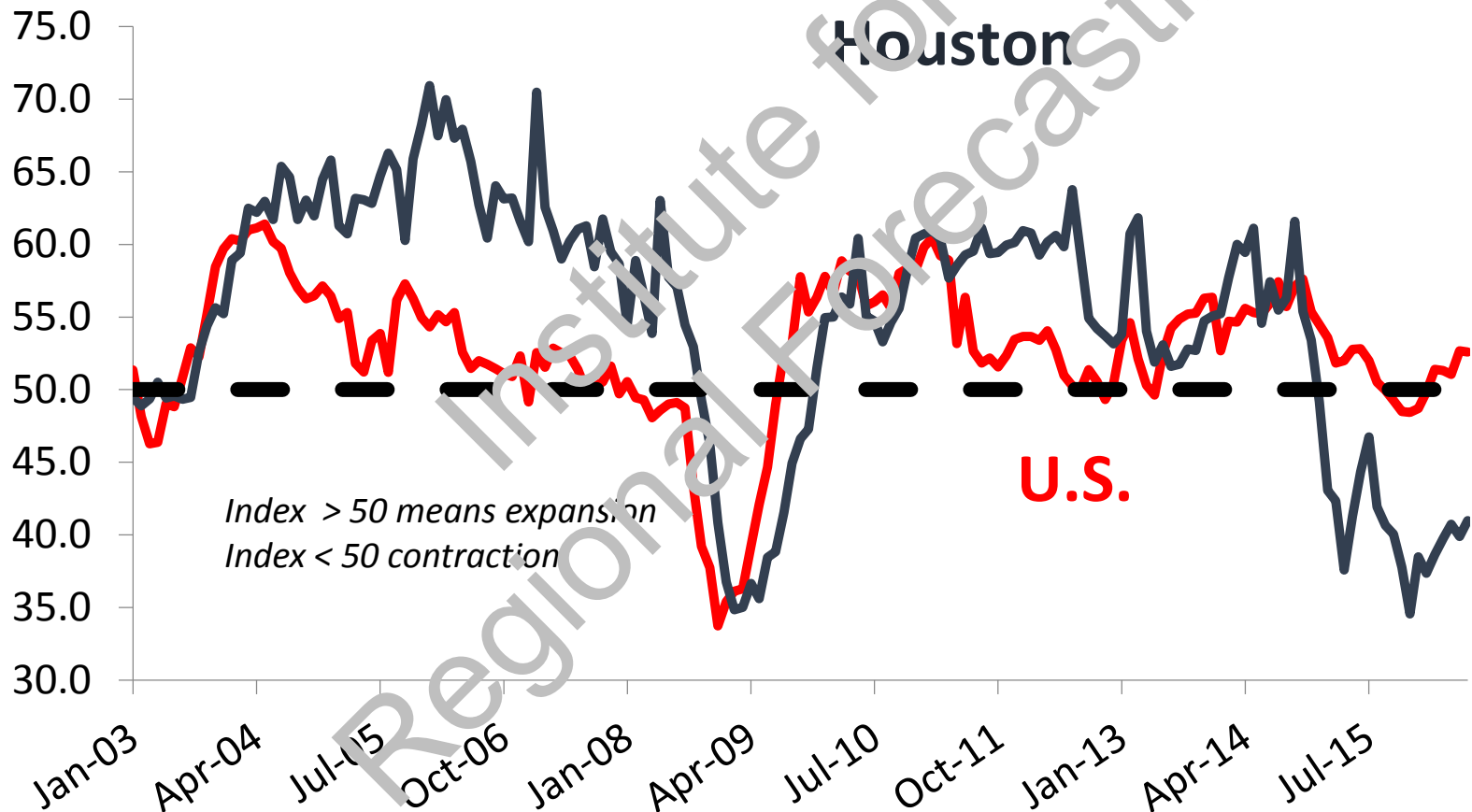
Bureau of Labor Statistics

Quarterly Sales and Use Tax Collections Down 8% for City & METRO MTA



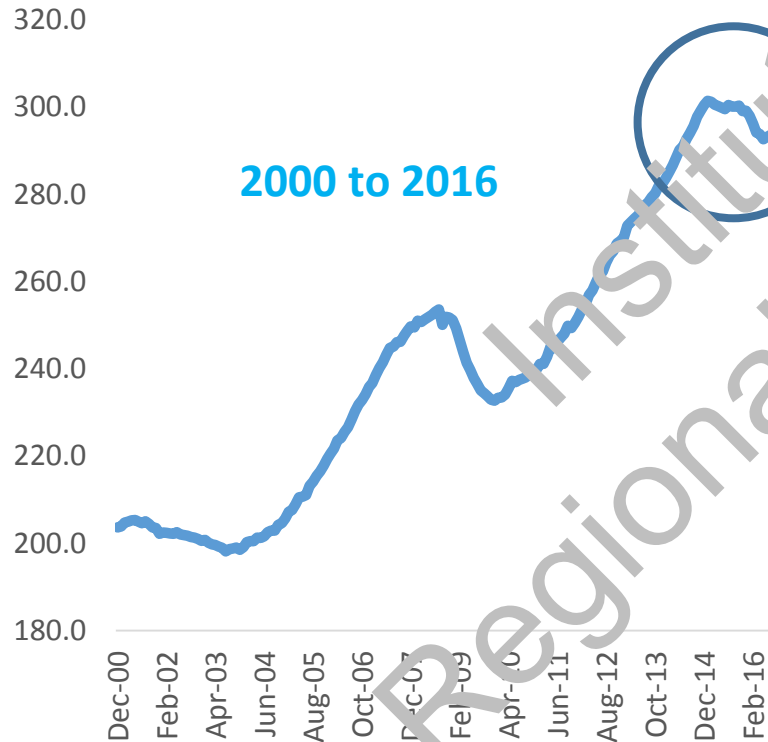
Texas Comptroller, seasonally adjusted

Purchasing Managers' Index U.S. And Houston Compared (S.A.)

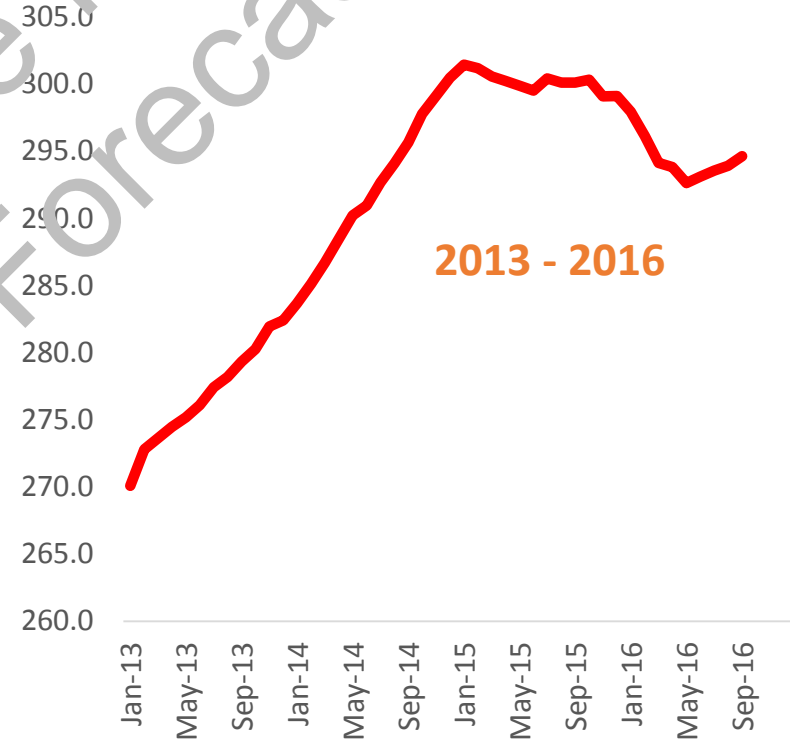


Recession? Ask The Dallas Fed Business Cycle Index

Tracks local business cycle with four variables



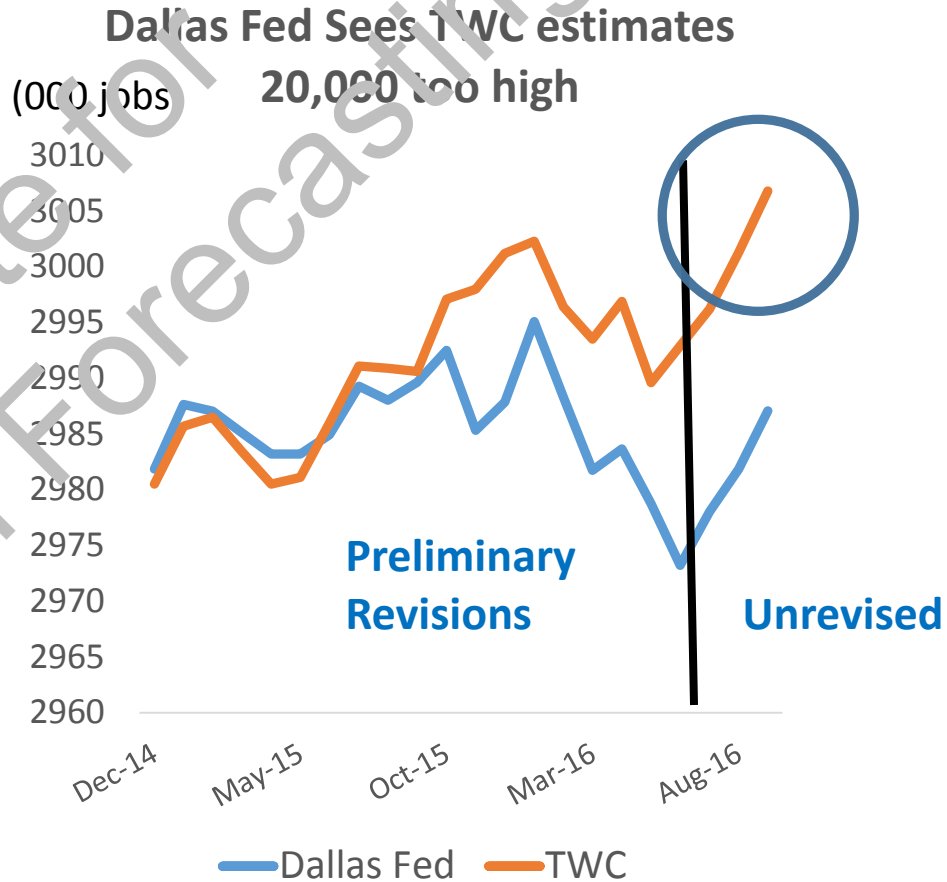
Now on brink of recession, if not in it



What Drove The Big Upturn In The Third Quarter?

(Change in Payroll Jobs)

Year	Period	TWC Official Number	Dallas Fed Revised
2015	Dec - Dec	20,700	6,000
2016	Dec - Sep	5,600	-200

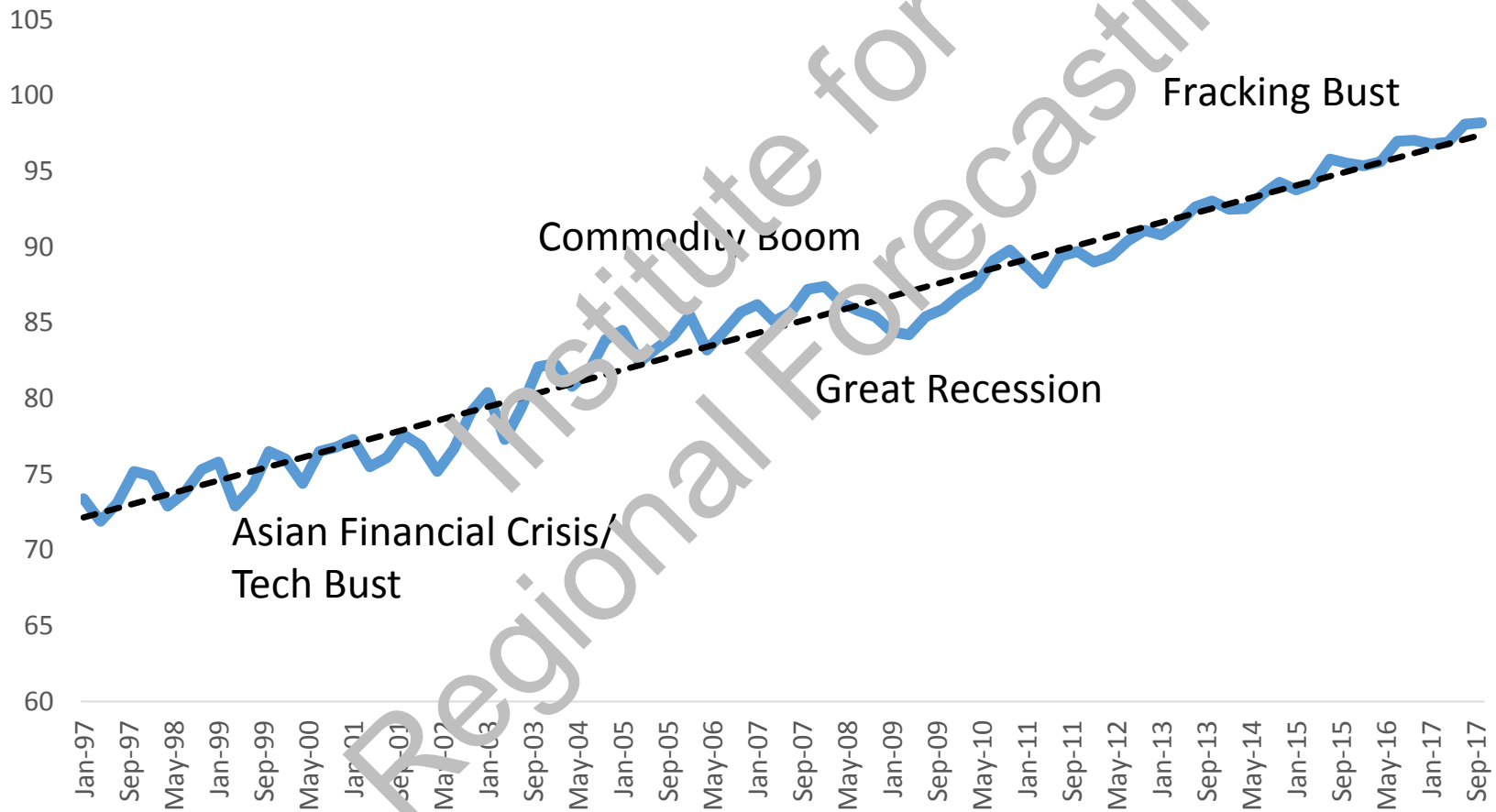


Oil Markets and Oil Price



Over The Long-term The World's Demand For Oil Has Grown Steadily

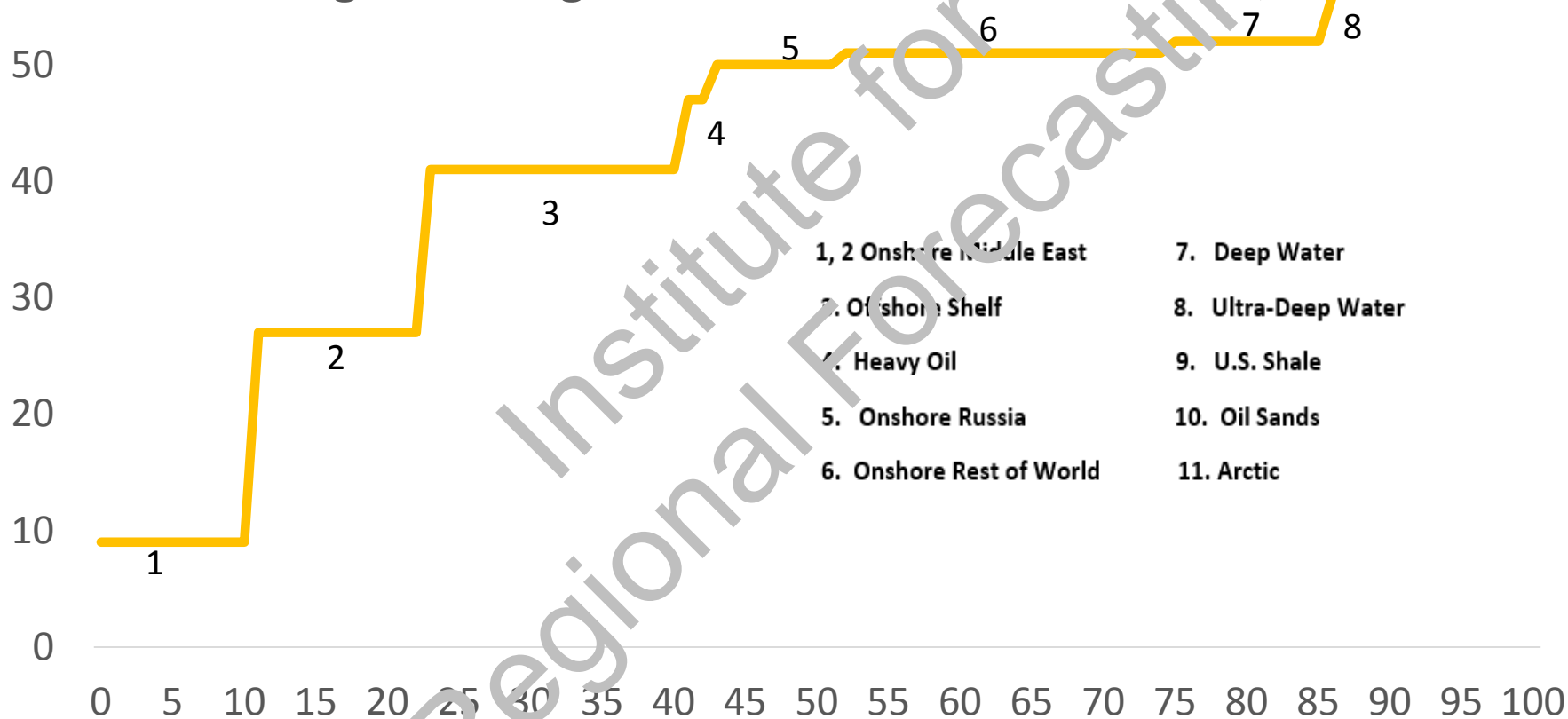
(million bbl./d)



\$/bbl.

Drilling Recovery Means Oil Near \$65/bbl.

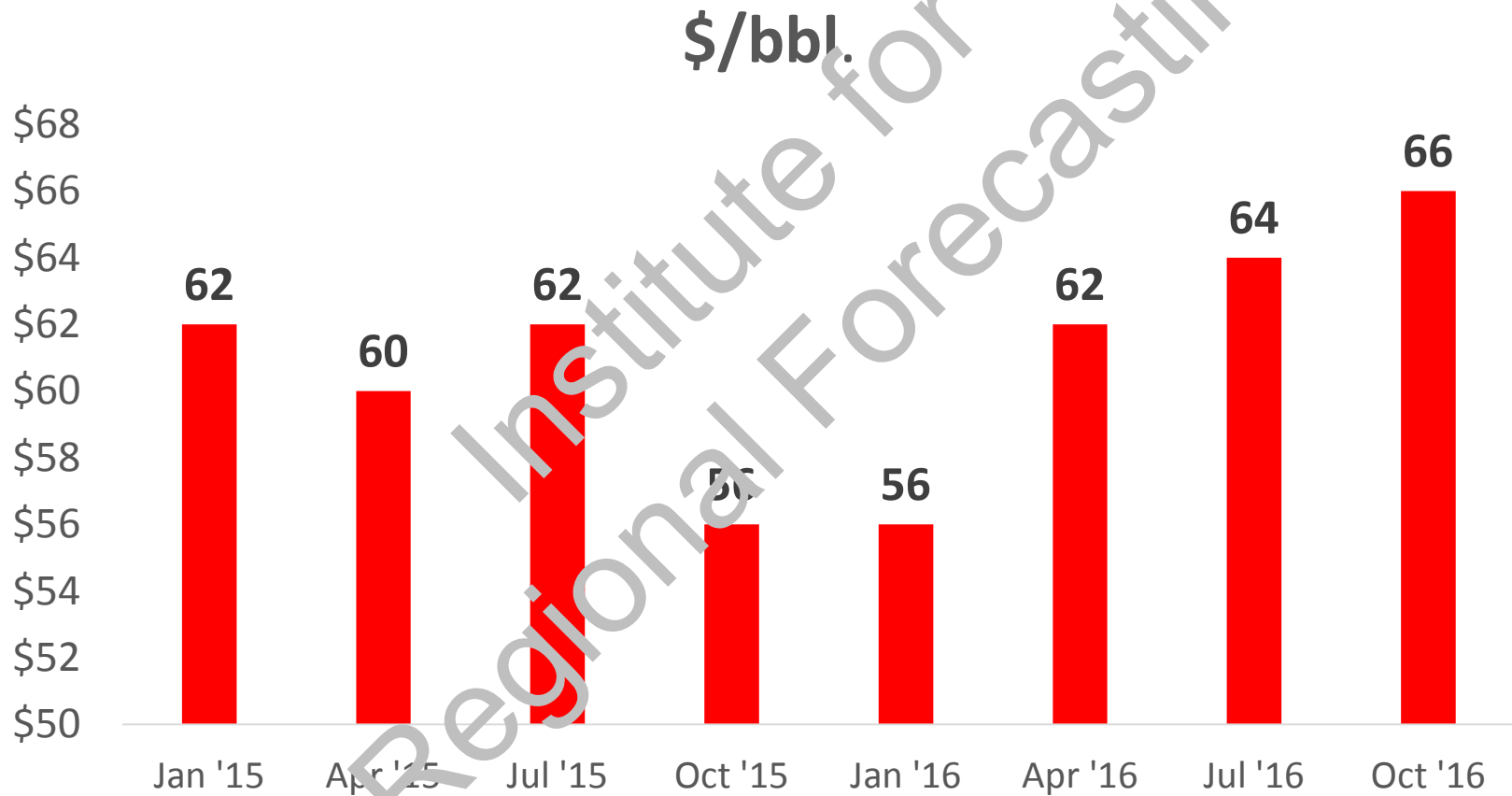
Long-Run Marginal Cost of Global Oil Production



This chart is stylized and illustrative

Production (million bbl./d)

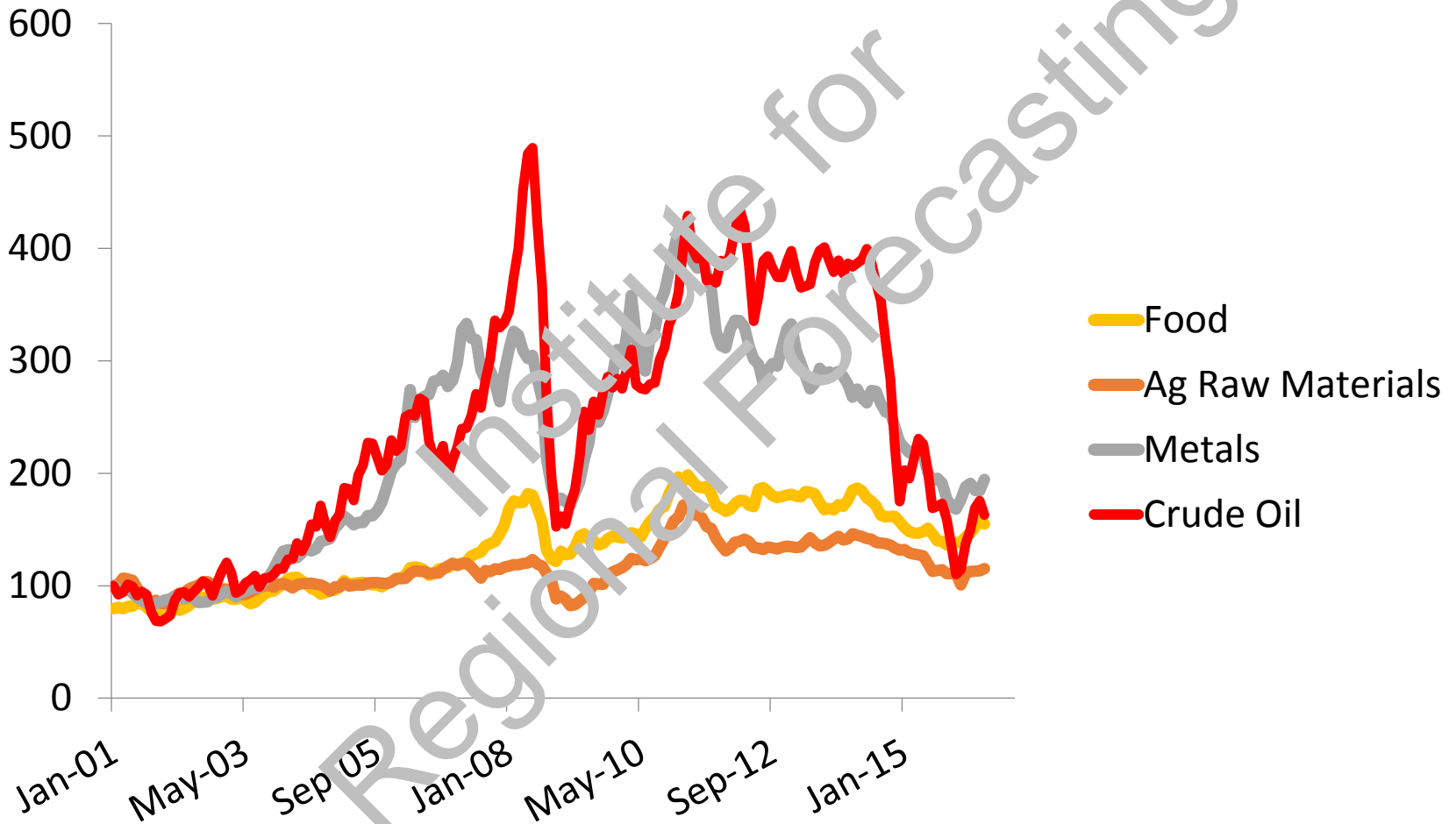
Price Of WTI Oil As Implied By Valuation Of The Stock Of 40 Producers



Goldman Sachs Research, at first week of each quarter

The Commodity Super-Cycle Is Over

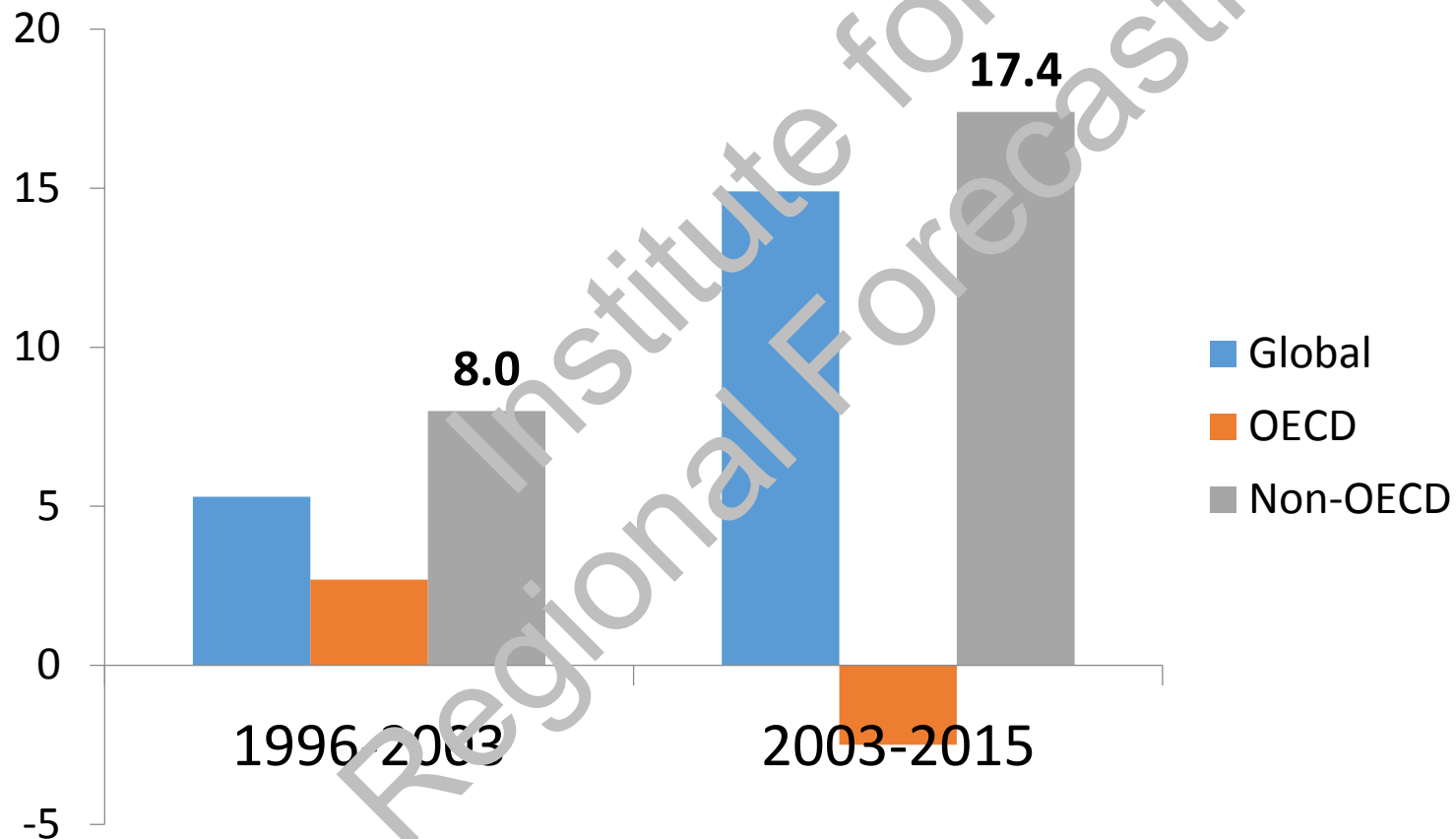
(price index: Jan 2001 = 100)



International Monetary Fund

Growth In The Demand For Oil Comes From Emerging Markets

(million b/d)

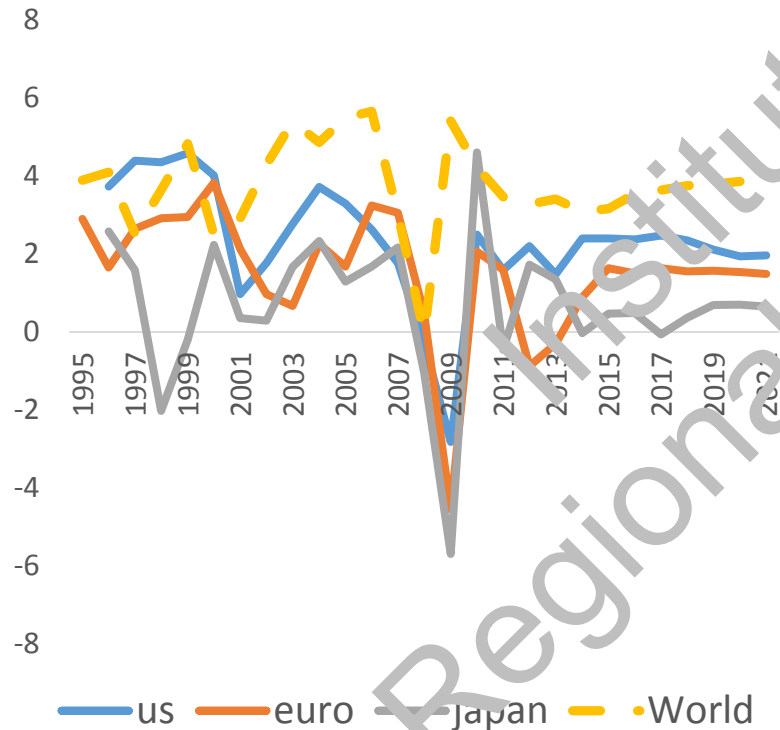


International Energy Agency

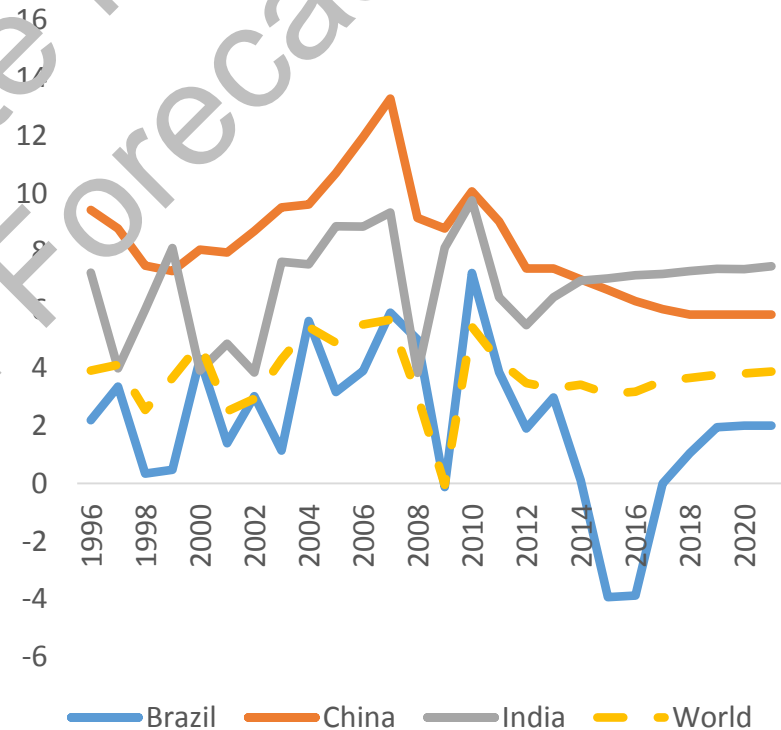
Global Growth Runs Below Long-Run Averages Through 2018

(percent change in GDP)

Developed world grows below
global average



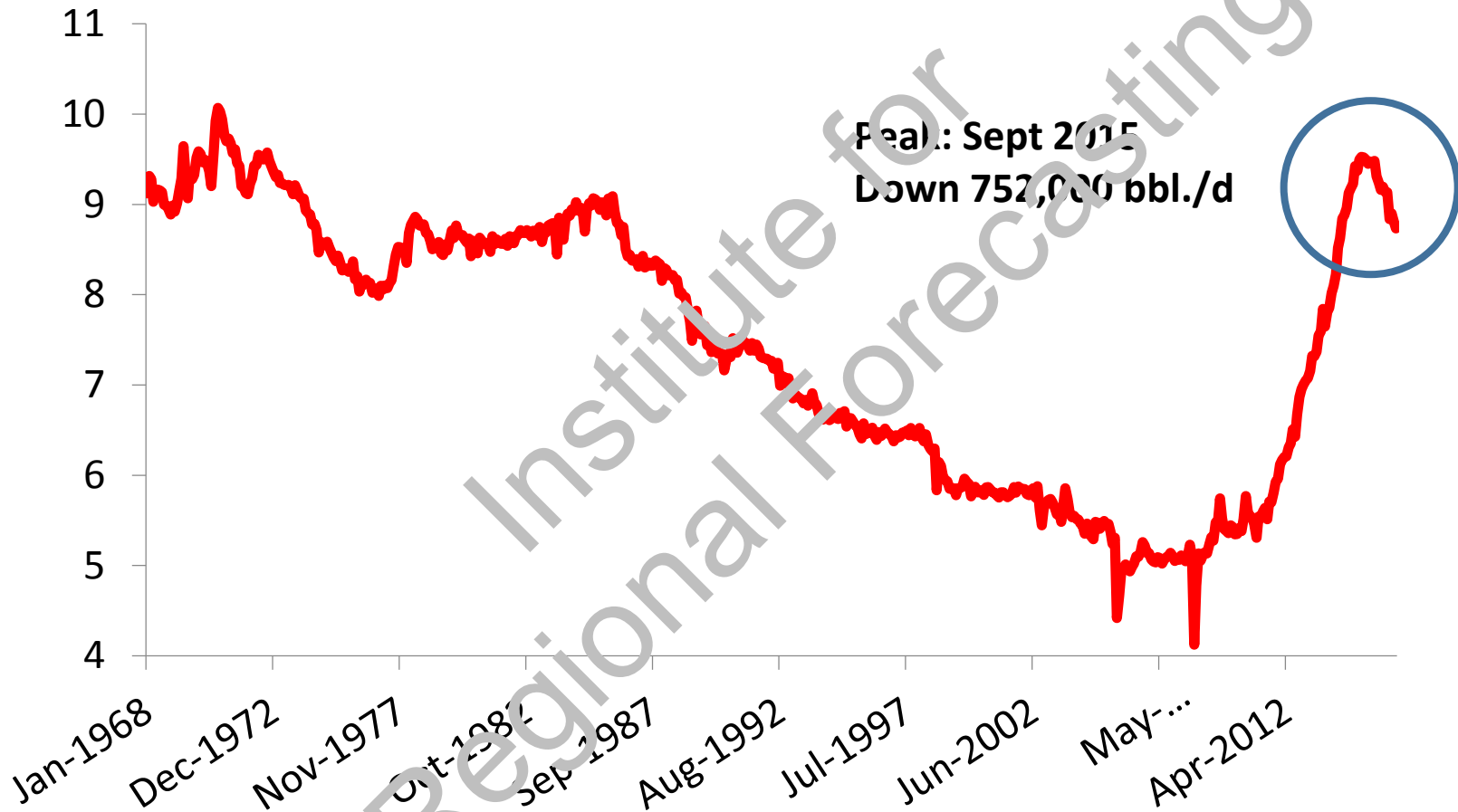
Emerging markets have slowed,
but well above world average



IMF World Economic Outlook, October 2016

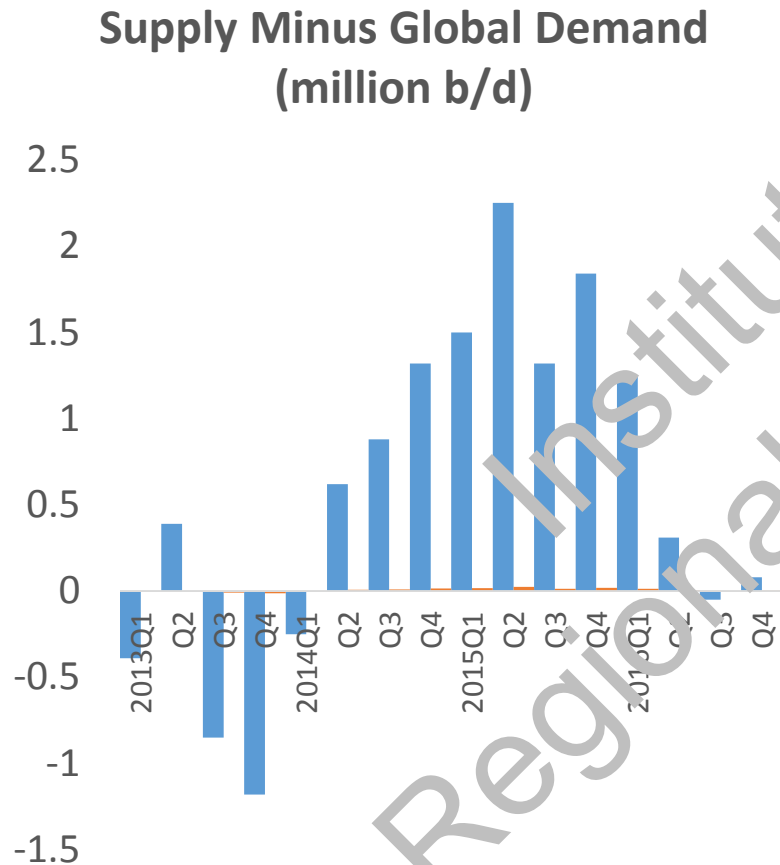
On Supply Side? U.S. Shale Reversed 40 Years Of Declining Oil Production

(million barrels/day)

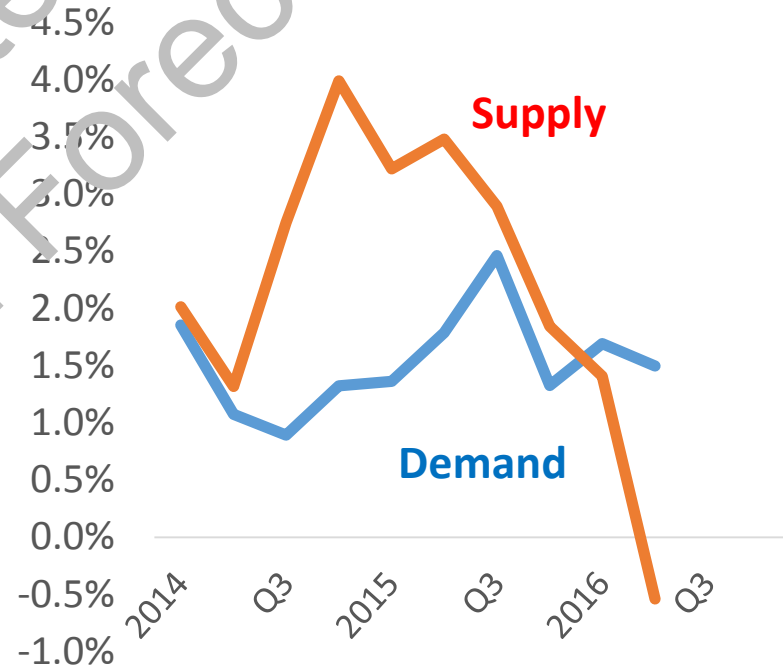


DOE/EIA, Seasonally adjusted by IRF

Global Crude Surplus Was Never Large, Gap Now Closing?

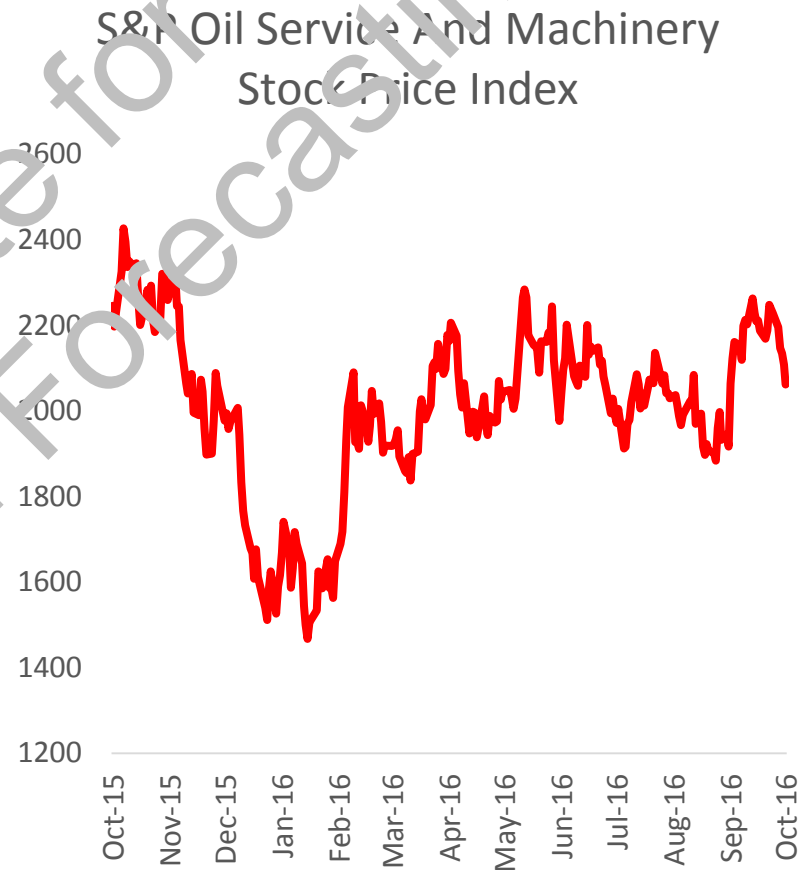


Growth of Demand Holds
While Supply Shrinks
(4-Q Percent Change)



As Oil Prices Rose This Spring, Mild Optimism Returned To The Oil Market

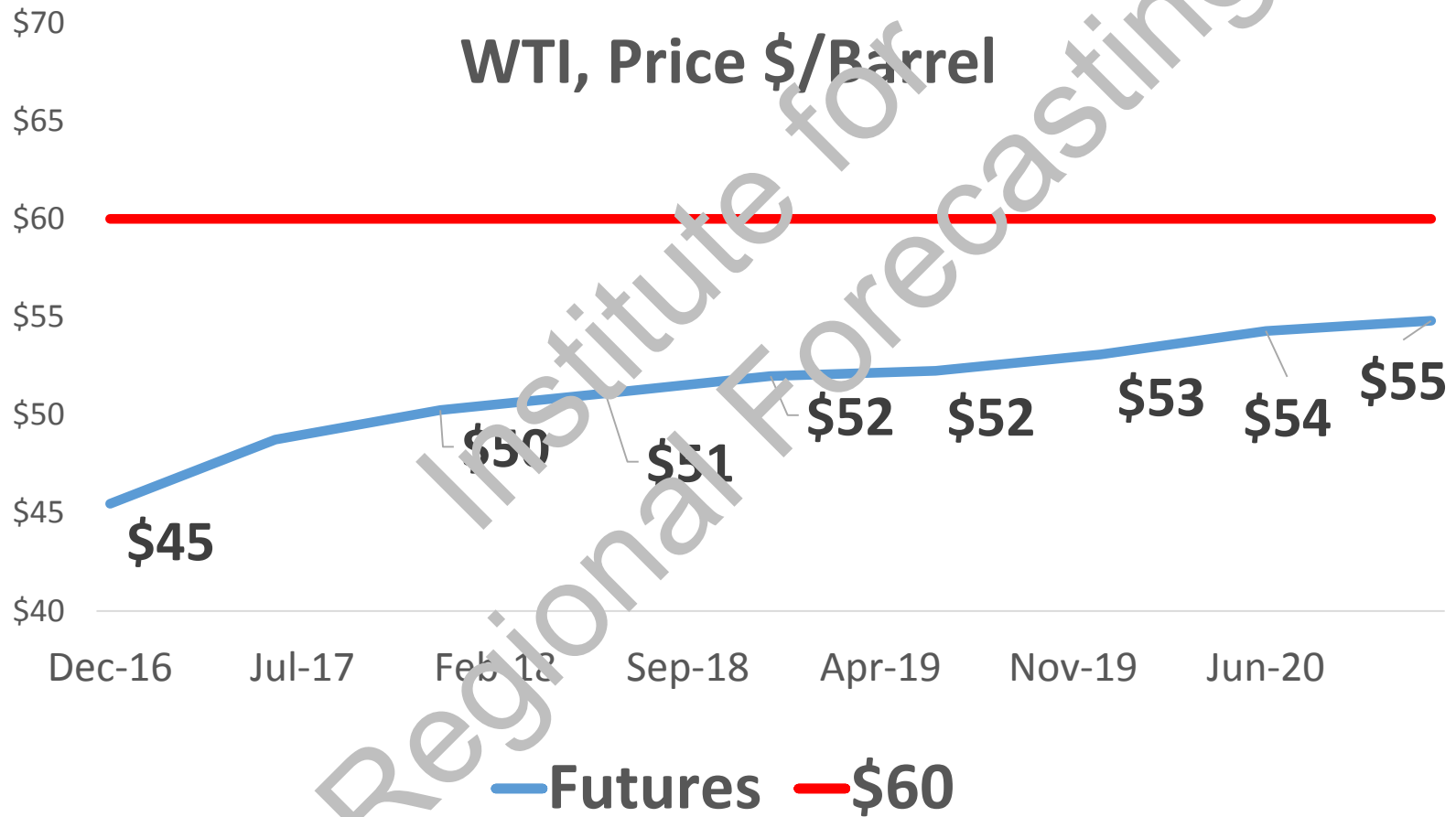
- The big three oil service companies all declared a bottom was in place for drilling in Q2/Q3 earnings reports
- Oil service and machinery stocks quickly rose 30% in February and March as oil prices moved off \$30/bbl., and are up 10% since then
- The rig count has steadily added back over 150 rigs from the March low
- But ahead: “a long, slow grind ahead,” “no V-shaped recovery in sight,” and “land recovering, but not yet international and offshore”



Now A Lifeline From OPEC?

- Agreement perhaps in place to cut 0.5-1.0 million bbl./d of production from current production estimates. Would cut OPEC production from 33.8 million daily barrels to perhaps 32.5
- Devil is in the details. Who cuts how much? Incendiary possibilities with Saudi's vs. Iran or Saudi's vs. Russia and Libya. Basket cases like Libya, Nigeria and Venezuela want opportunity to build their production back up
- Technical meetings on implementing cuts in late October did not go well. Iran moved from "willing to freeze" to "not willing to consider." Regional politics? Bargaining strategy? Oil price promptly slipped back to mid 40s.
- Higher near-term prices? History says these agreements can work for a while – but only if the Saudi's really want it. Best to think of this as the Saudi's stepping in to help Texas and North Dakota get this oil marketing rebalancing complete. They won't get much help from the rest of OPEC.

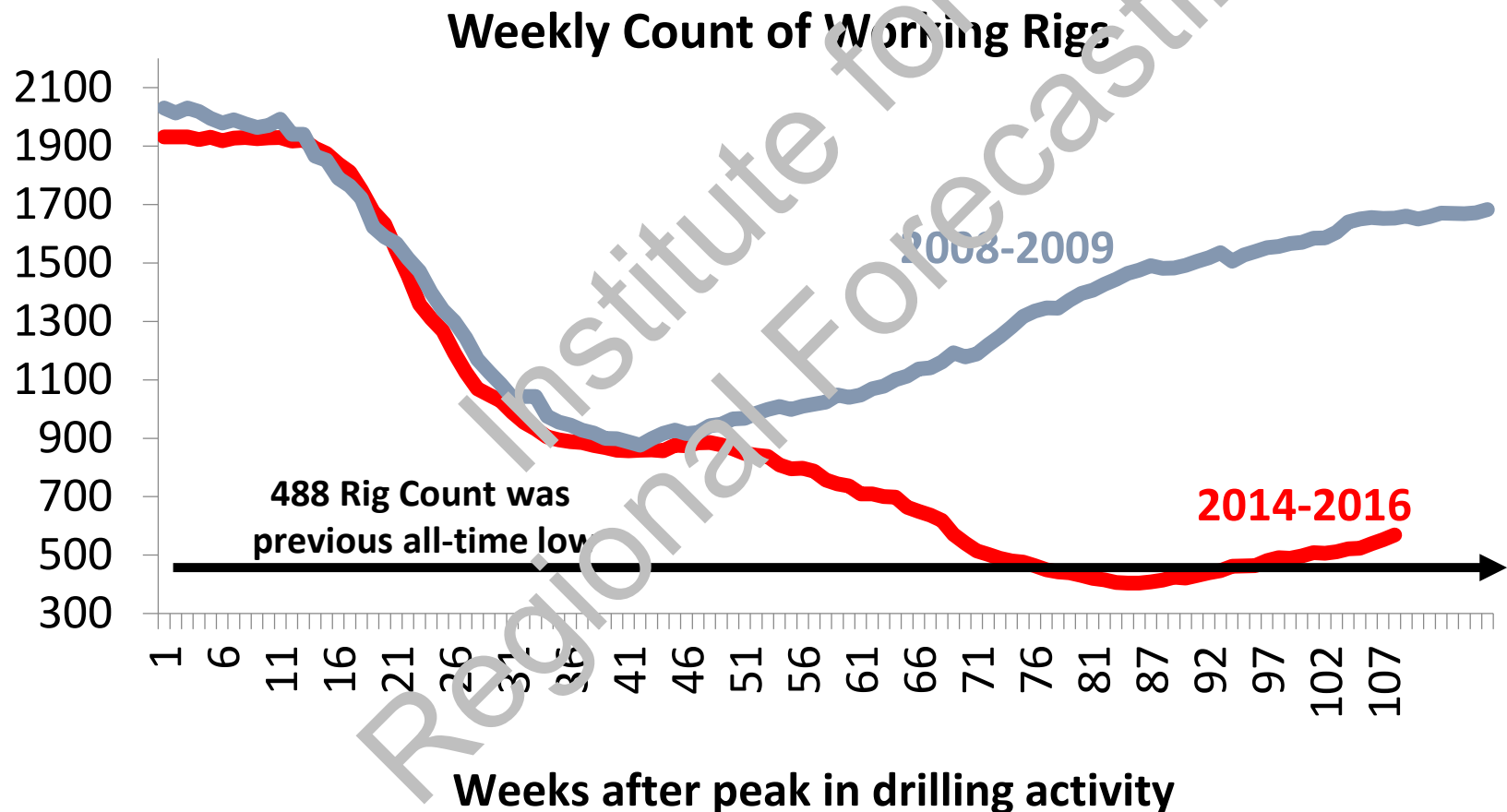
What The Futures Market Thinks About WTI Oil Price



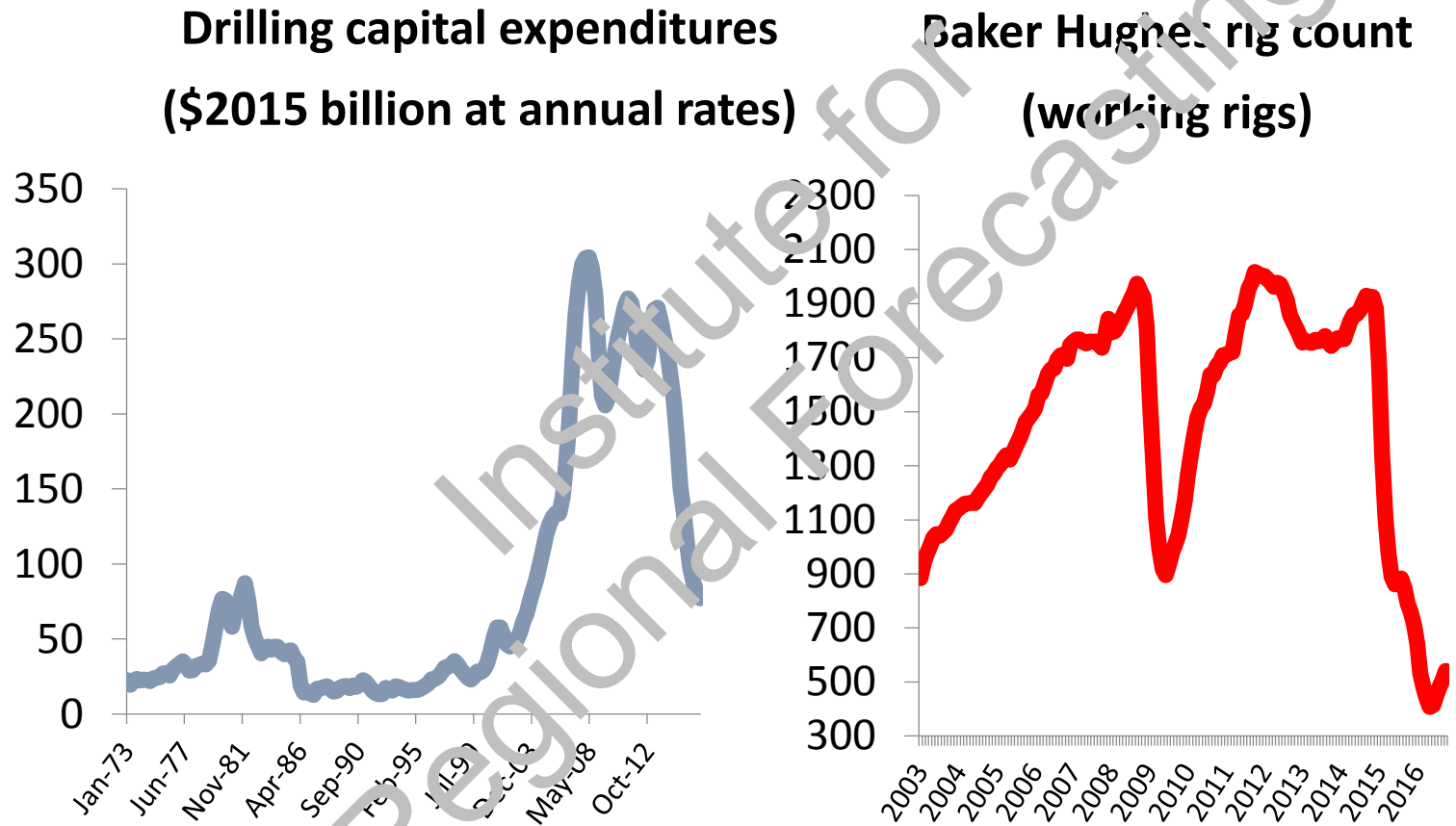
As of November 2, 2016

Definitive Turn In Drilling? Or Just A Dead Cat Bounce?

Drilling Has Turned Up from Historic Lows



The Greatest Oil Boom And Bust Is Now Coming To An End ...?



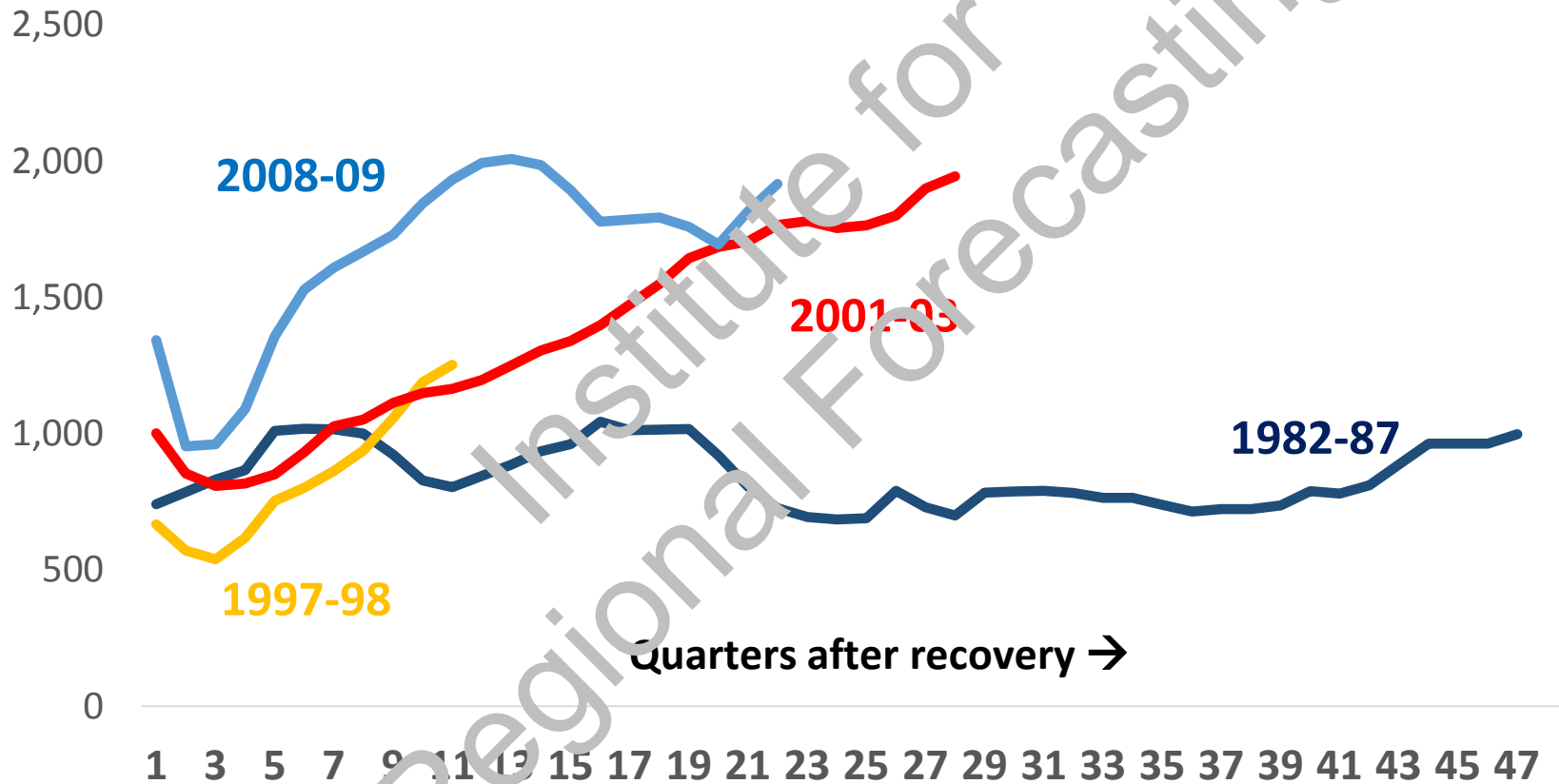
Capital expenditures for E&P from Oil and Gas Journal, calculations of IRF

Thinking About Recovery In the Oil Patch



Recovery In Rig Count After Oil Prices Definitively Move Up

(working rigs by quarter after oil prices begin to rise, s.a.)



Baker Hughes, calculations of IRF

Building Scenarios For Recovery In Oil

- When will oil prices hit bottom?
- When will the rig count turn up?
- When do energy jobs begin to come back?
- How high will the rig count go in this recovery?
- How long before the rig count reaches these highs?

Drilling Recovery After The Price Of Oil Hits A Low

Past Recoveries

Forecast

Quarters Until:	1982-87	1997-98	2001-03	2008-09	High	Medium	Low
Rig Count Begins Definitive Turn Up	0	2	2	1	2	2	6
Energy Jobs Make a Low	2	4	4	3	4	6	11
High Rig Count	never	8	8	11	10	12	16

Note: For the high, medium and low forecasts, it is assumed that the rig count returns to 1650, 1500, and 1300, respectively. Given the complexity of modern and future rigs, think of this as future activity based on “current equivalent” rigs.

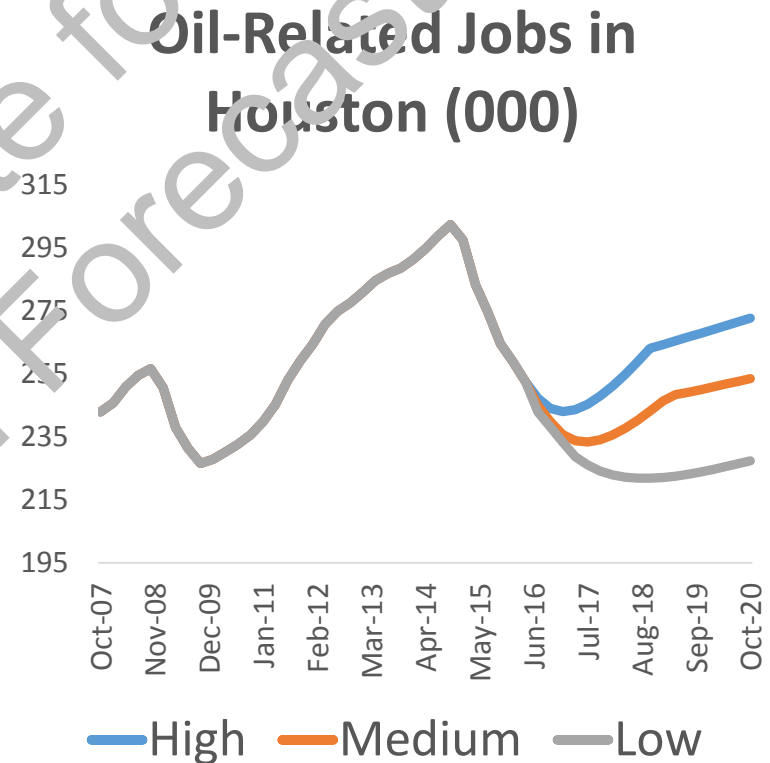
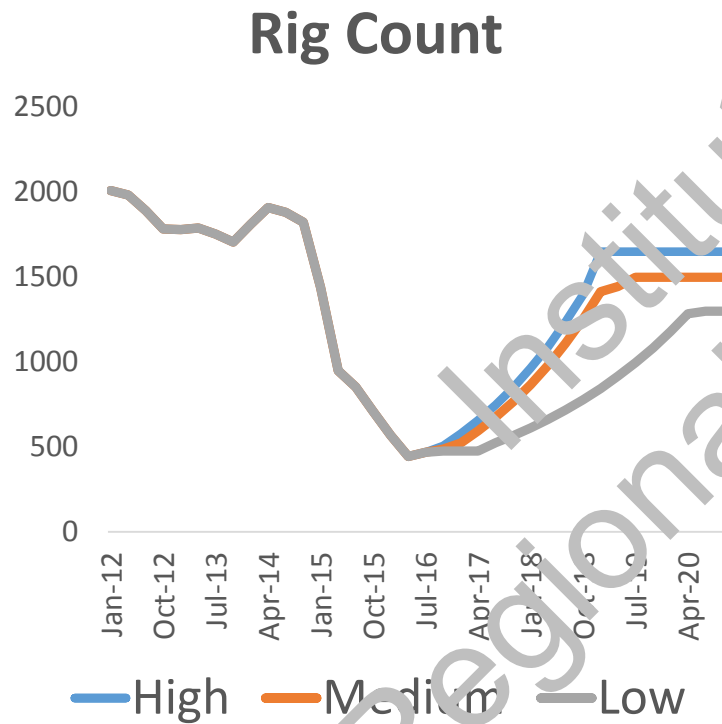
Other Key Assumptions For Houston Recovery

- **Rig Count *Accelerates*?**
 - High Scenario: 2016 Q4
 - Medium Scenario: 2017 Q1/Q2
 - Low Scenario 2017 Q3/Q4
- **Rig Count Max After Recovery?**
 - High Scenario: 1650
 - Medium Scenario: 1500
 - Low Scenario: 1300
- **Return of Energy Jobs**
 - Follow the rig count
 - Allow for complexity of fracking, productivity trends
 - Never returns to previous highs in any scenario



Note: Rig count accelerates refers to point where “long slow grind” ends and normal pace of recovery in drilling sets in.

Rig Count Scenarios And The Return Of Oil Employment In Houston



U.S. Economy Continues to Work for Houston



Good things
come from
S/SCO™

WM®
WASTE MANAGEMENT
Think Green.®

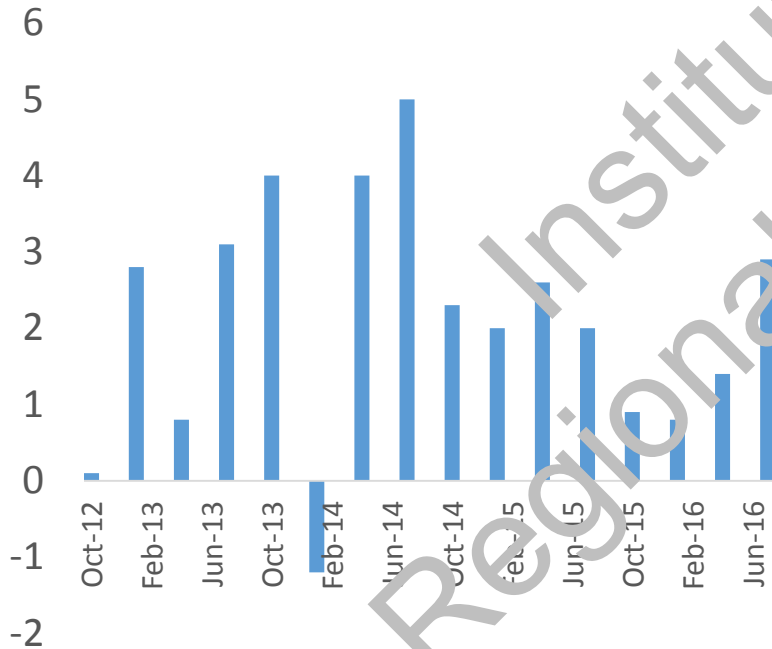
U.S. Economy Continues To Grow Strongly And Create Jobs

- Assume in all scenarios that the U.S. economy has put the Great Recession behind it
- Consumer has deleveraged; state and local governments are collecting revenues at a healthy rate and spending; the housing market has returned to close to normal
- U.S. job growth is at 1.7 percent or about 200,000 jobs per month throughout the forecast horizon
- We see the export sector, especially manufacturing struggling with the strong dollar, but domestic growth is robust

Current Split Between Growth In Production And Jobs

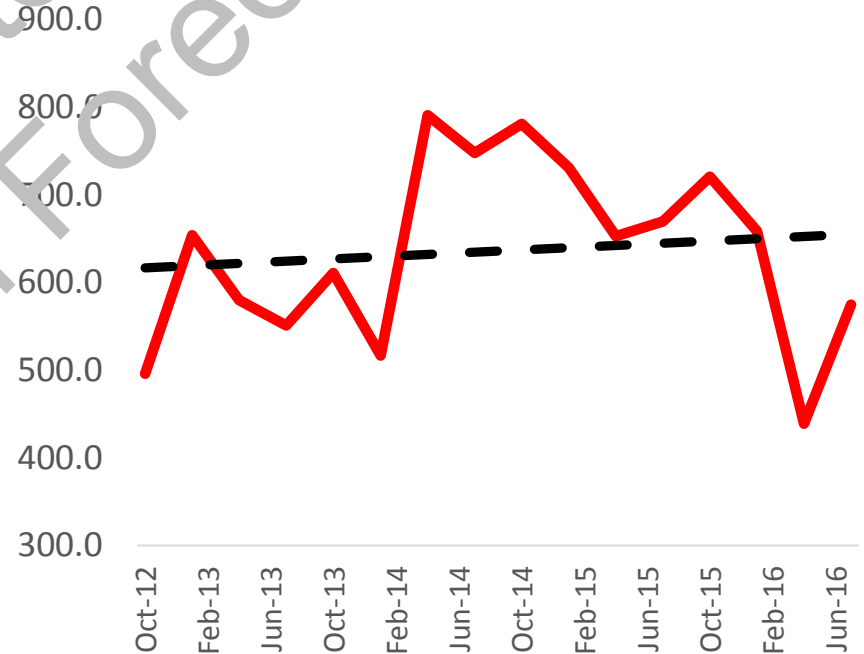
GDP Growth Has Slowed Sharply in Recent Quarters

% Change at Annual Rates



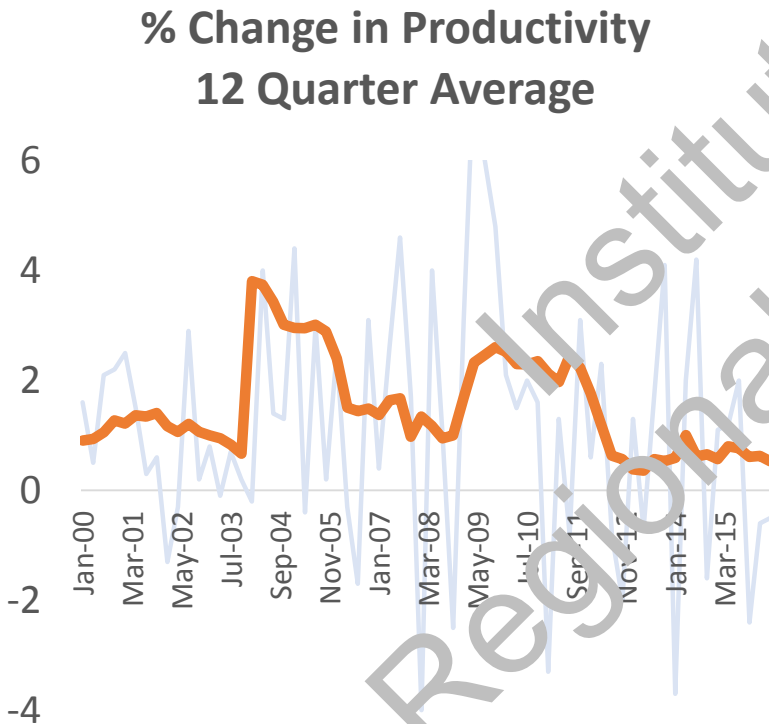
While U.S. Job Growth Remains Quite Strong

000 New Jobs Per Quarter

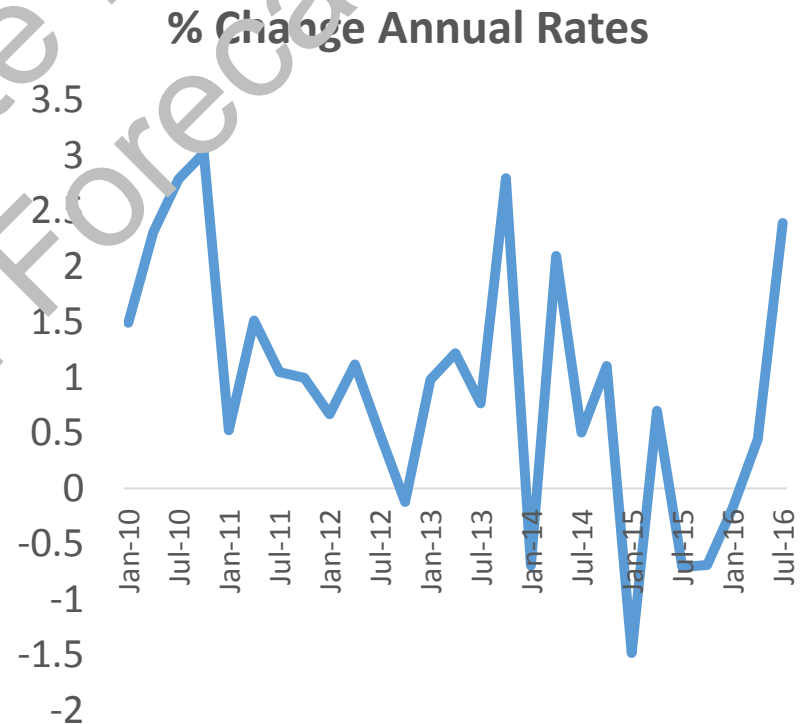


Results Are Consistent With Robust Domestic Growth And Weak Exports

Productivity Growth Is Slow

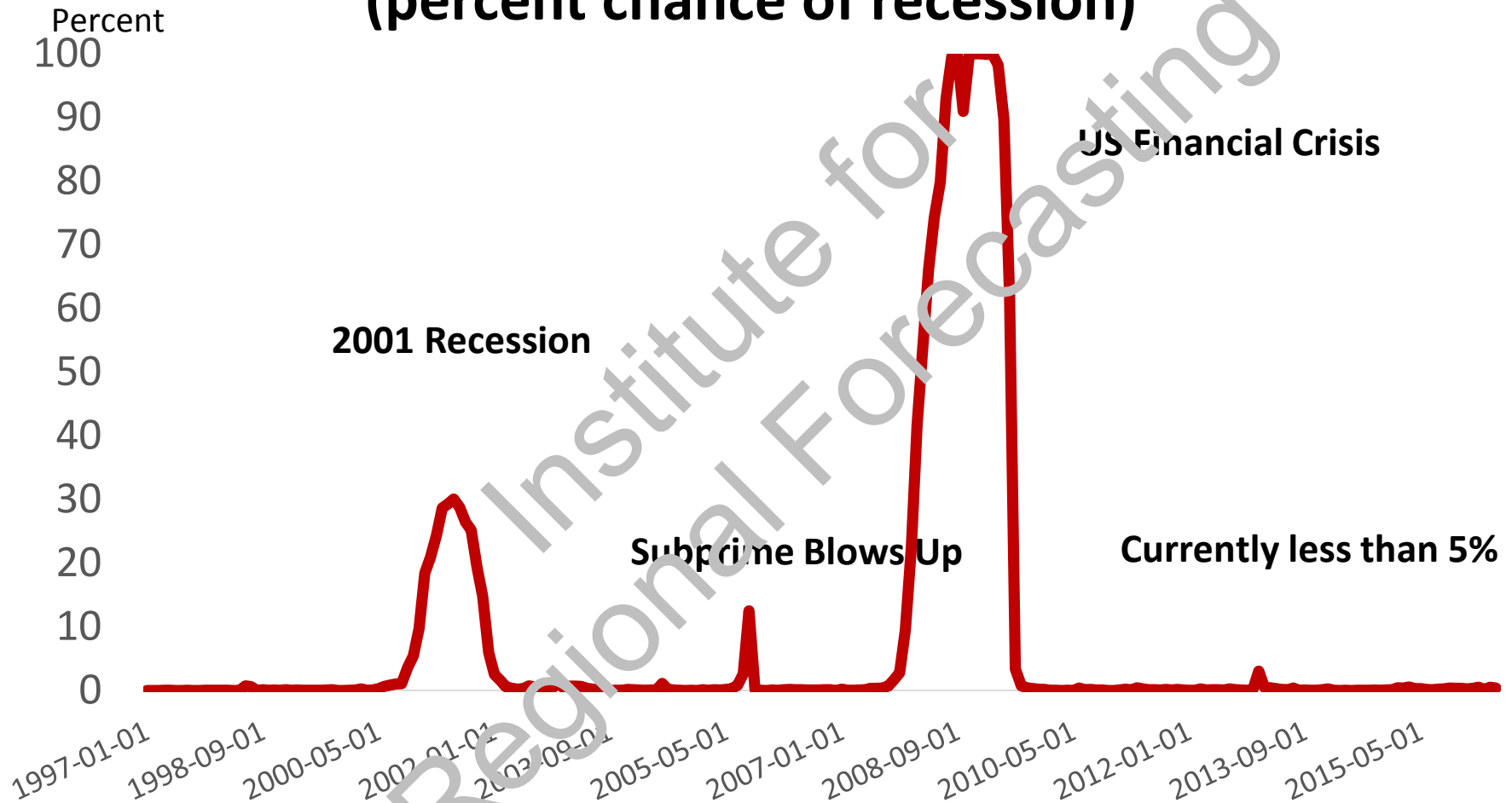


Weak Export Sector



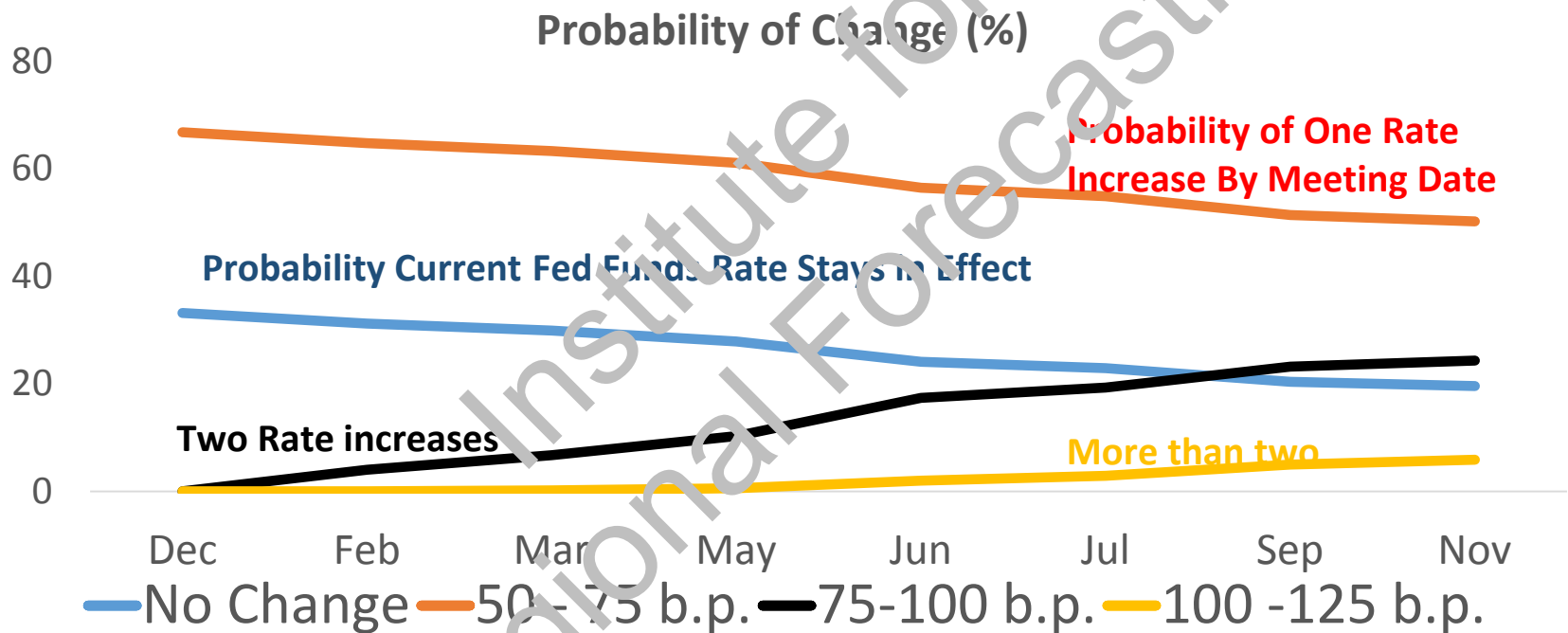
Smoothed U.S. Recession Probabilities

(percent chance of recession)



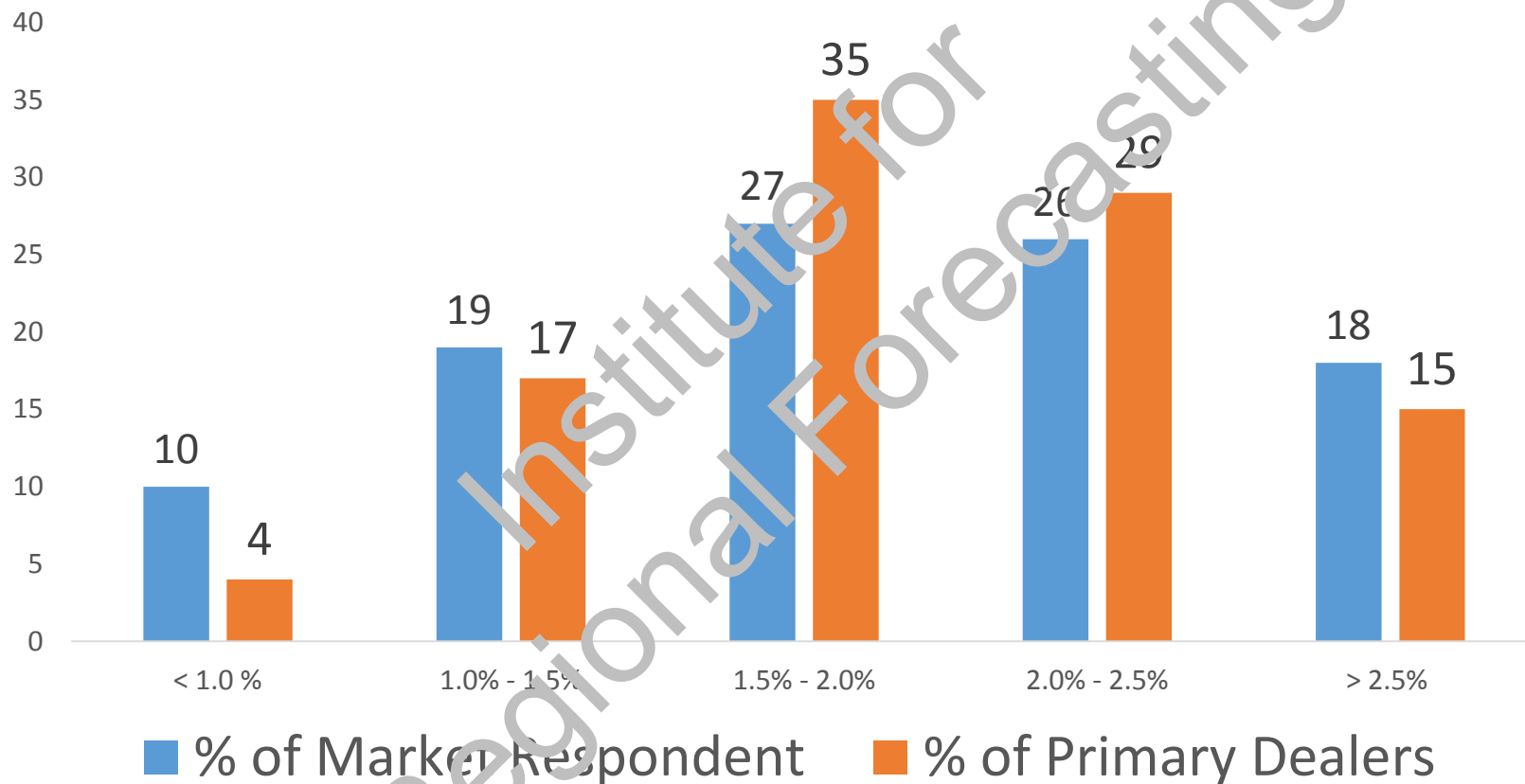
Source: Chauvet and Piger smoothed recession probabilities, FRED, St. Louis Fed

Probability of Federal Funds Rate By Date of Future Meetings: CME Futures Market



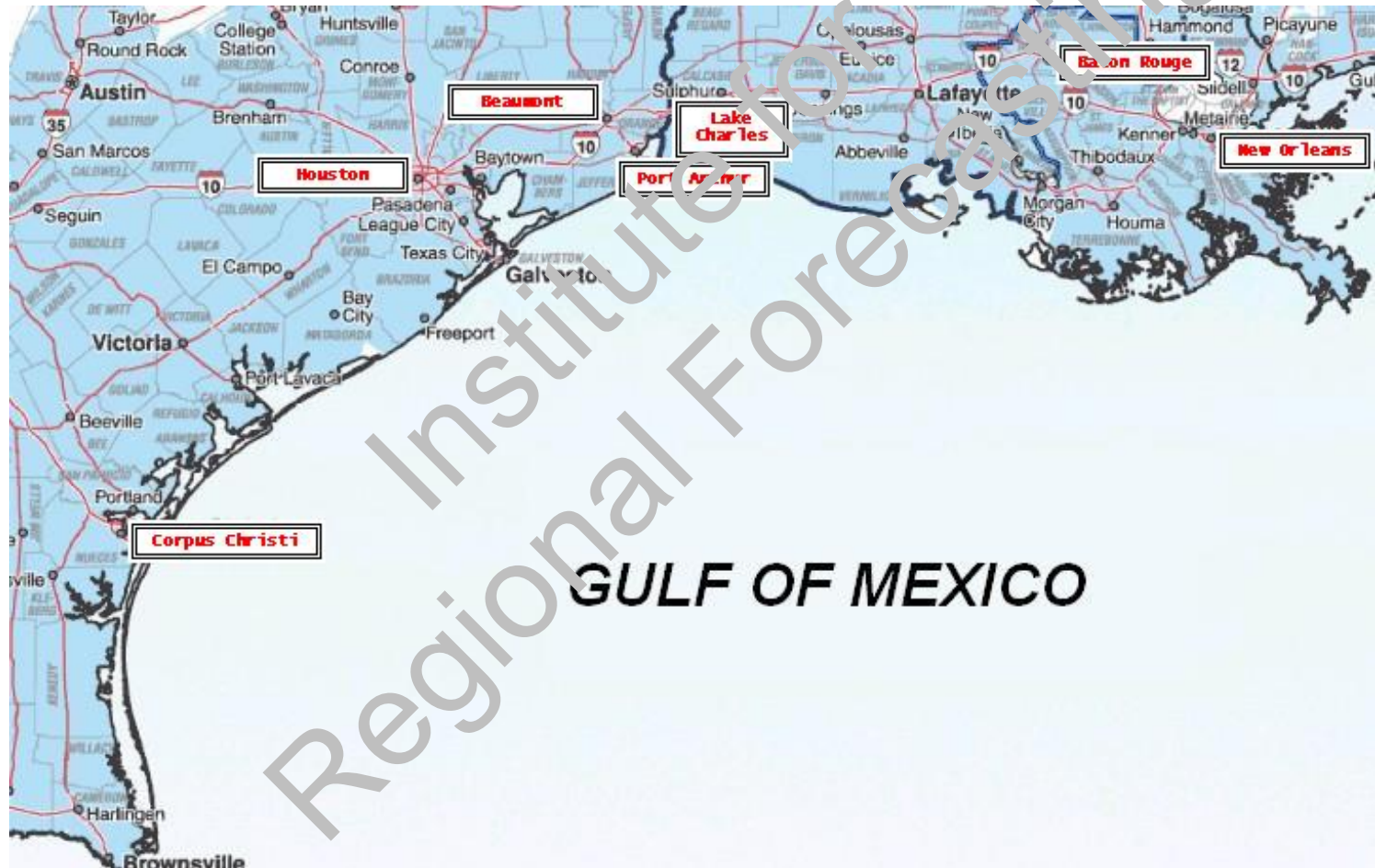
NY Fed Surveys Point to 10-Year Treasury Near 2.0-2.5 percent by End of 2017

(percent of respondents expecting rate)



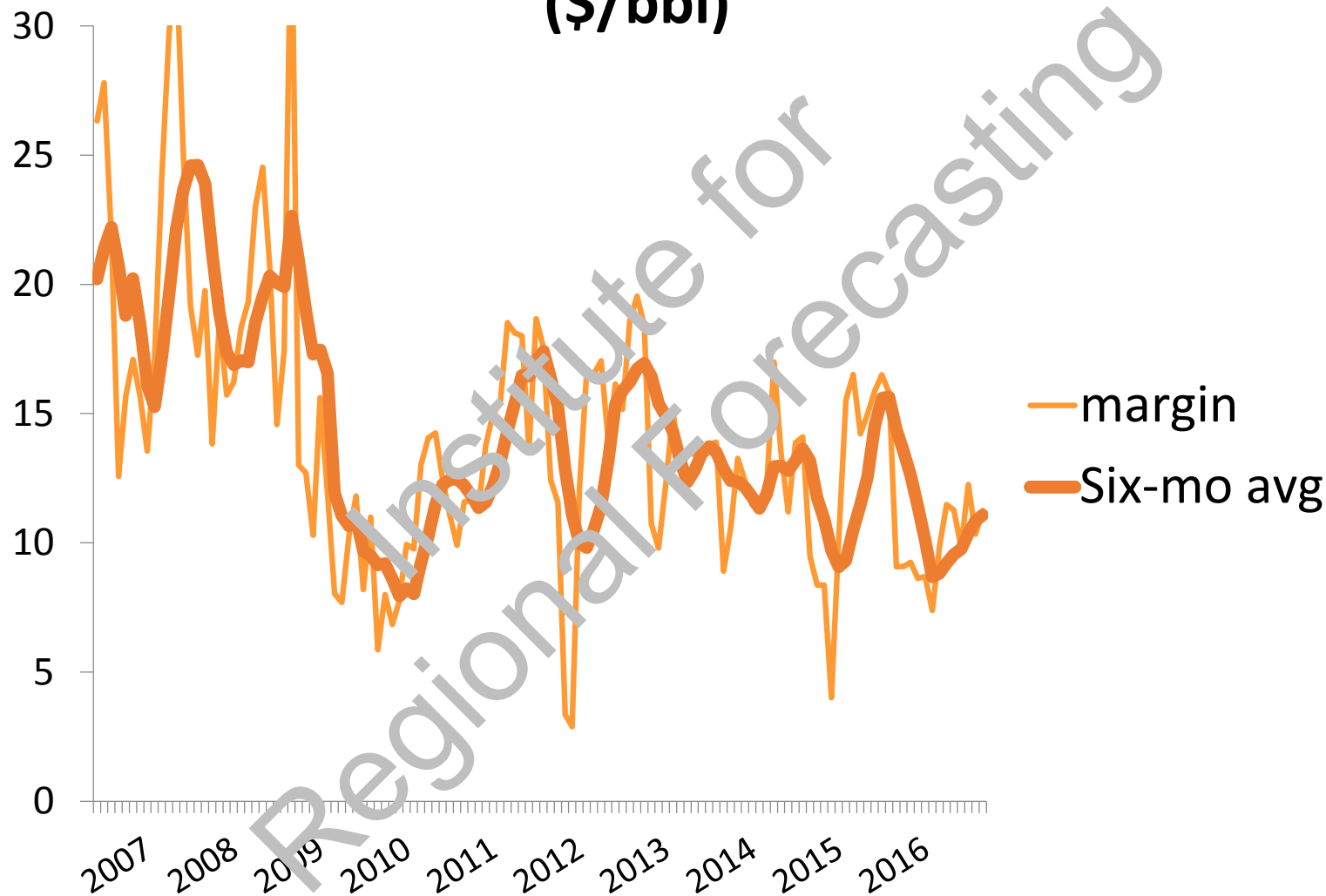
Note: Yield on 10-year treasury was 1.82% on November 4, year-to-date average was 1.74 percent.

Downstream Boom Offsets Upstream Bust



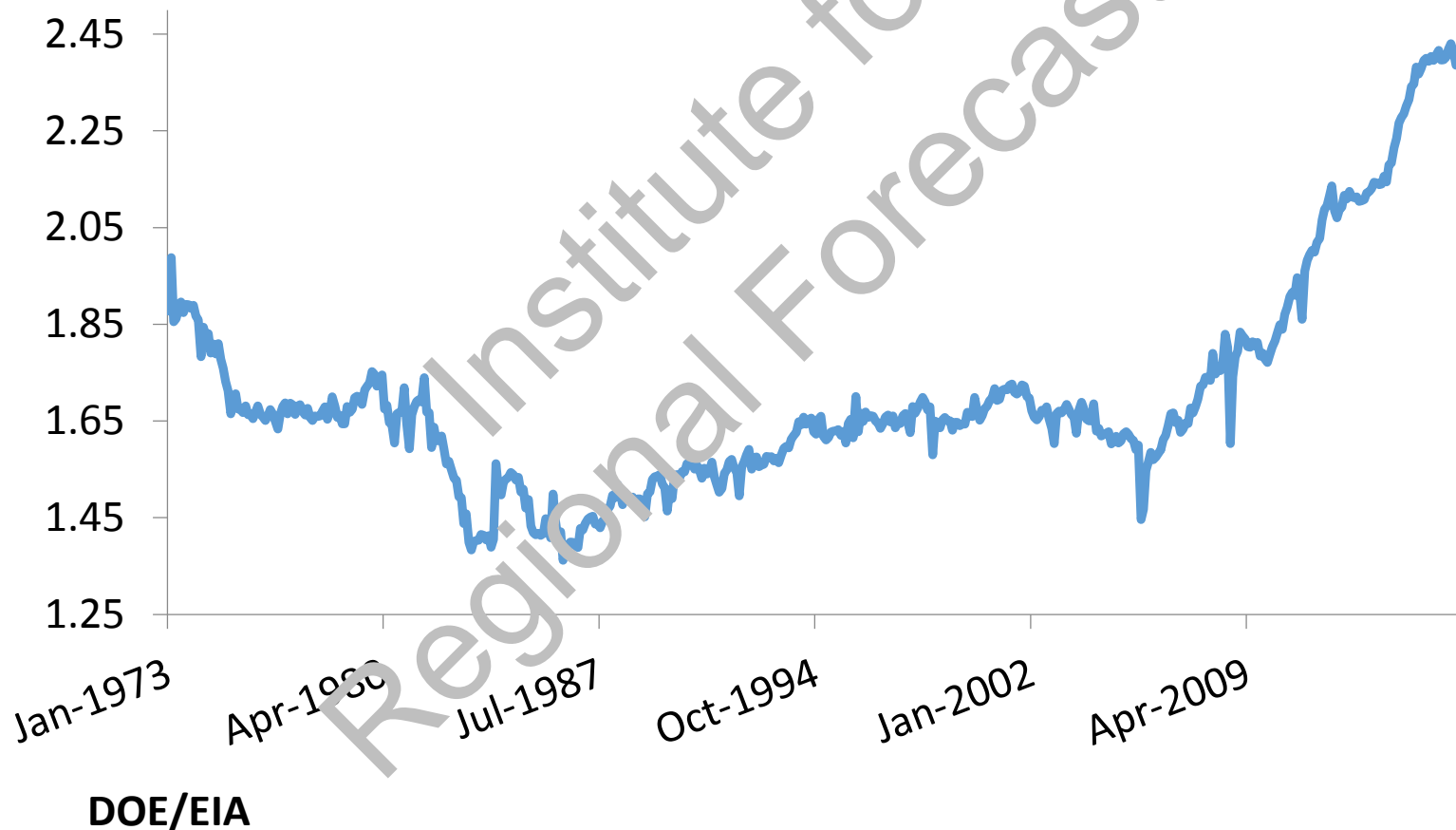
Low Oil Prices Keep Gulf Coast Refining Margins Strong

(\$/bbl)



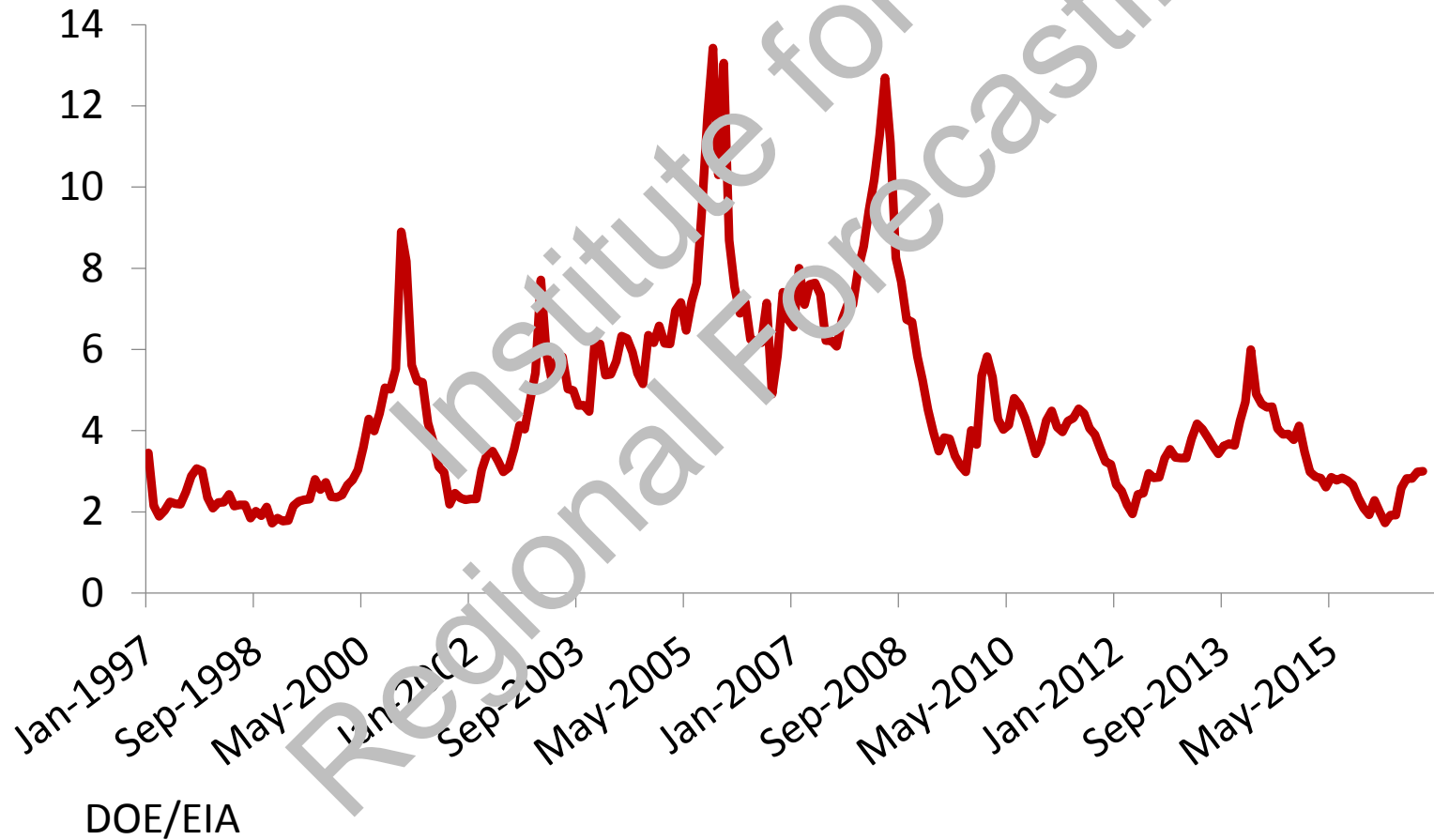
Natural Gas Shares Oil's Hockey Stick Surge In Production

Marketed production, Tcf/mo, seasonal adj



Natural Gas Prices Collapsed In Late 2011

(\$/mcf)



\$164 Billion U.S. Construction Boom Is Based On Cheap Energy

- This \$164 billion total includes many industries and all of the U.S.
- New ethylene crackers, more ethylene-related expansion in PE, PVC and other derivative plants
- LNG export terminals to sell surplus natural gas into global markets
- Refiners have joined in with additional expansions



Note: The \$164 billion figure is based on all U.S. shale-related expansion, estimated by the American Chemistry Council in April, 2016

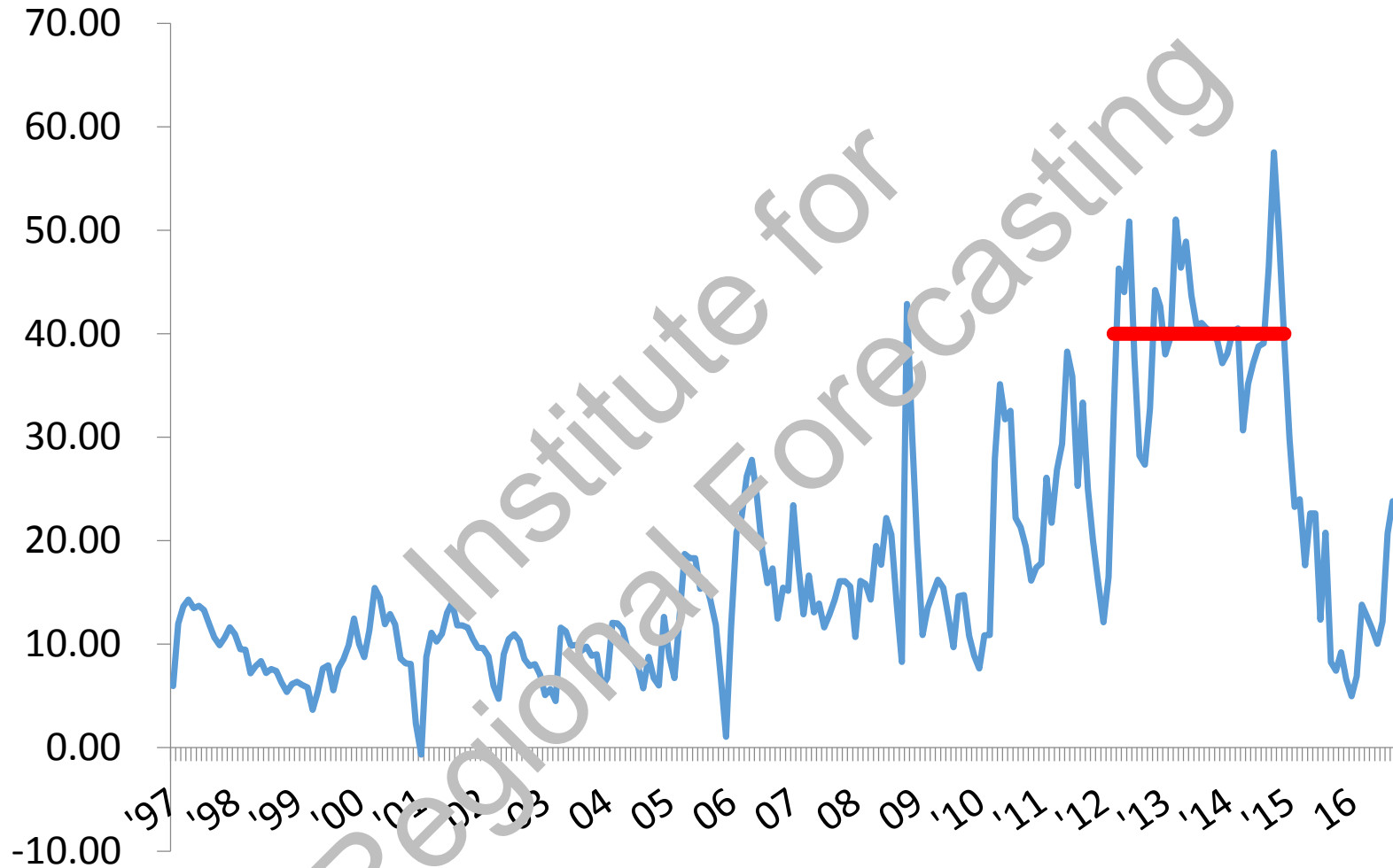
Natural Gas Energy Content Equivalent To \$15 -\$30 Per Barrel For Oil



DOE/EIA and calculations of the author

Ethylene Margins

(cents per pound)

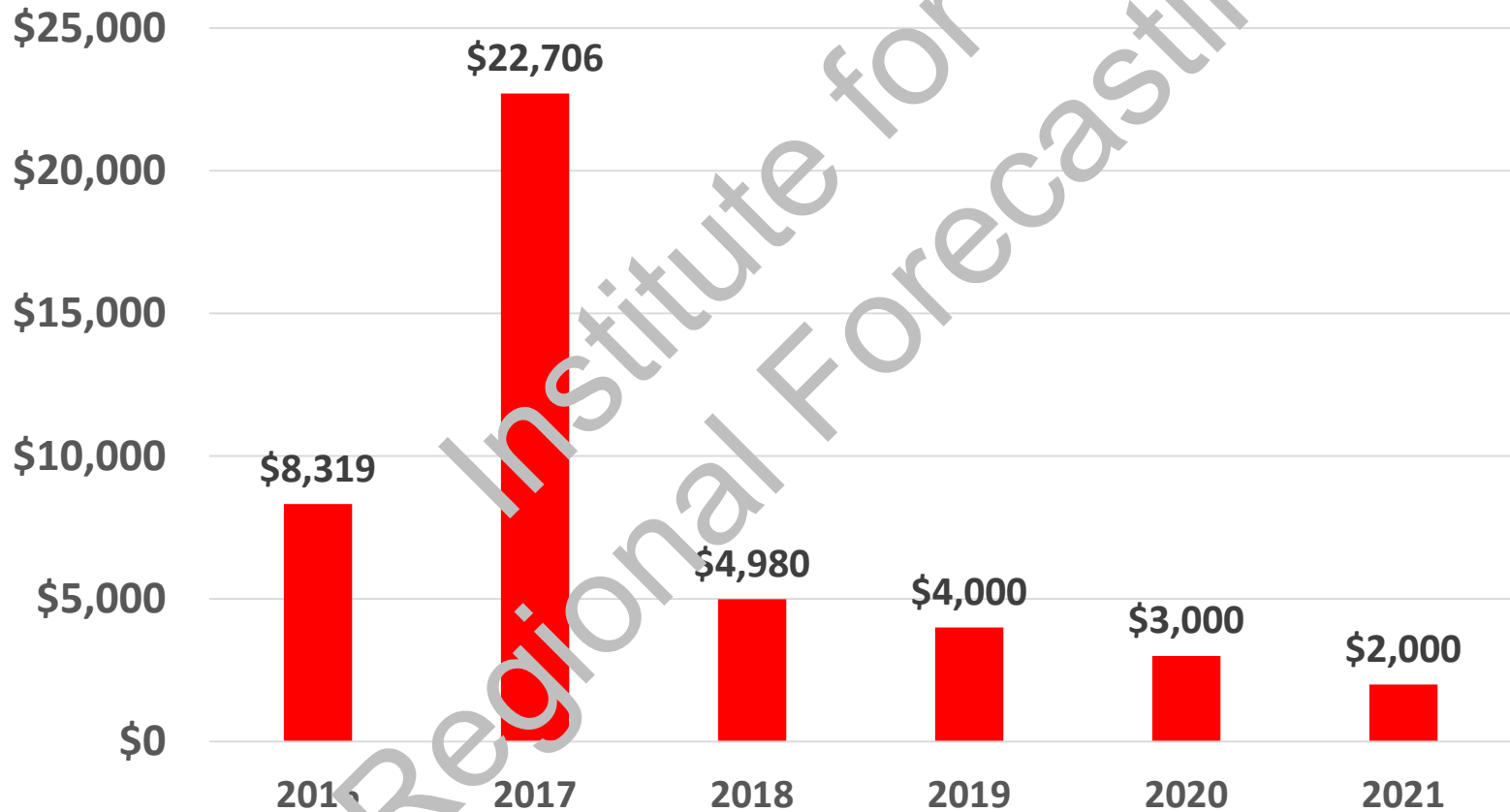


Large Projects Headline Over \$50 Billion In East Houston Construction

Company	Location	Project	Completion	Value (\$ mil)
Exxon	Baytown	Ethylene	2017	\$5,000
Chevron	Freeport	Ethylene	2017	\$4,000
Dow	Baytown	Ethylene	2017	\$3,500
BASF	Freeport	Ethylene	2017	\$3,000
Freeport LNG	Freeport	LNG Export	2019	\$3,000
Freeport LNG	Freeport	LNG Export	2020	\$3,000
Bayer	Baytown	PUR Facility	2021	\$2,000
CPV	Freeport	Gas to Polypropylene	2017	\$1,500
Freeport LNG	Freeport	Methane to Propylene	2018	\$1,400

Projects Begin To Wind Down Rapidly After 2017

(Value of Projects Completed, \$ million)

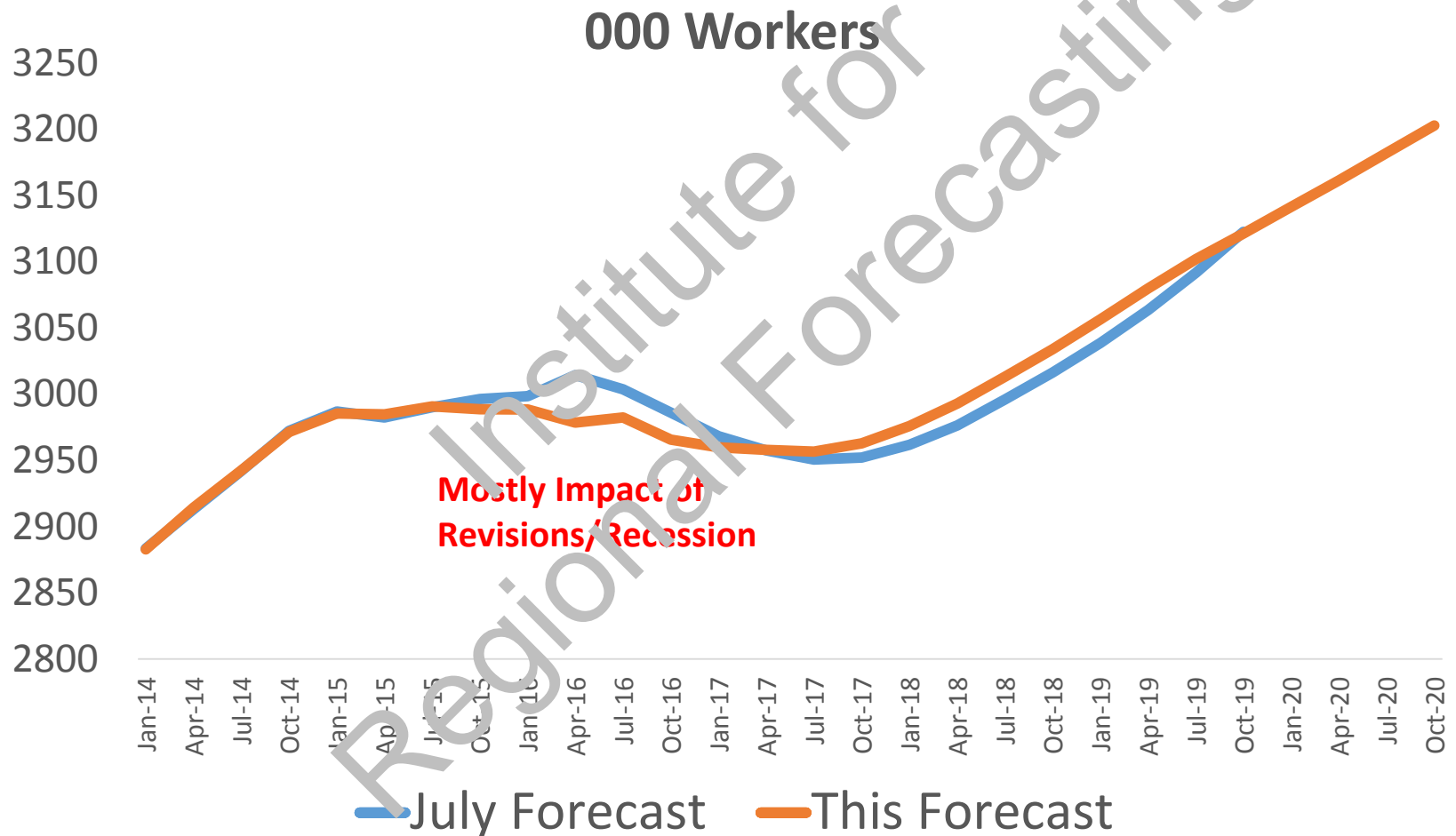


Put It All Together

- Three oil scenarios: high, medium, or low. High sees solid recovery now underway in drilling; medium sees strength delayed until early 2017; low until late 2017
- Continued U.S. expansion at moderate rates
- The end of most of the petrochemical construction on the East Side. Some new construction, but nothing to replace the boom-time construction that finishes
- Data revisions that point to possible mild local recession in early 2016.



Data Revisions? Trade An Expected Recession In 2017 With Real One In Early 2016



Forecast Job Growth In Houston 2013-2020

(000 New Jobs, Q4/Q1)

Year	Scenario			30/60/10
	High	Medium	Low	
2013	90.3	90.3	90.3	90.3
2014	112.3	112.3	112.3	112.3
2015	117.1	10.4	10.4	10.4
2016	-18.2	-23.0	-27.1	-22.0
2017	27.0	-2.8	-19.2	4.5
2018	95.7	71.2	33.8	74.8
2019	91.3	87.3	53.4	85.1
2020	87.1	81.7	69.9	81.1

Calculations of IRF, based on drilling scenarios above

Compared To What We Were Saying Before?

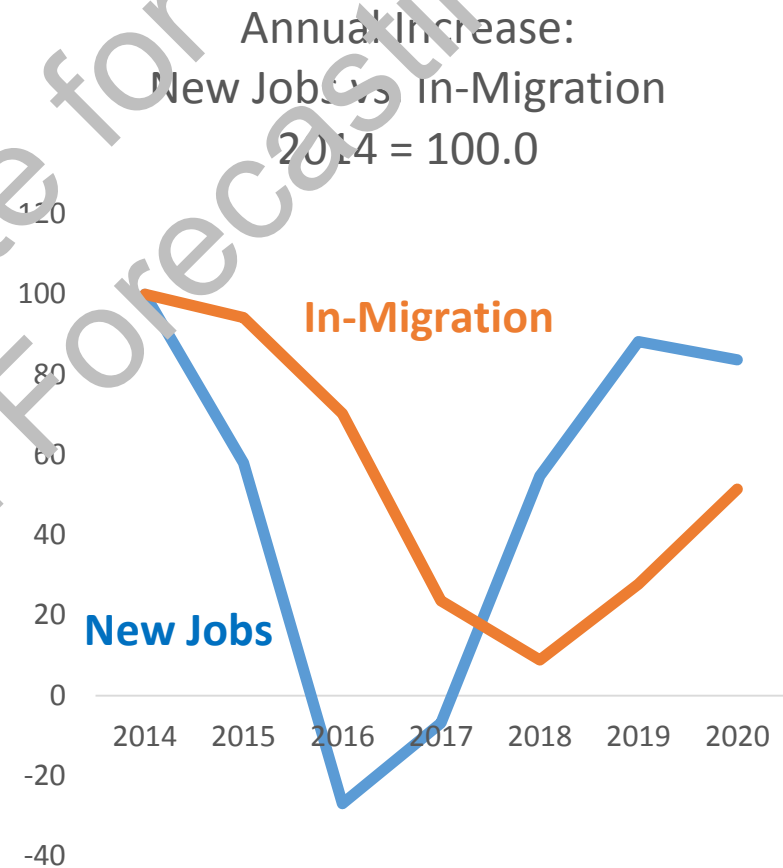
Flip Forecast 2017 Recession Into 2016

(Thousands of Jobs)

	Current 30/60/10	May 2016 30/50/20	November 2015 40/40/20
2014	112.3	112.1	103.6
2015	17.1	23.4	14.0
2016	-22.0	-10.8	20.1
2017	4.5	-30.0	74.4
2018	74.8	62.9	86.8
2019	85.1	97.1	73.6

In-Migration Follows Job Growth: Forecast In-Migration for Houston

- When population grows, in-migration gives biggest economic stimulus
- As job growth rises, in-migration begins to rise a year later
- In recovery, in-migration falls a year behind
- Data at right matches 30/60/10 weighted employment forecast, sees a 2018 bottom for in-migration

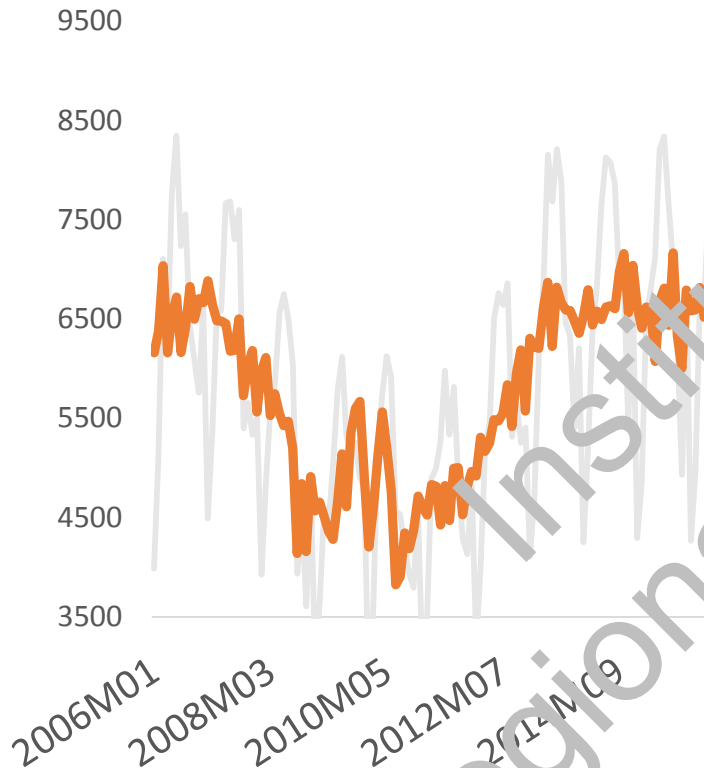


Existing Home Sales: Beware the Averages



Existing Home Sales Flat In Houston Since 2012

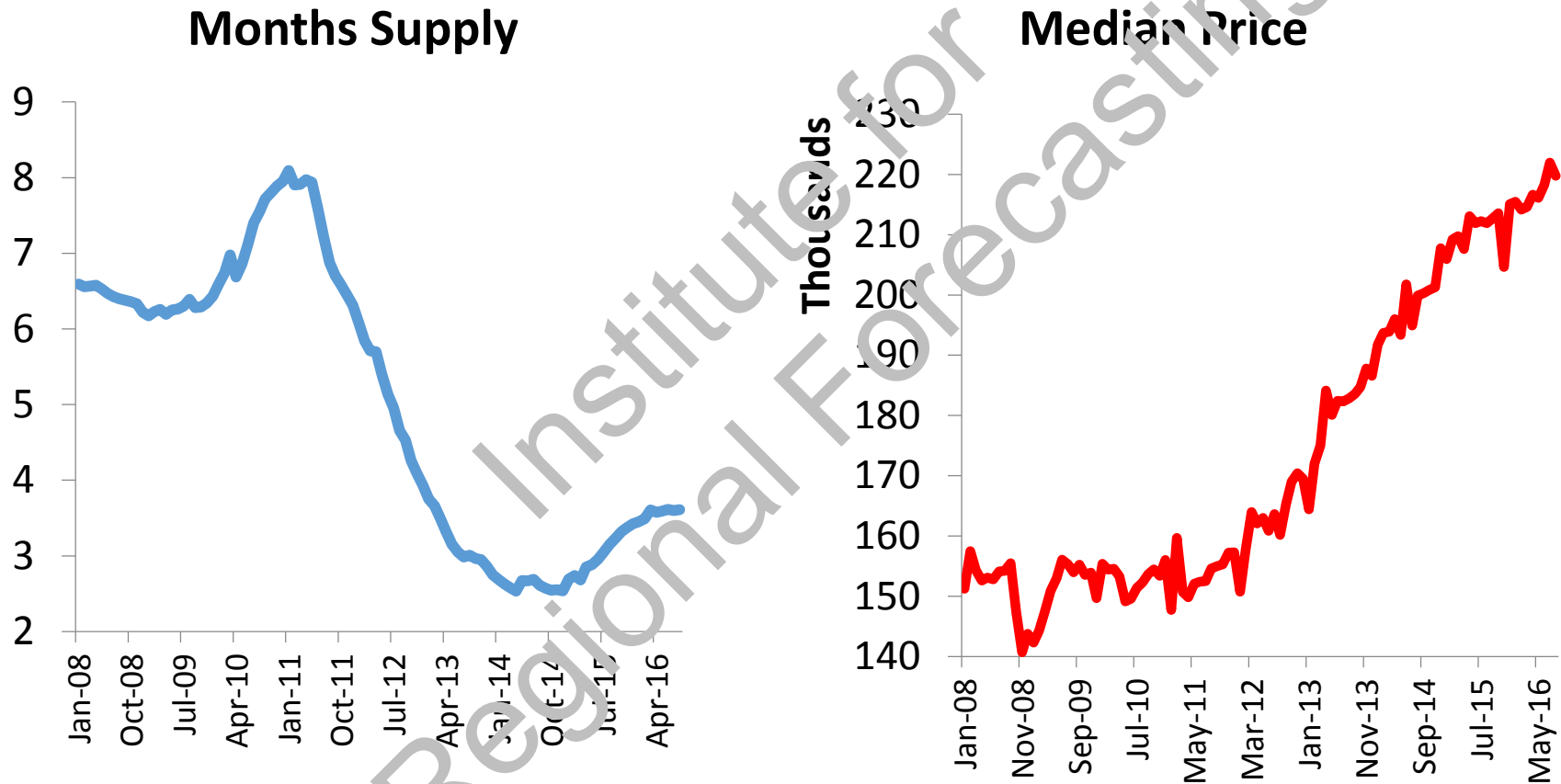
(sales, s.a.)



- Flat since 2012? First, due to lack of existing and new home supply, now due to mix
- Median home prices rose rapidly after 2011, at 9.4 percent annually from 2012-2014
- 2016 saw continued high level of sales, relief on inventories, prices rising but more slowly

Source: Texas A&M Real Estate Center

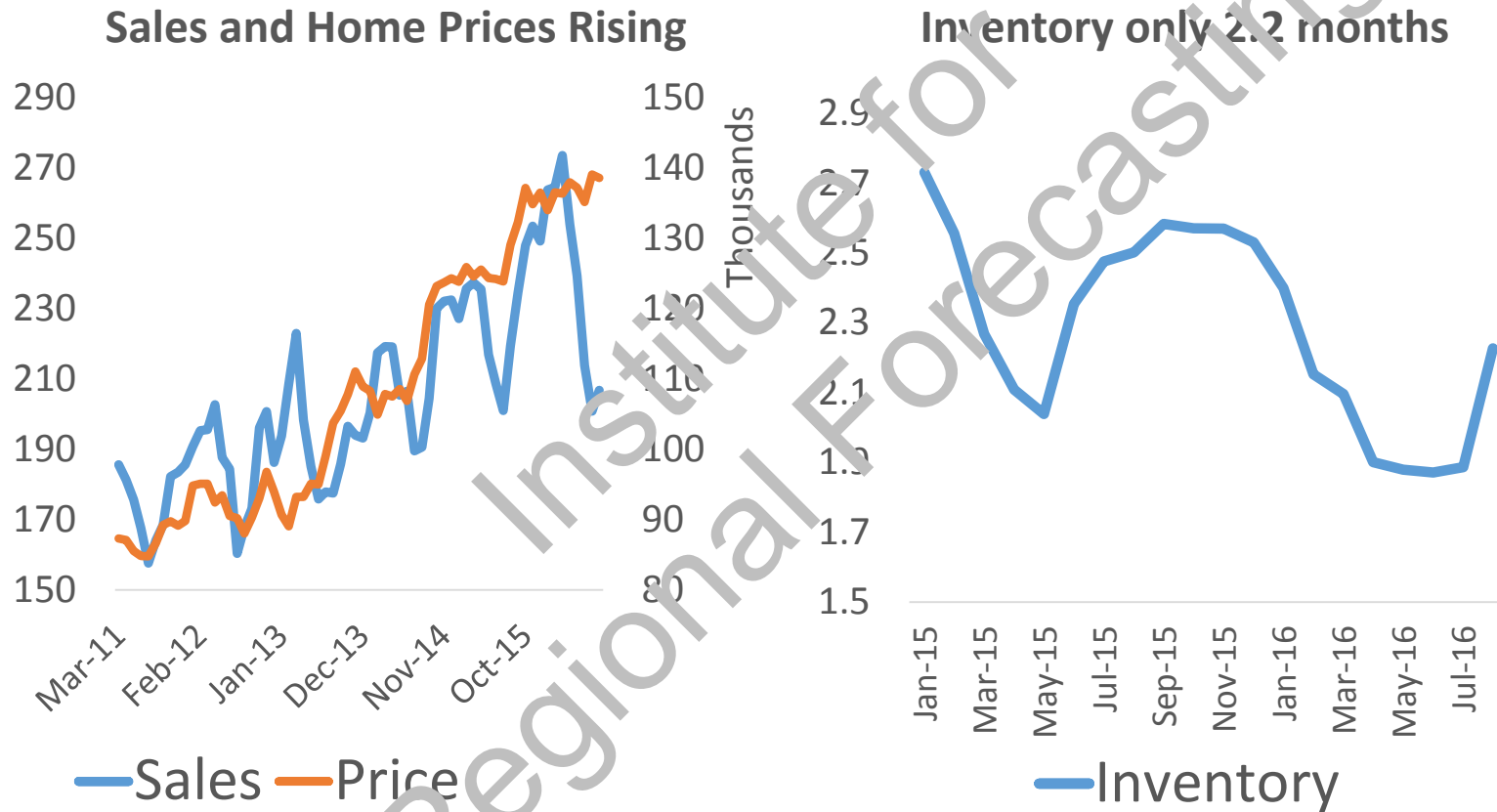
Strong Growth And Lot Shortages Distorted Single-Family Housing Market



Source: Texas A&M Real Estate Center, seasonal adjustment by IRF

Ship Channel Cities

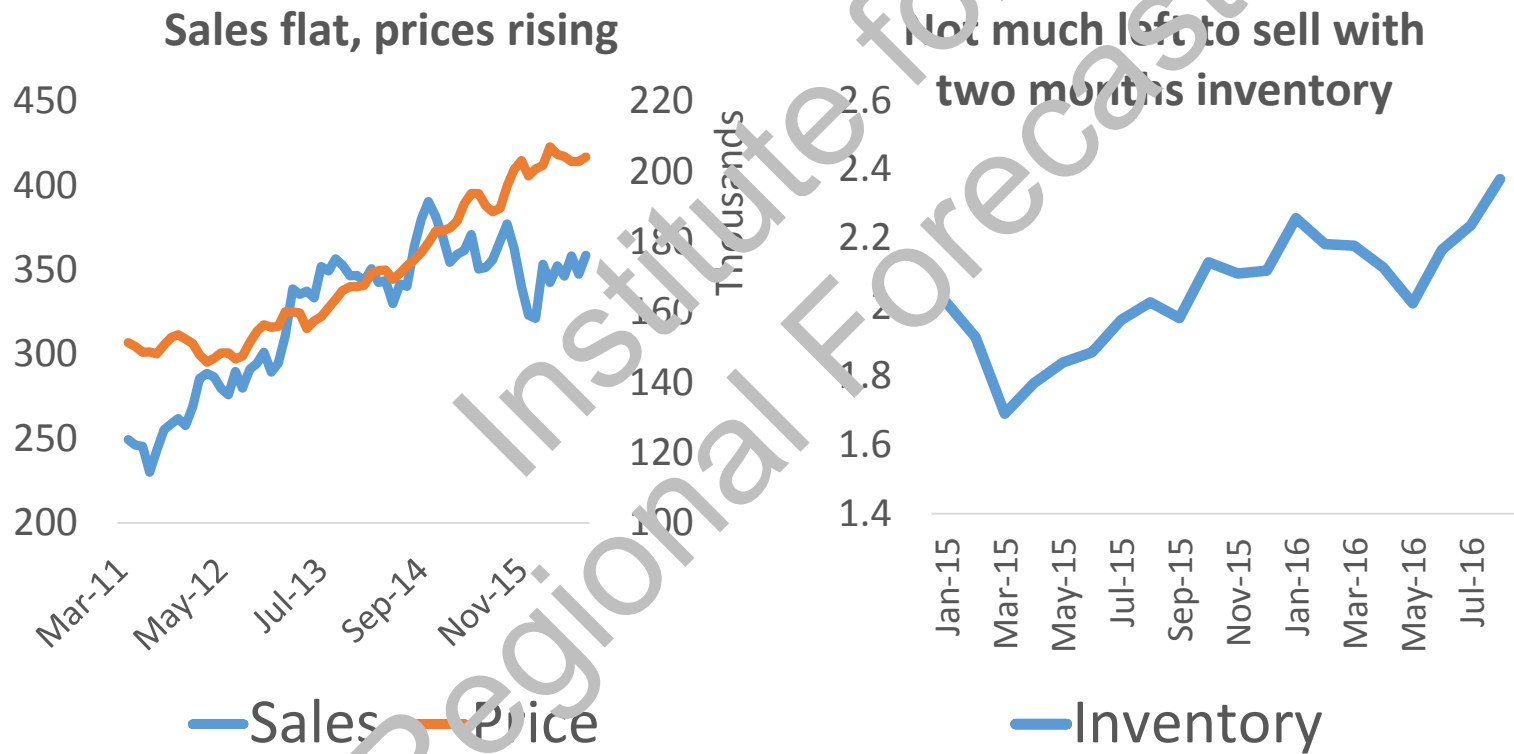
Baytown, Channelview, Pasadena



Source: Texas A&M Real Estate Center, calculations of IRF

South Houston

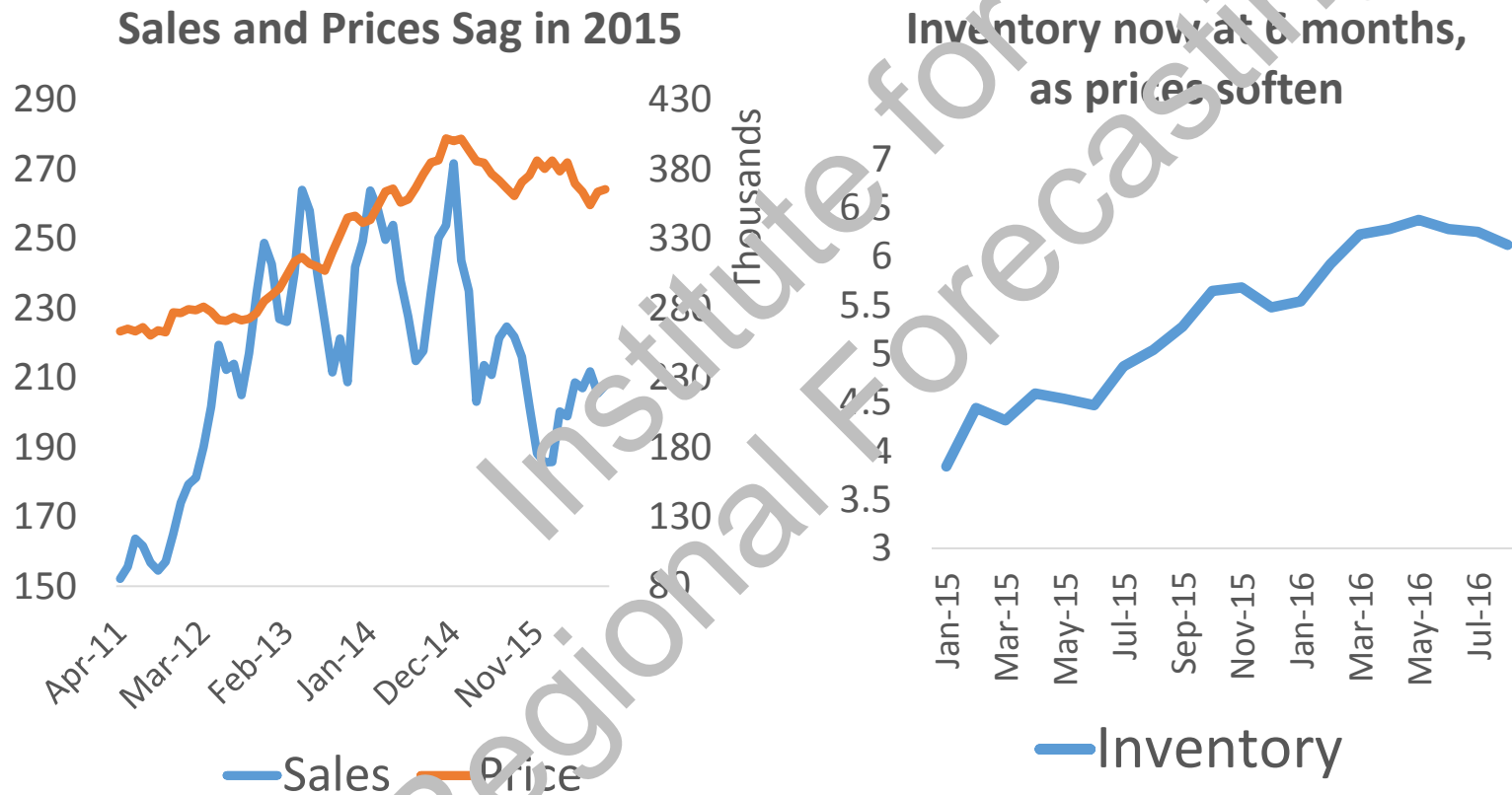
South Belt, Clear Lake, League City



Source: Texas A&M Real Estate Center, calculations of IRF

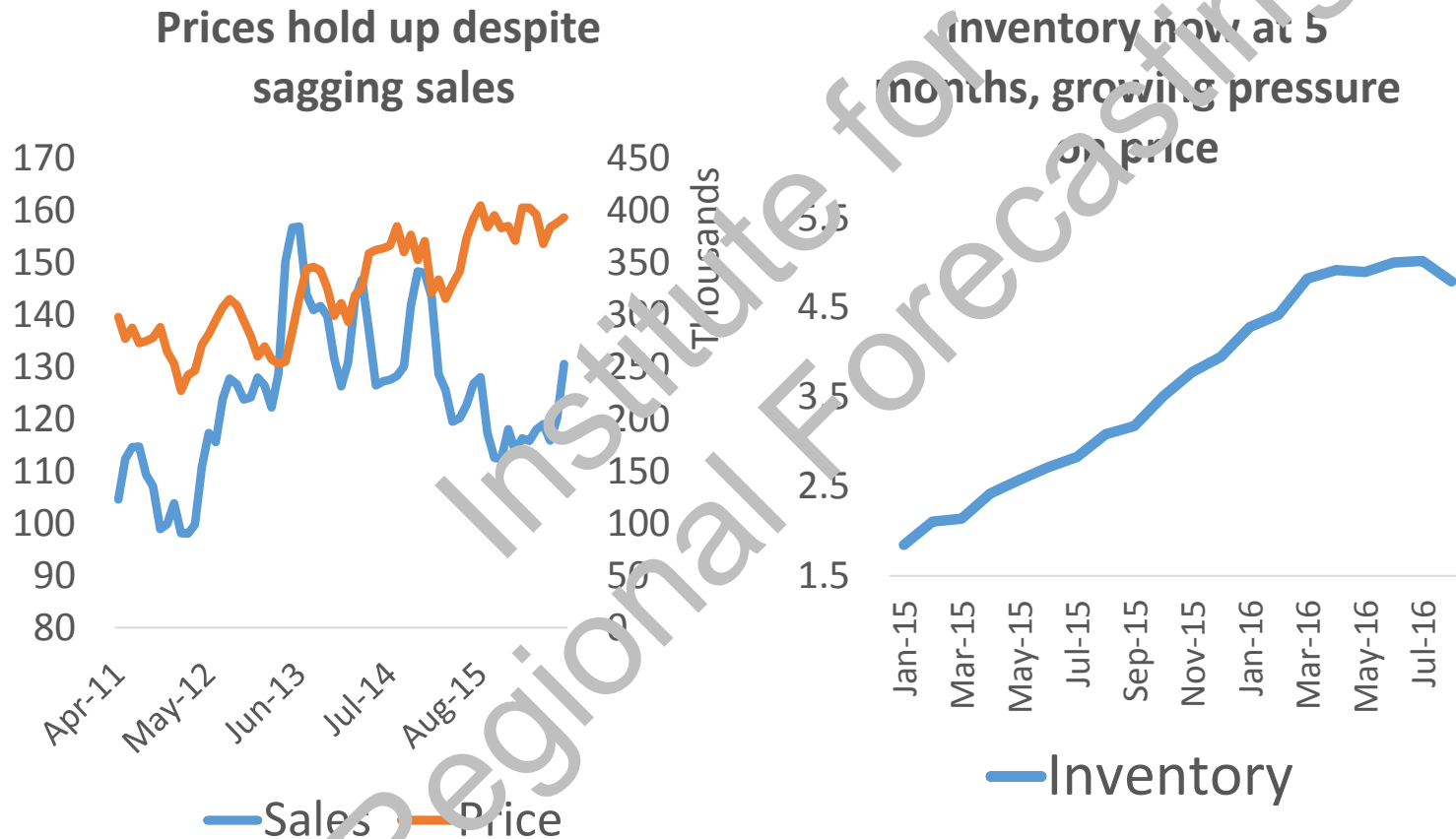
Close-In

Rice Military, Heights, Galleria



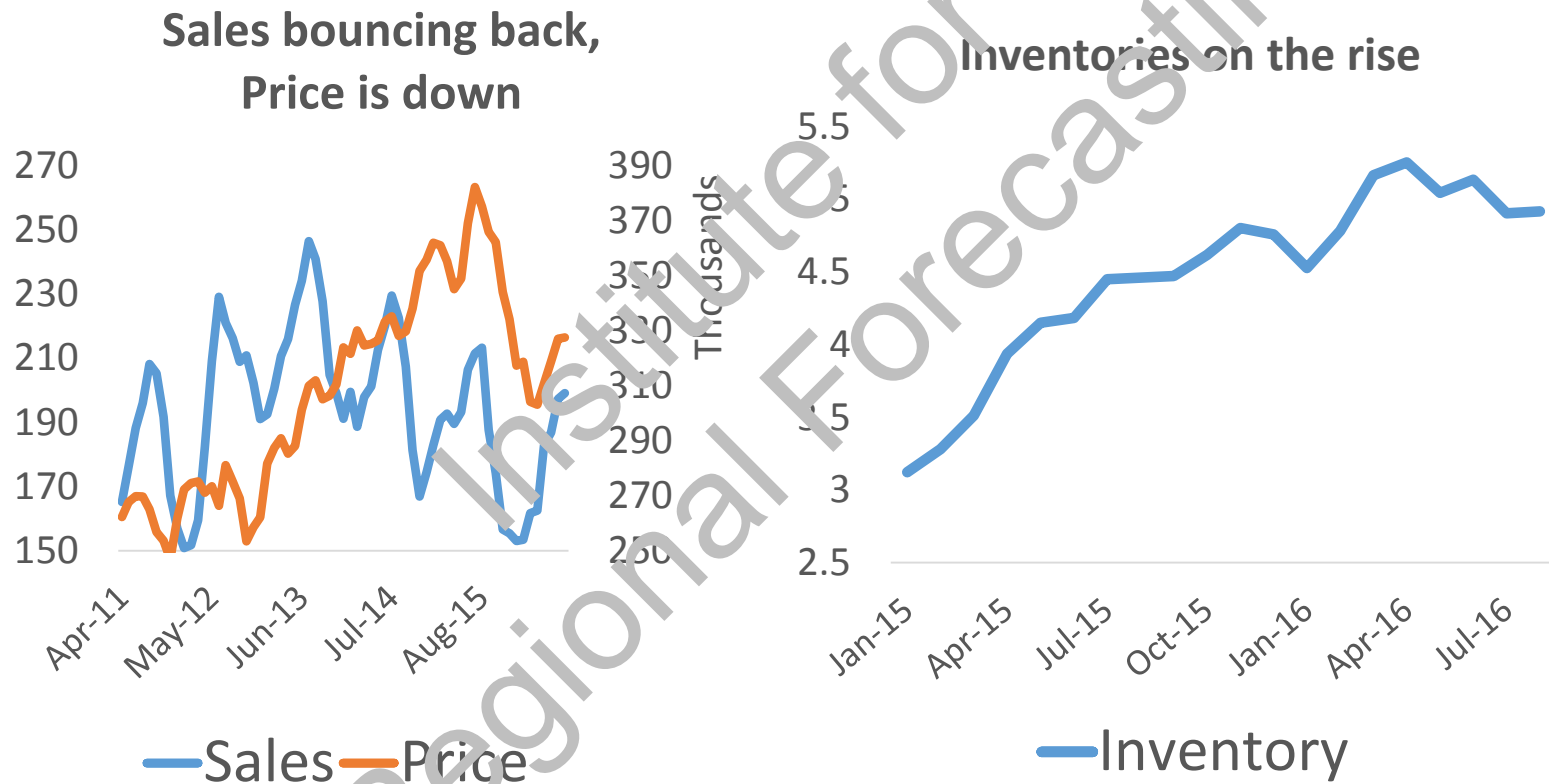
Source: Texas A&M Real Estate Center, calculations of IRF

South Of I-10 West Memorial and Energy Corridor



Source: Texas A&M Real Estate Center, calculations of IRF

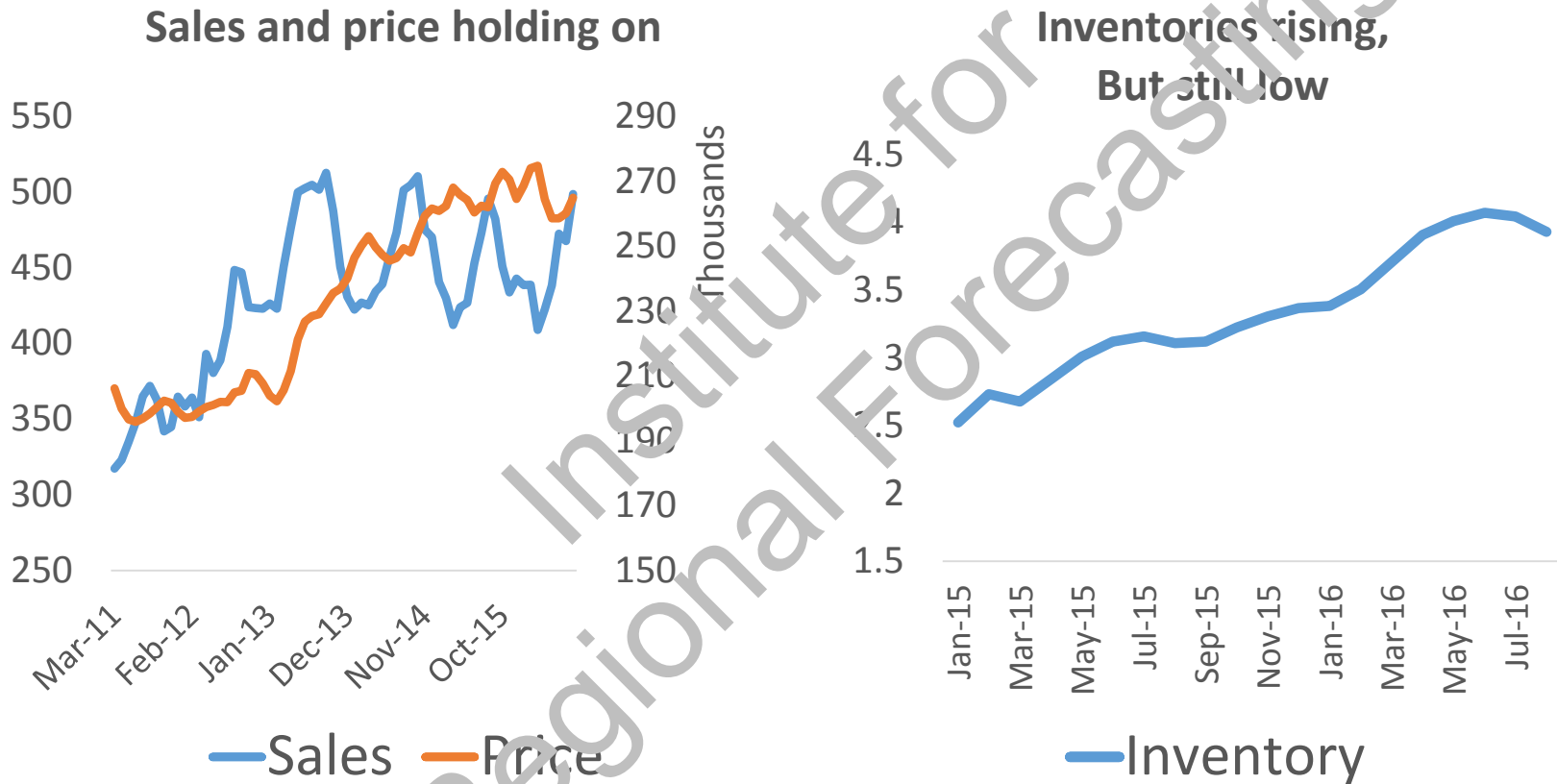
The Woodlands Cools Off



Source: Texas A&M Real Estate Center, calculations of IRF

Katy

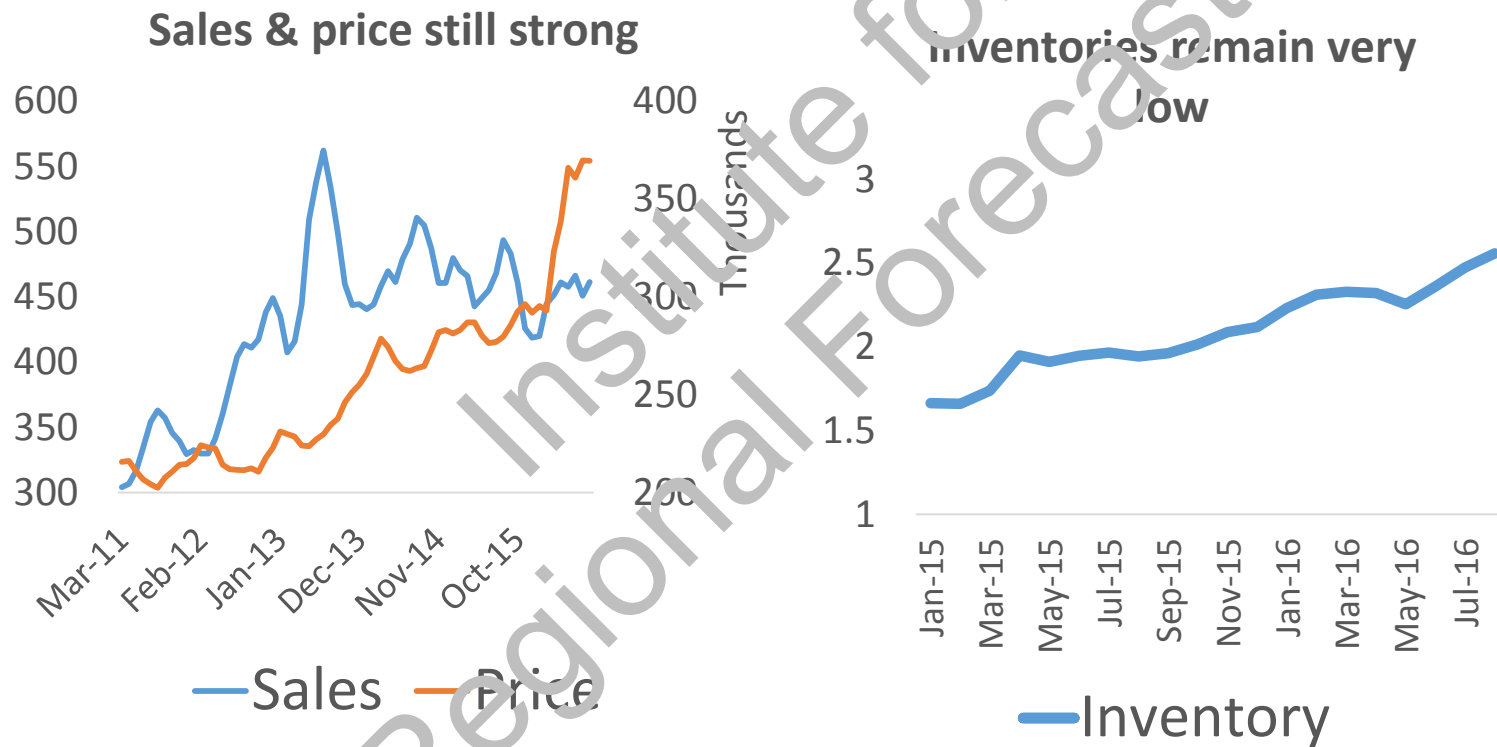
Katy North and South



Source: Texas A&M Real Estate Center, calculations of IRF

Other Distant Suburbs

Pearland, Sugar Land, Kingwood



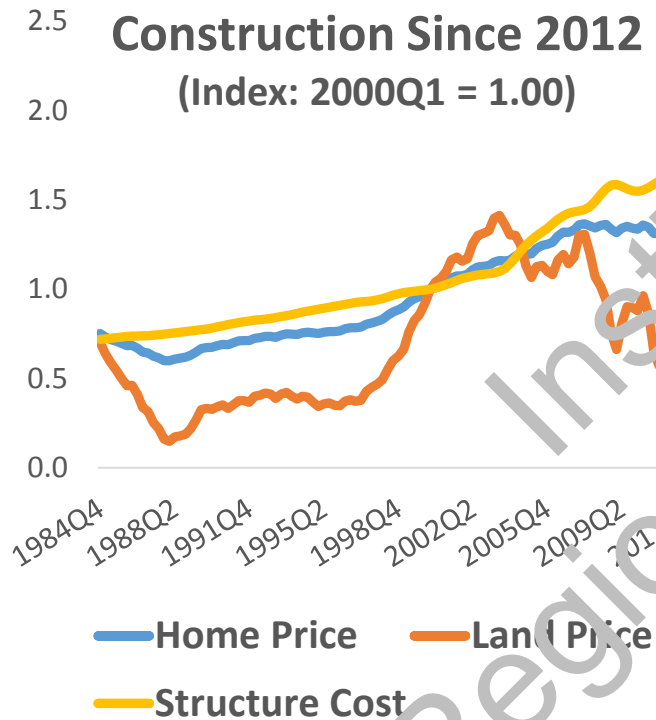
Source: Texas A&M Real Estate Center, calculations of IRF

New Home Sales Also Shift Down to Smaller Lots and Houses

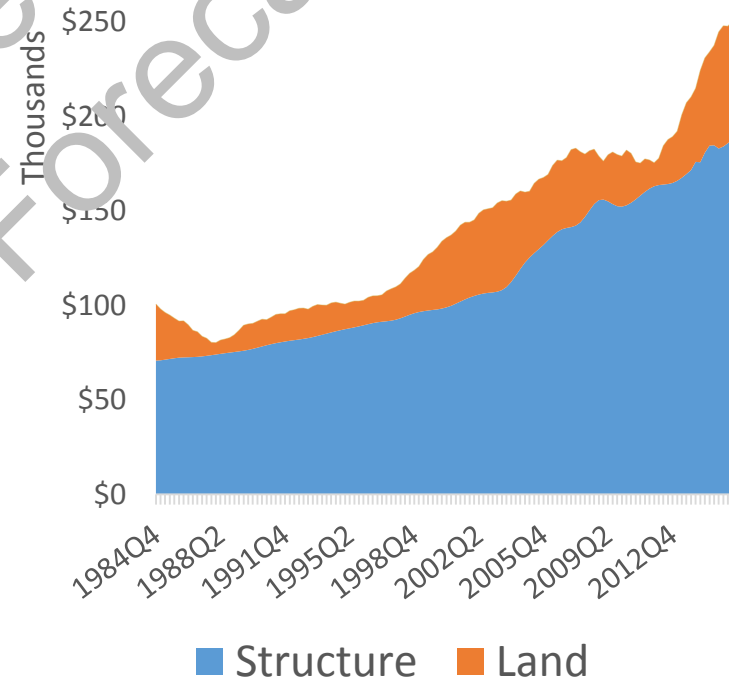


Rising Land Prices Drove Cost Of New Homes

Land Drives Cost of Houston's New Home Construction Since 2012
(Index: 2000Q1 = 1.00)



Spike in Land Prices Added \$40,000 To Typical New Home After 2012

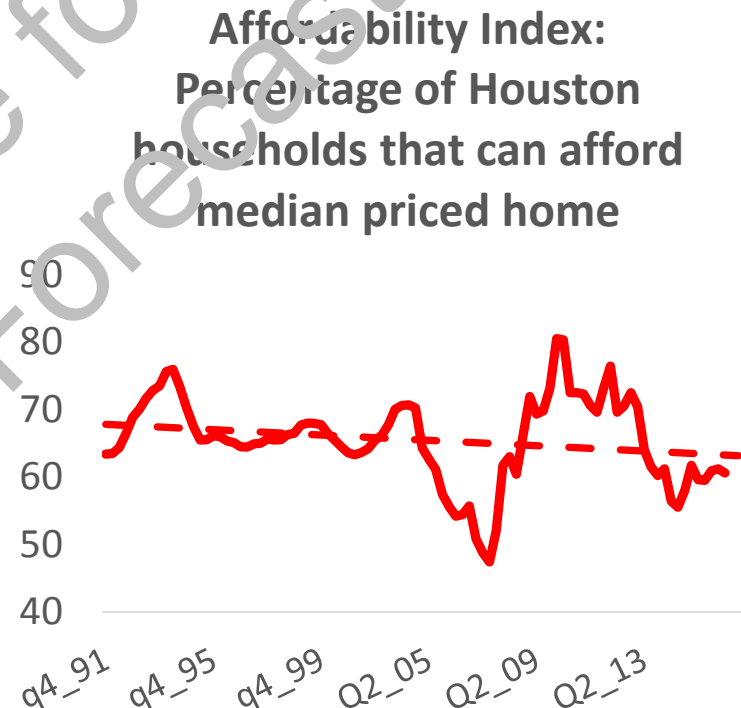


Source: Lincoln Institute of Land Policy

Top-end Buyers Lost To Oil Bust, Bottom Of The Market Wants Back In

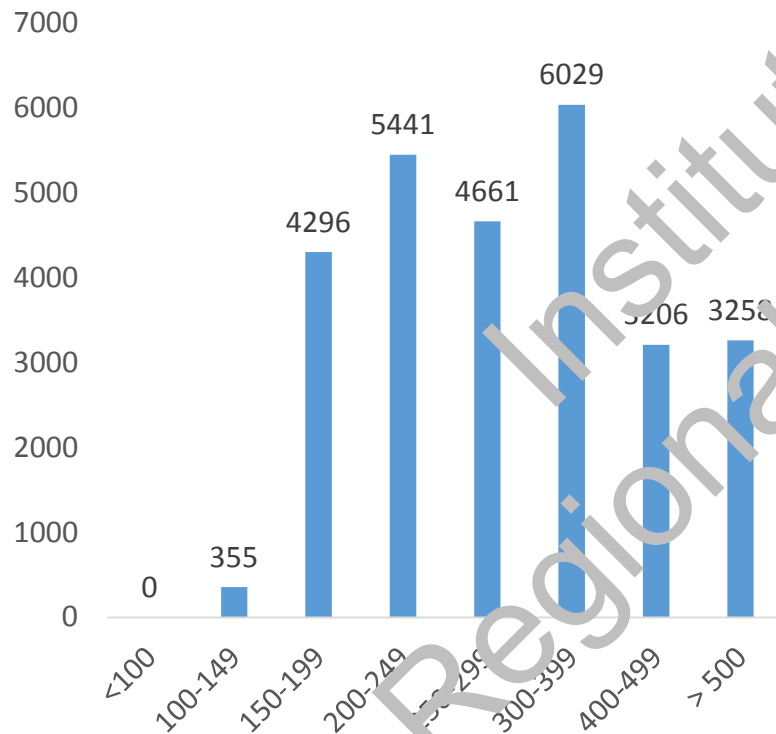
- High-end market for executives and professionals is gone for the next couple of years
- There are 2.3 million households in Houston. Every time affordability ticks up one percent, it locks 23,000 families out of the market.
- Affordability down 4-5 percent means over 100,000 families were pushed out since 2013
- They have household incomes of \$65-\$75,000 and can qualify for \$250,000 product. Can we deliver near this price point?

Wells Fargo Housing Opportunity Index



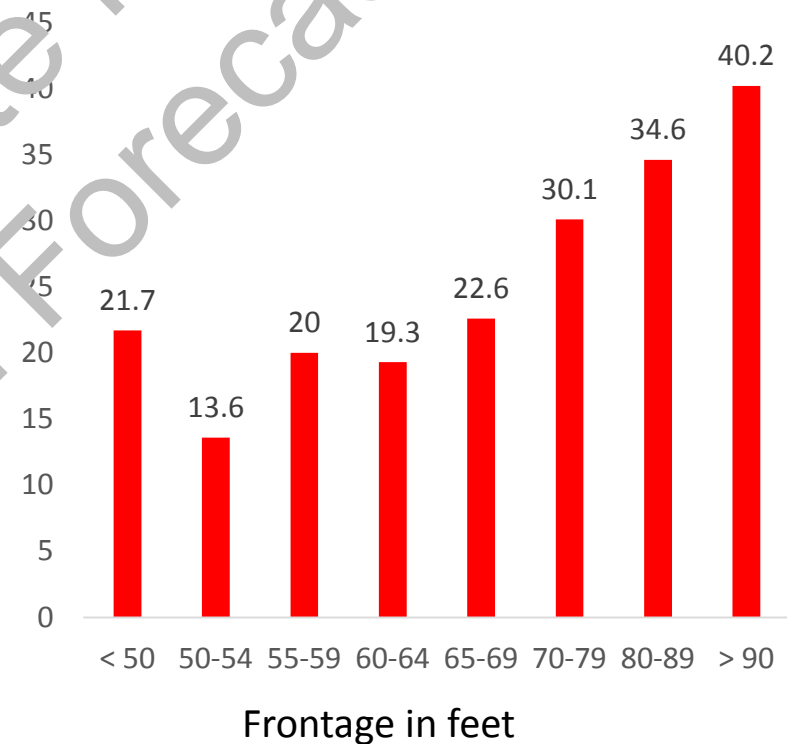
Market Shifts To Moderate Priced Homes On Smaller Lots

Q3 closings at annual rate by
Price range \$000



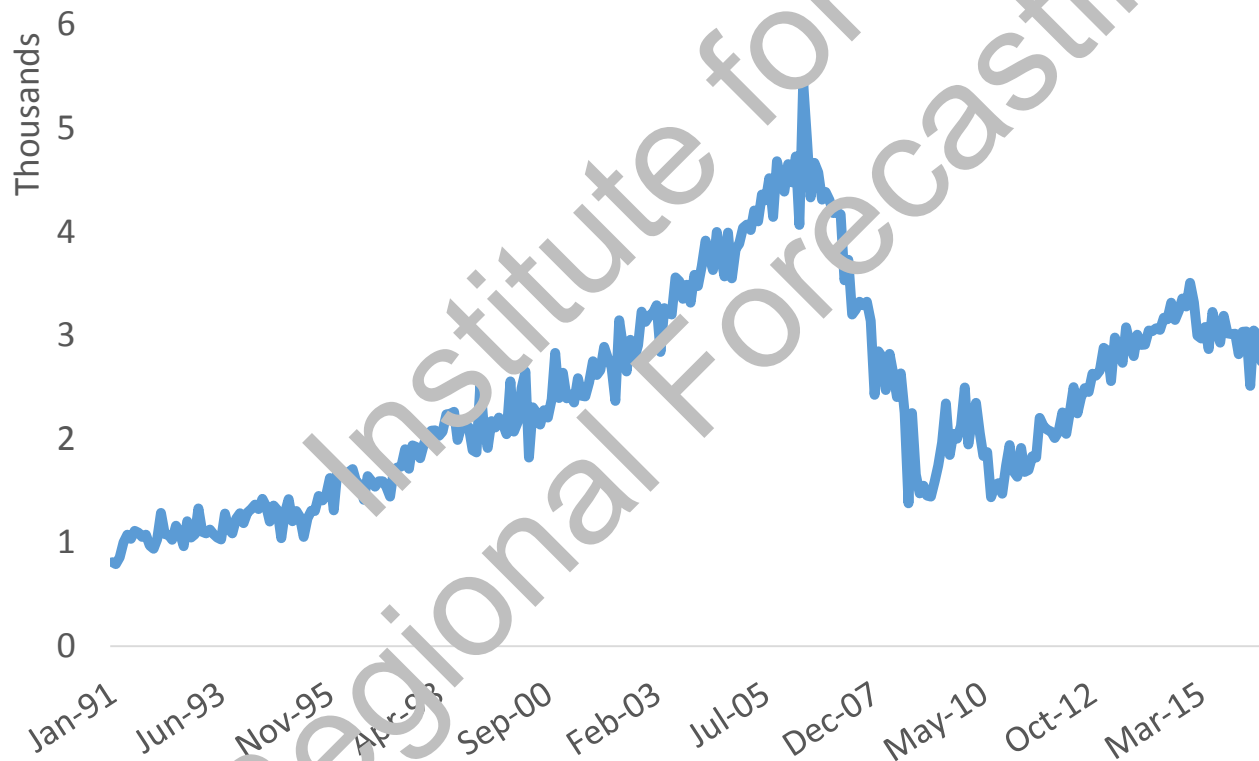
MetroStudy

Current lot supply
in months & by lot size



Single-Family Permits Softer Expect 30,000 Total In 2016

(monthly permits at annual rates, s.a.)

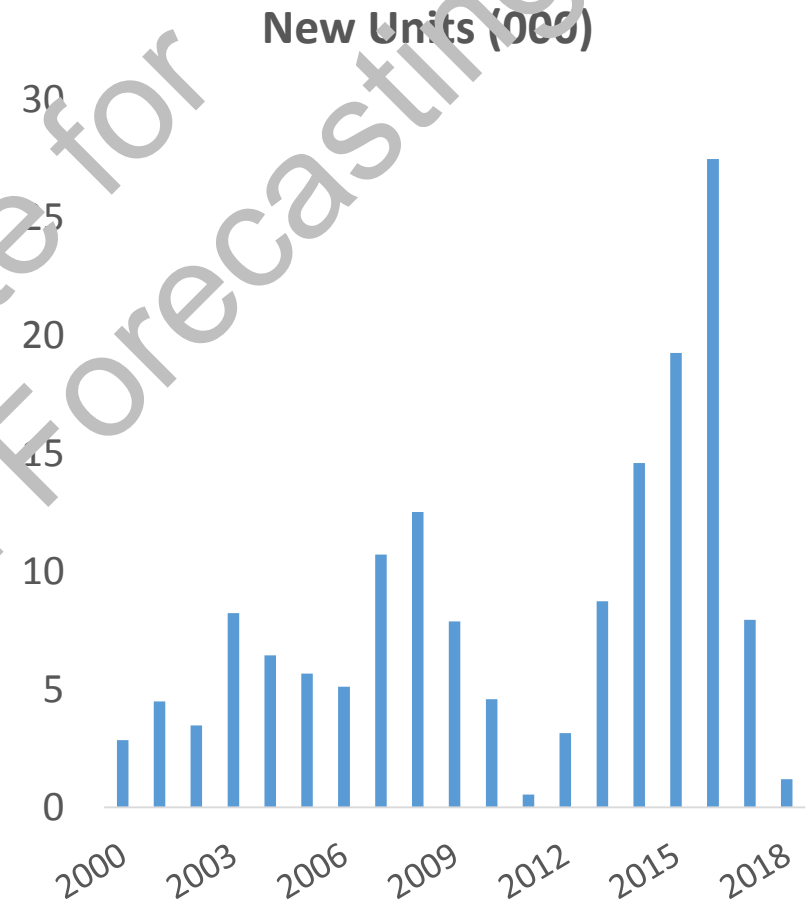


Apartment Market Rolls Over

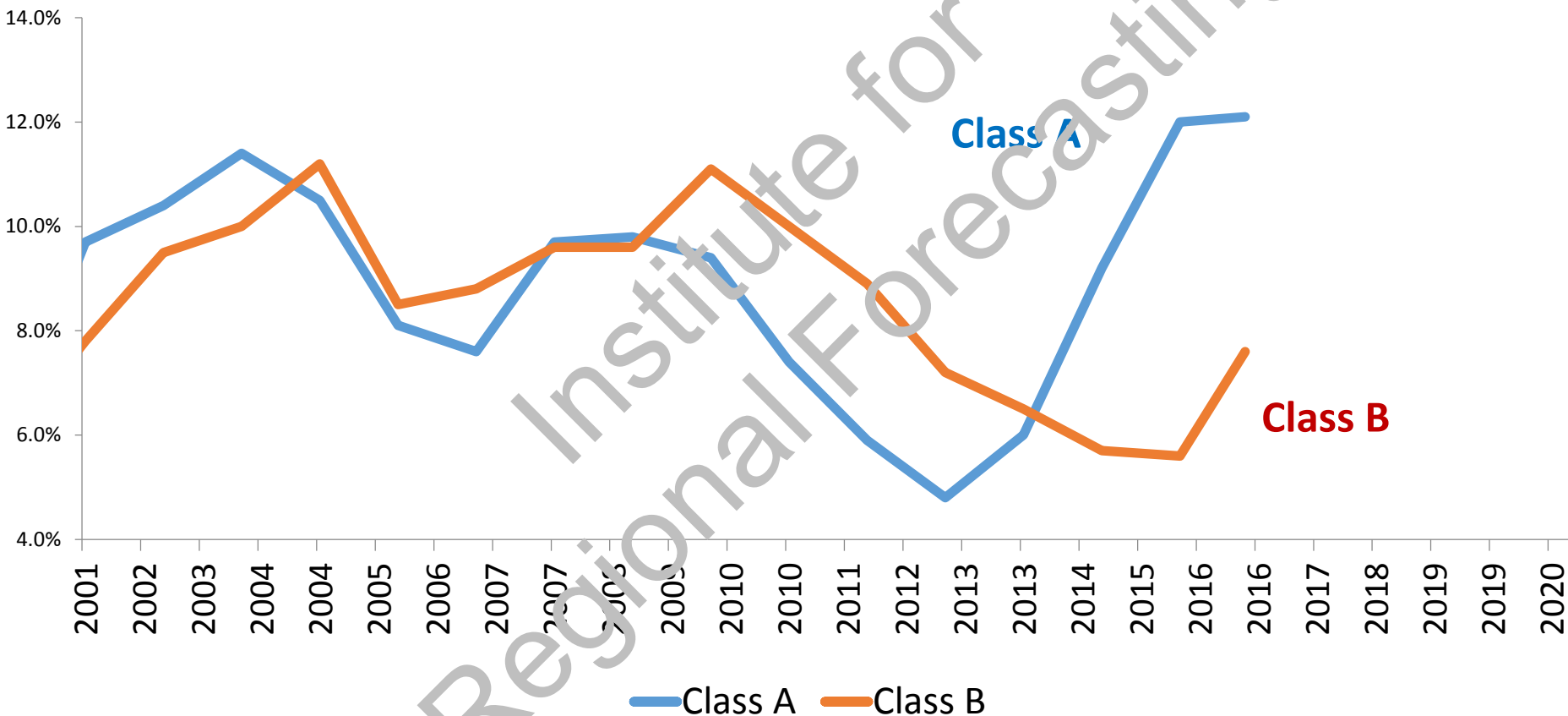


Apartment Construction Finally Peaks In 2016

	Number of Units	Percent of 2018 Units
Pre-2014	119,176	62.9%
2014	14,514	7.7%
2015	19,276	10.2%
2016	27,497	14.5%
To Sept	17,827	9.4%
To Dec	9,670	5.1%
2017	7,946	4.2%
2018	1,189	0.6%
total	189,528	100.0%

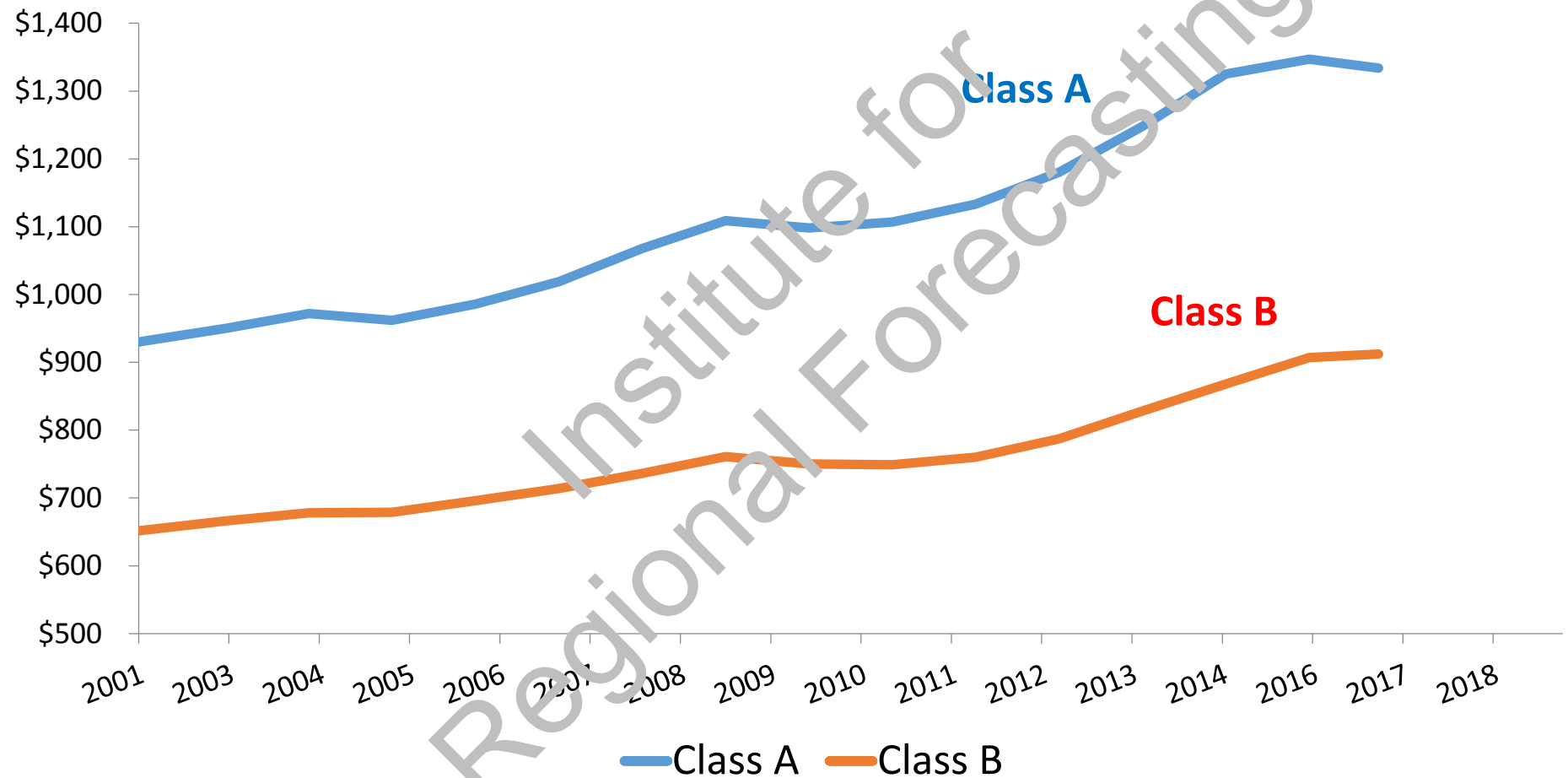


Vacancy Rate For Class A and B Climb From Low Levels



Source: CoStar

Average Effective Monthly Rents Have Now Peaked



Source: CoStar, IRF forecast

Class A Apartment Market Suffering From Self-inflicted Wounds

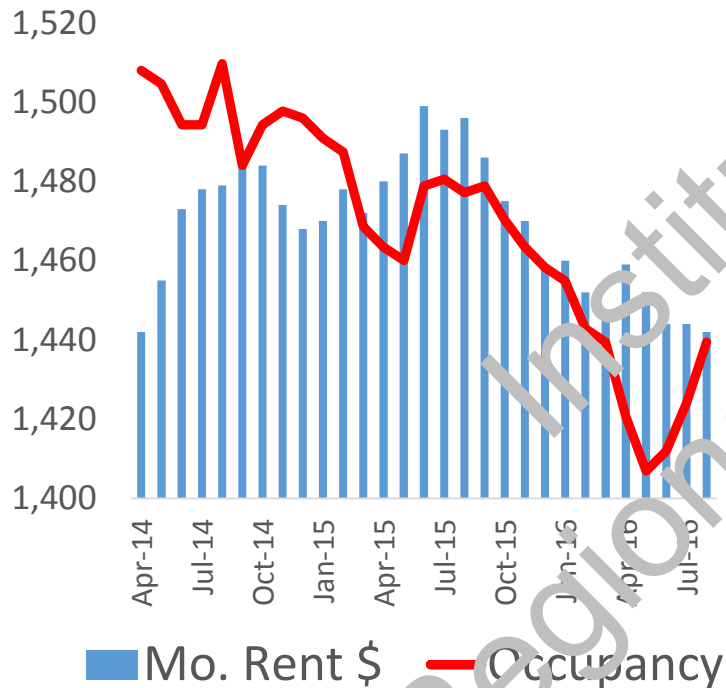
Class A Rents and Occupancy Under Growing Pressure			
	Stable	In Lease Up	All Class A
No. of Units	121,571	25,071	146,642
Monthly Rent	\$1,427	\$1,513	\$1,442
Occupancy	91.3%	26.9%	60.3%

Apartment Data Services through August

- Damage is felt first in the rest of Class A, in similar product
- Class A is struggling with rent under pressure from widespread concessions and falling occupancy rates
- There are 25,000 units in lease-up with only 26.9% occupancy, another 18,000 units still in the construction pipeline

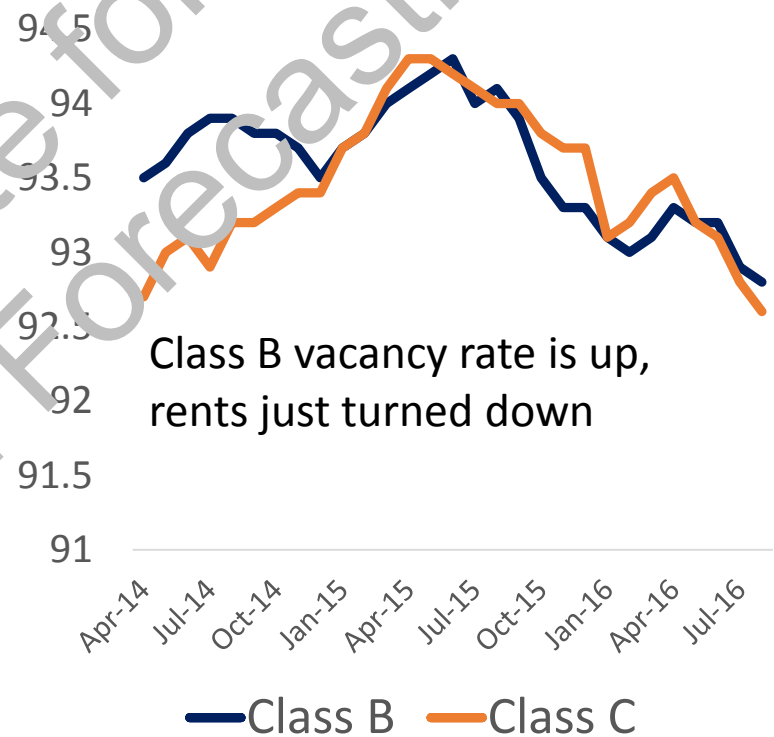
New Product Puts Class A Under Pressure, But Damage Spreading

Class A Rents and Occupancy Under Pressure



Apartment Data Services

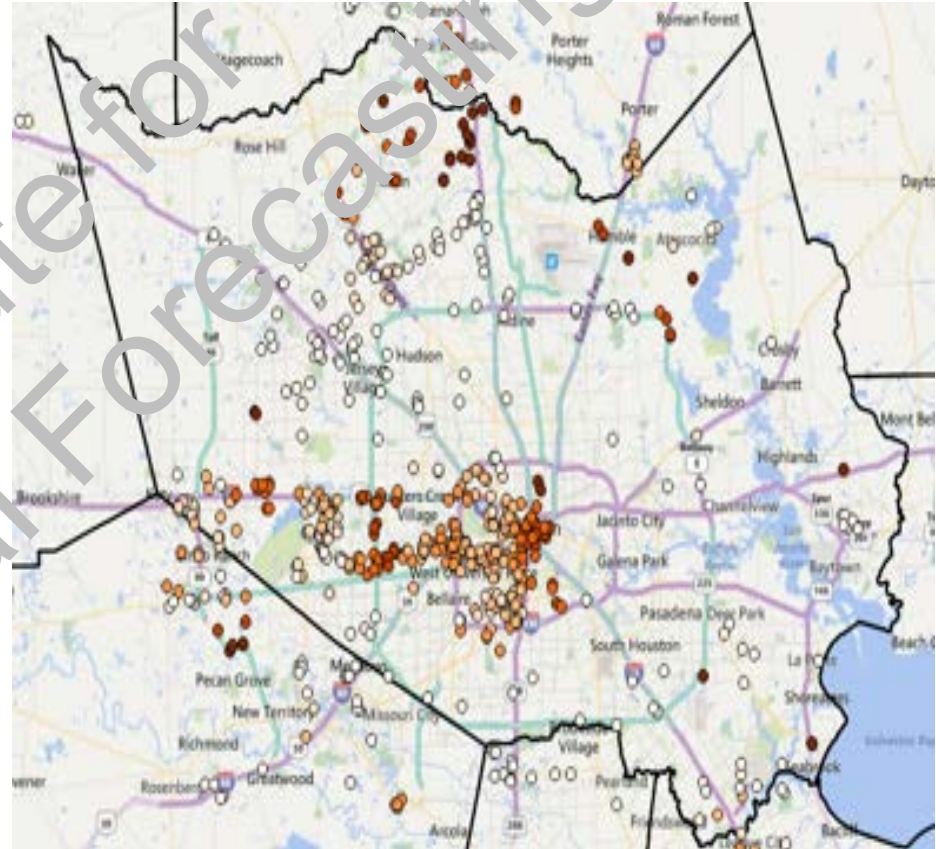
Occupancy high in Class B and C, but now falling



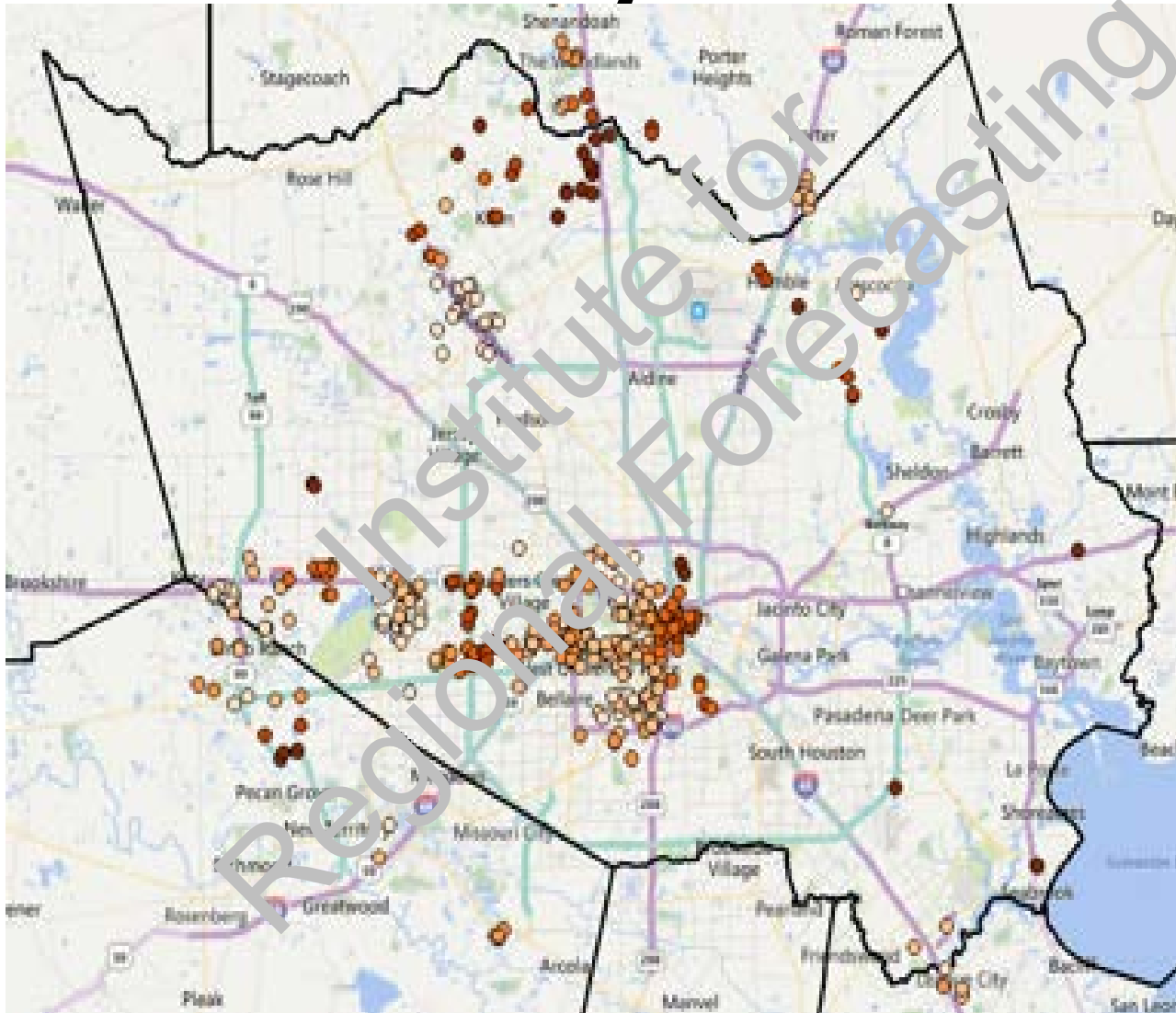
Class B vacancy rate is up, rents just turned down

Damage Also Spreads Geographically From Complex To Complex

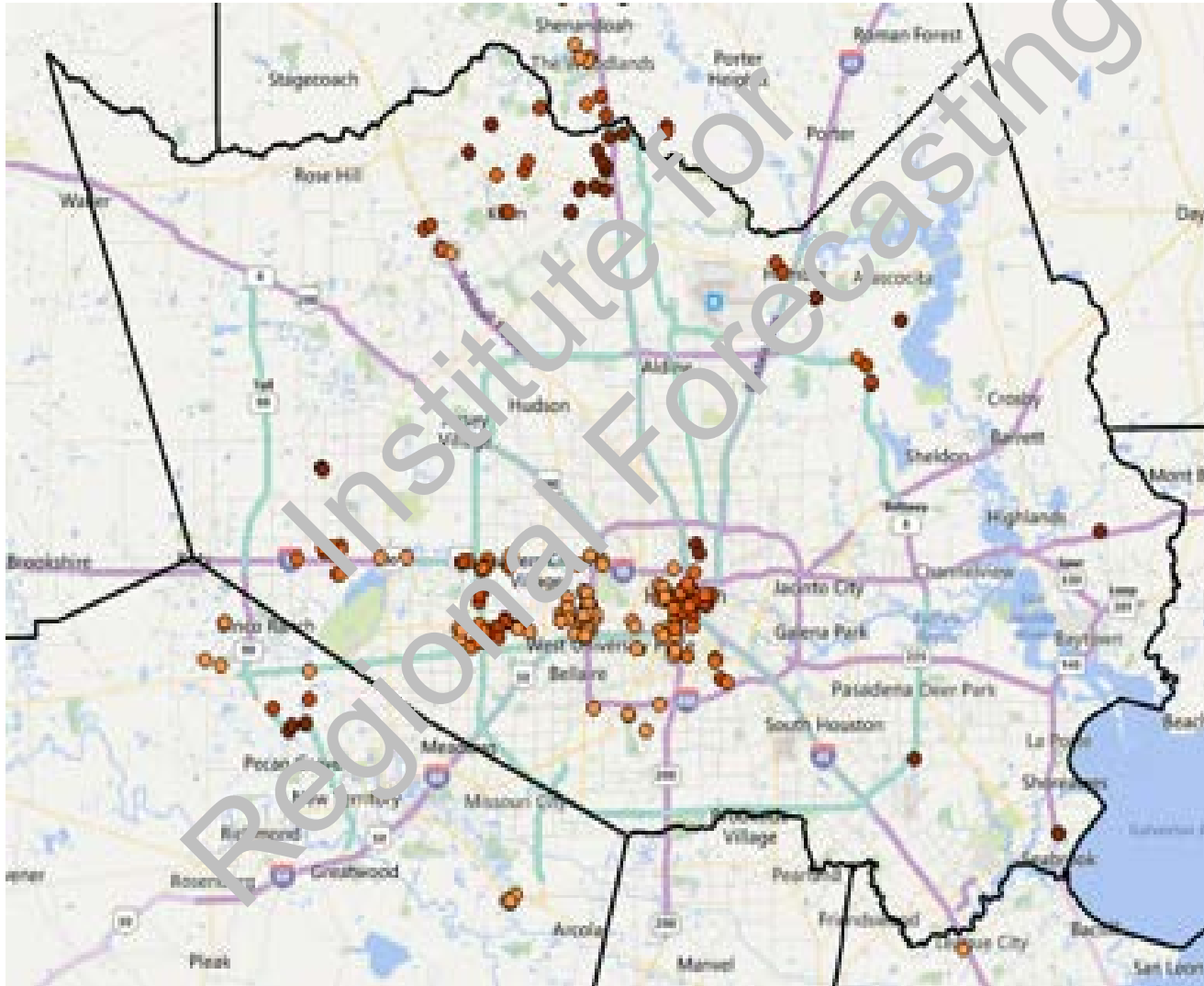
- Look at all Class A apartment complexes in metro area at end of 2016
- Look at all the other Class A complexes in circle of radius of 2 miles
- Compute the resulting vacancy rate in its market area
- Each dot an A apartment, the darker the spot, the higher the vacancy rate in its market area



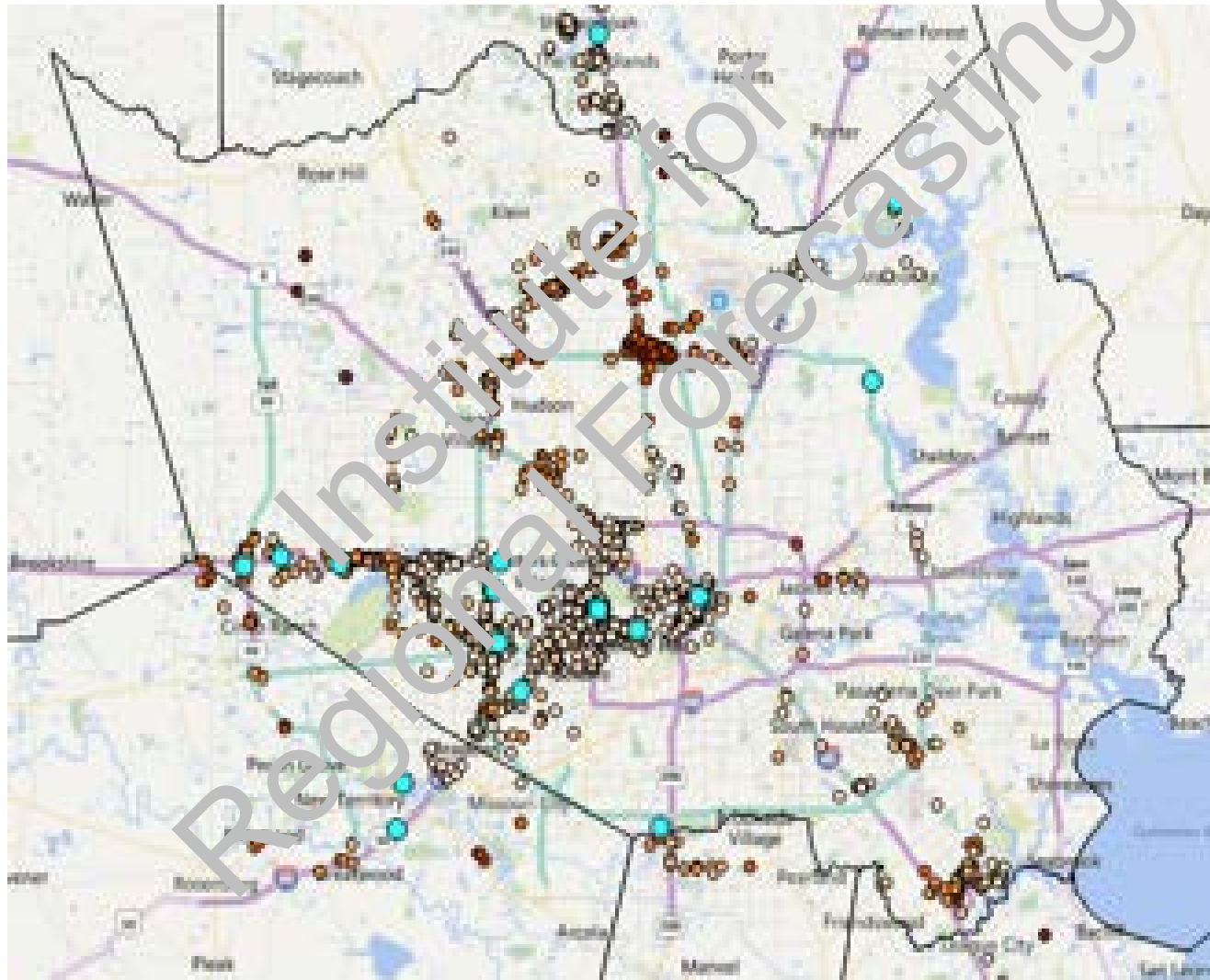
Where Vacancy Rates Are Above 10 Percent By Year End



Where Vacancy Rates Are Above 20 Percent By Year End

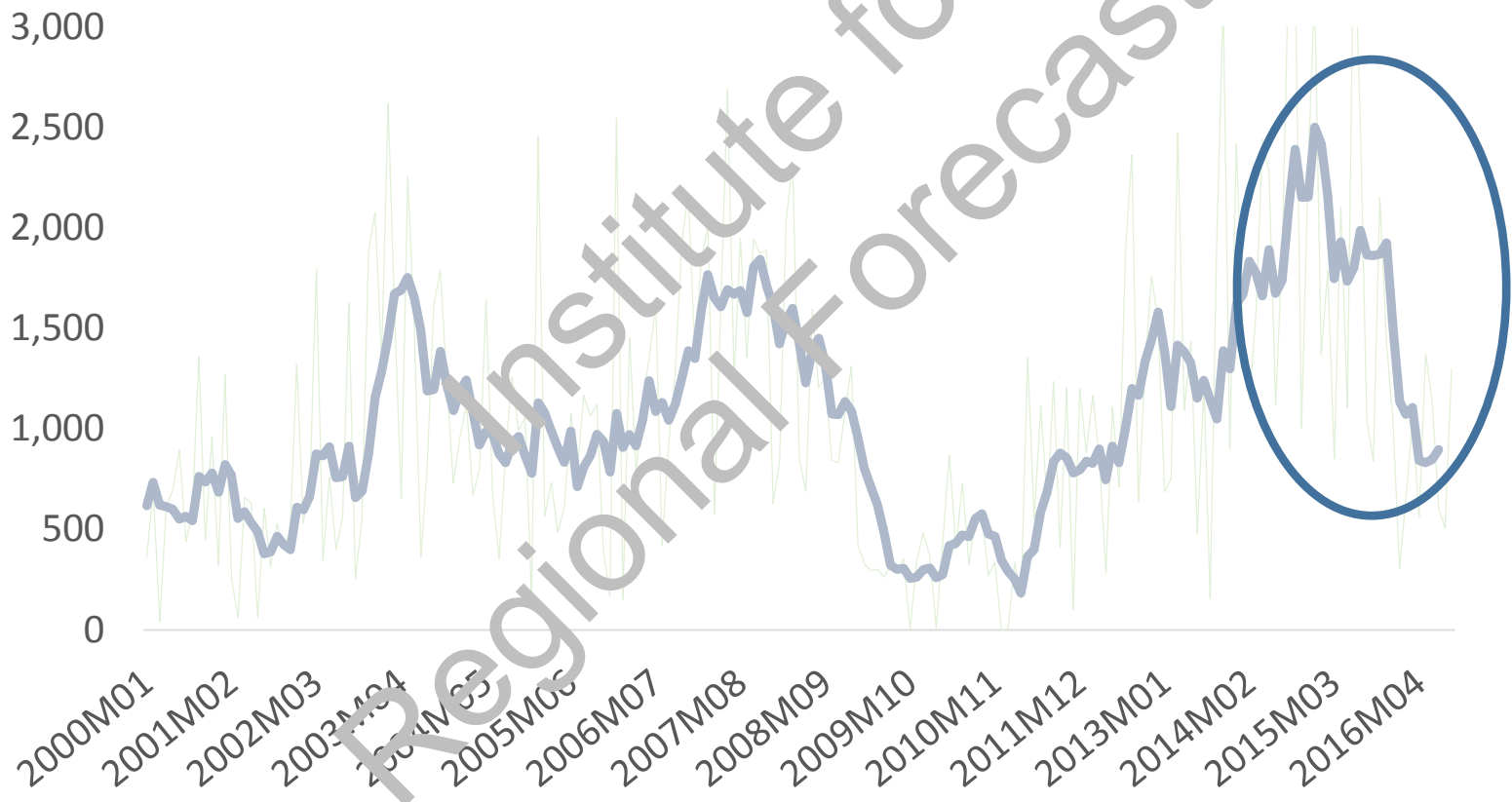


More Deliveries To Come In 2017

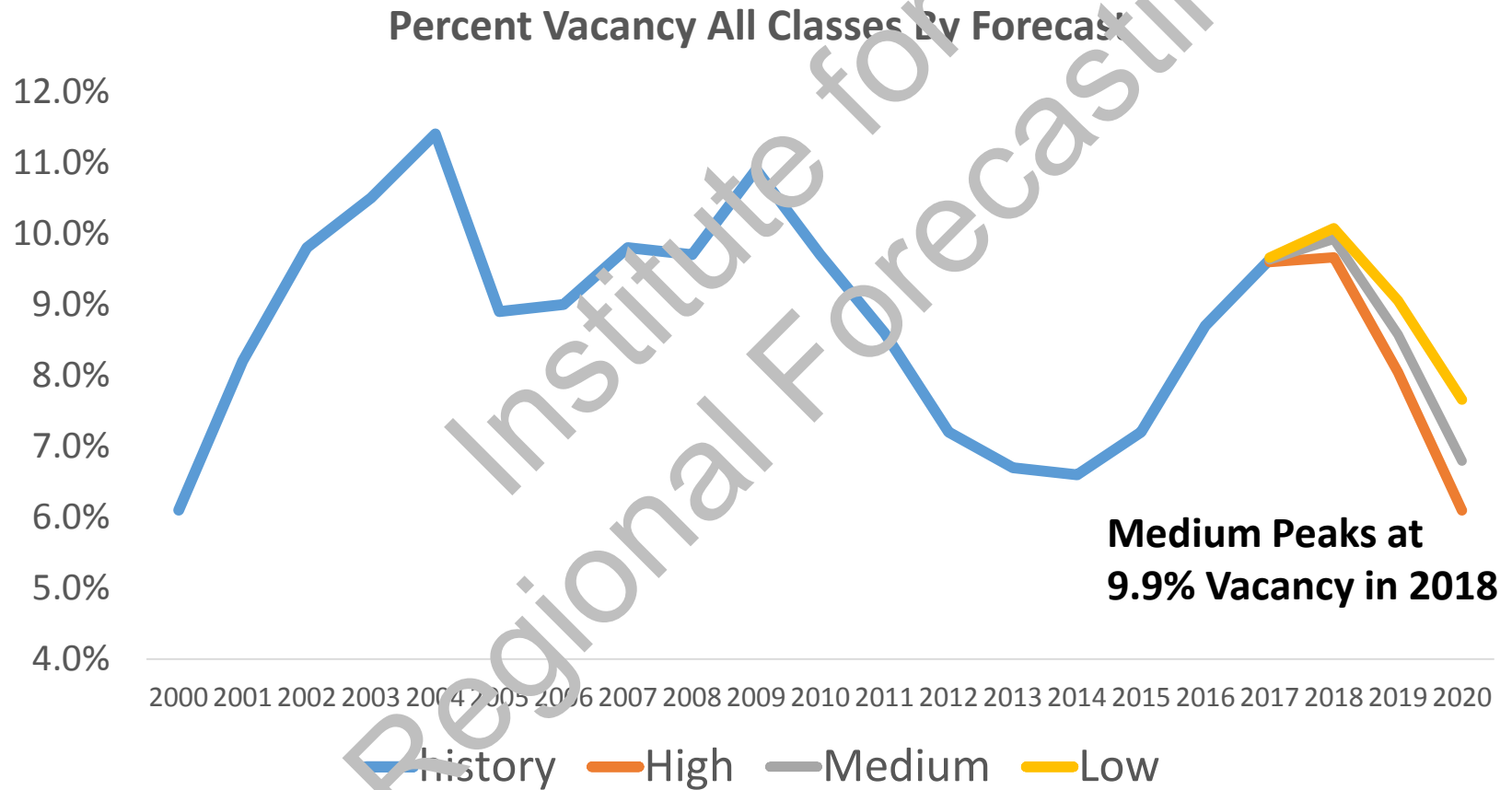


Multifamily Permits Finally Turn Down In Houston

Monthly permits, 6-month average



These Multi-Family Vacancy Rates Have Been Seen Before



What Drives Quarter-to-Quarter Changes In Office-Using Employment In Houston?

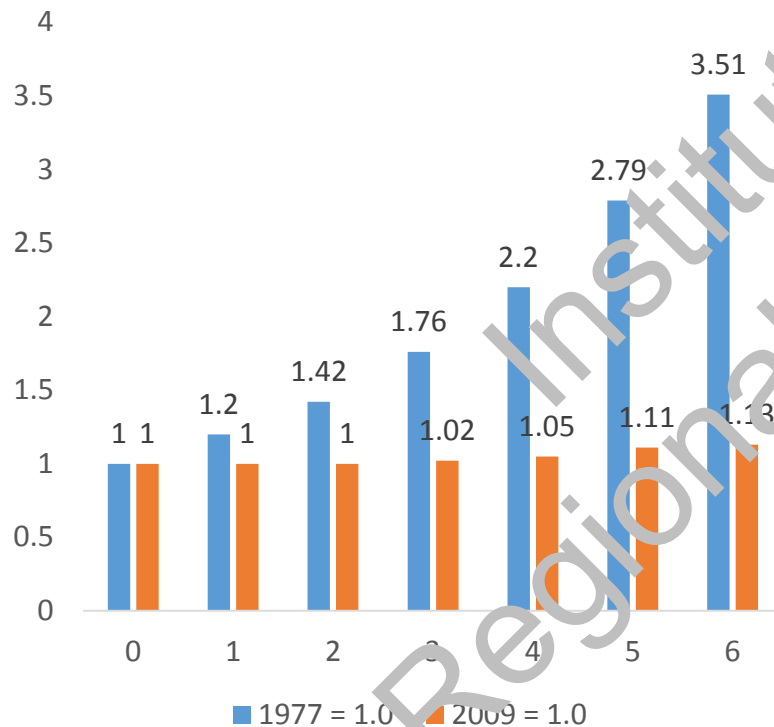
- Just over half the change is purely cyclical, driven by all the key factors that drive the local business cycle – oil, U.S. growth, etc.
- About 15 percent is oil headquarters and campus activity that is related to energy employment growth, but independent of the business cycle
- About 10 percent is health care, driven by demographics and health-care policy. It has some ties to energy employment, but is not particularly cyclical
- Another 10 percent is driven by non-energy national or regional headquartering activity or general secondary activity like banking

See All Of This At Work In 2016

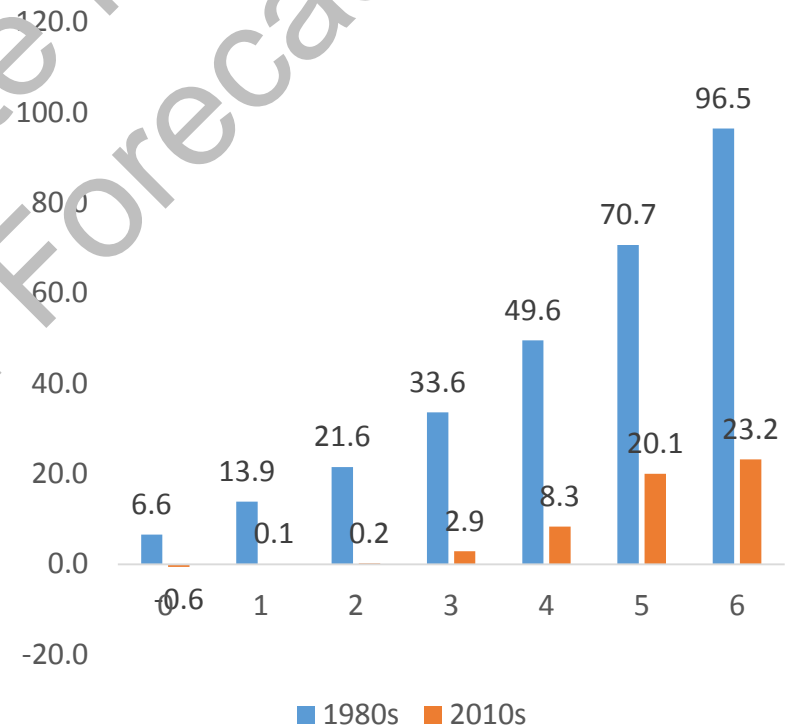
- The worst damage was done with 14.5 million square feet entering construction just before the bust begins, from 2013Q2 to 2014Q1
- Much of the space was for corporate headquarters, campuses, and otherwise preleased. But substantial parts of it would come back as sublet space – even if economic growth had continued
- Oil bust arrives, and a total of 12 million square feet sublet space returns. Add the cyclical loss of 80,000 jobs in oil-related activity, and 40 million square feet (18.4%) is quickly available
- Leasing activity is dead in the water, and recent net absorption in past 12 months is near zero. The vacancy rate is already above 15 percent

Ugly As The Office Market Is, This Is Not The 1980's

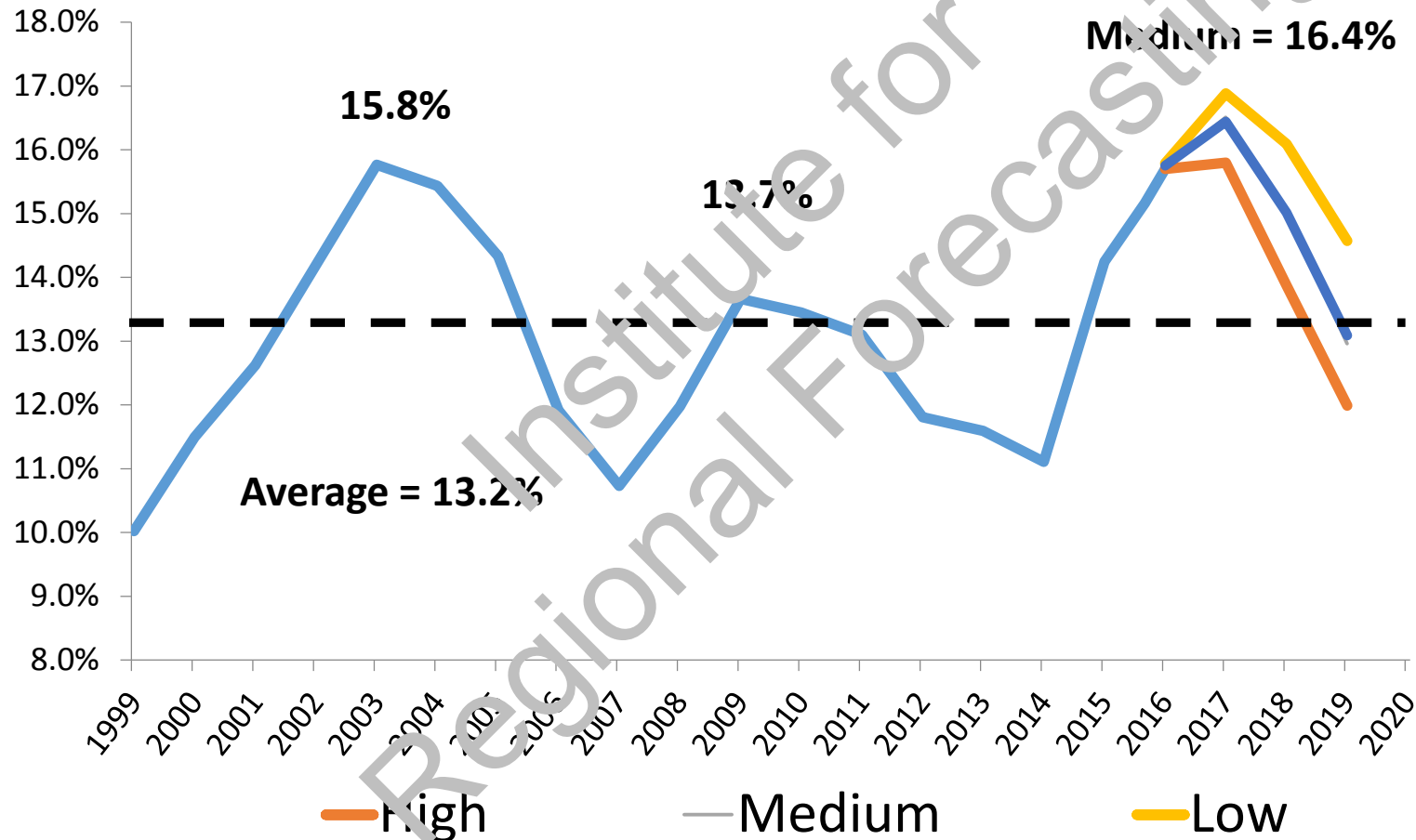
Total Office Space in Houston:
1977 = 1.0 or 2009 = 1.0



Cumulative square footage
added after 1977 or after 2009



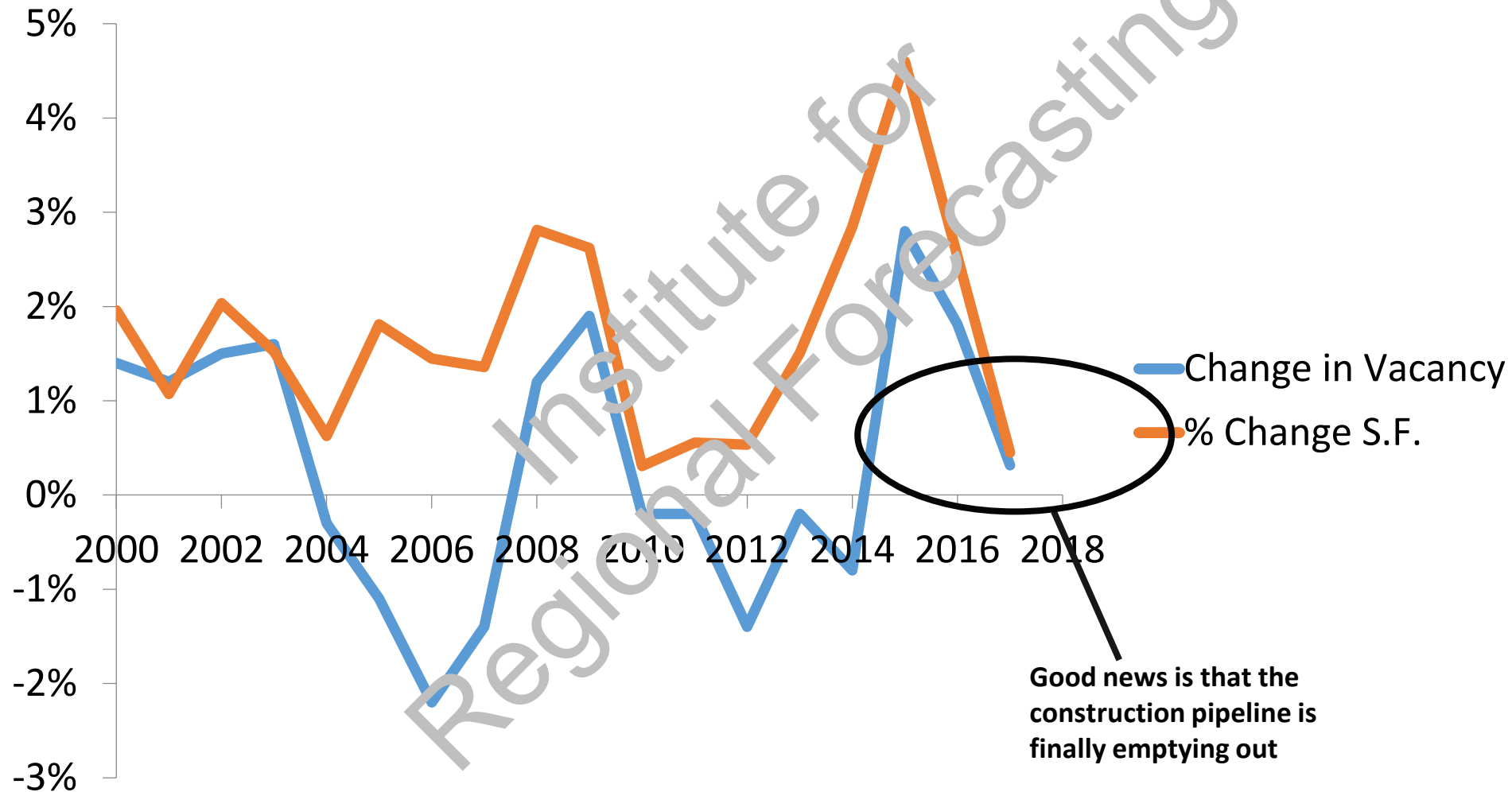
Office Vacancy Rate Nearing A Peak For All Classes Of Building



Source: CoStar, IRF Forecast

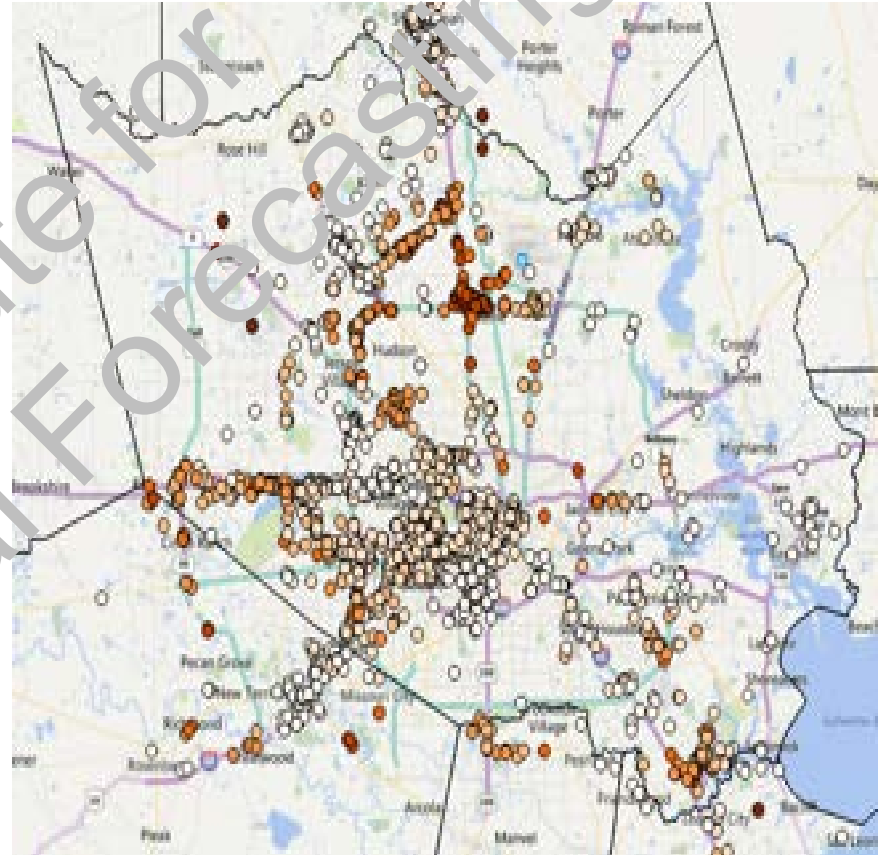
August 2016

Still ... Vacancies Rise Mainly Due To Past Decisions & Continued Deliveries

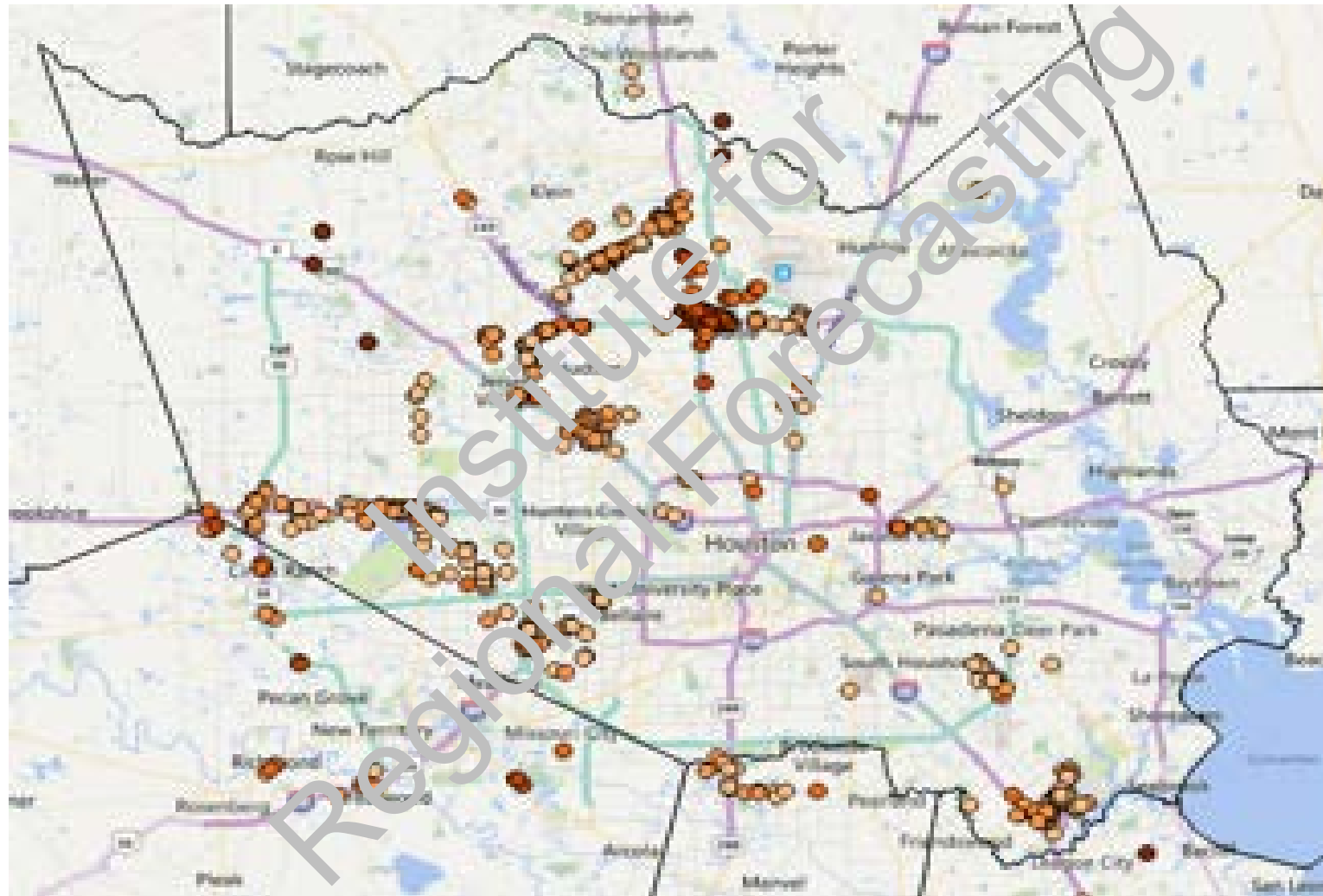


Damage Spreads Geographically From Building To Building

- Look at all buildings in metro area at end of 2016
- Look at all the other buildings in circle of radius of 2 miles
- Compute the resulting vacancy rate in its market area with new deliveries
- Each dot a building. The darker the spot, the higher the vacancy rate in its market area



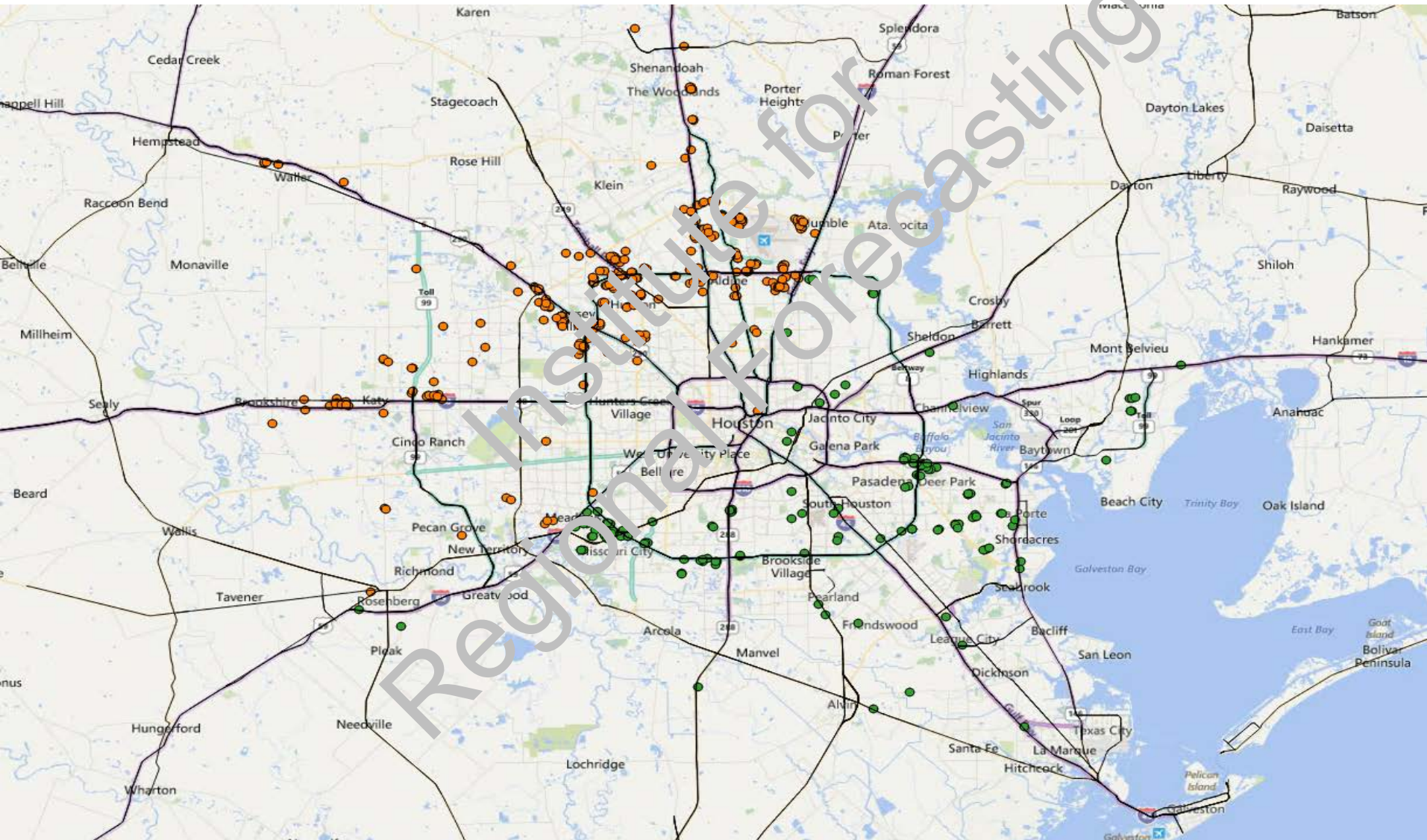
Local Office Markets With Vacancy Rate Already Above 15 Percent



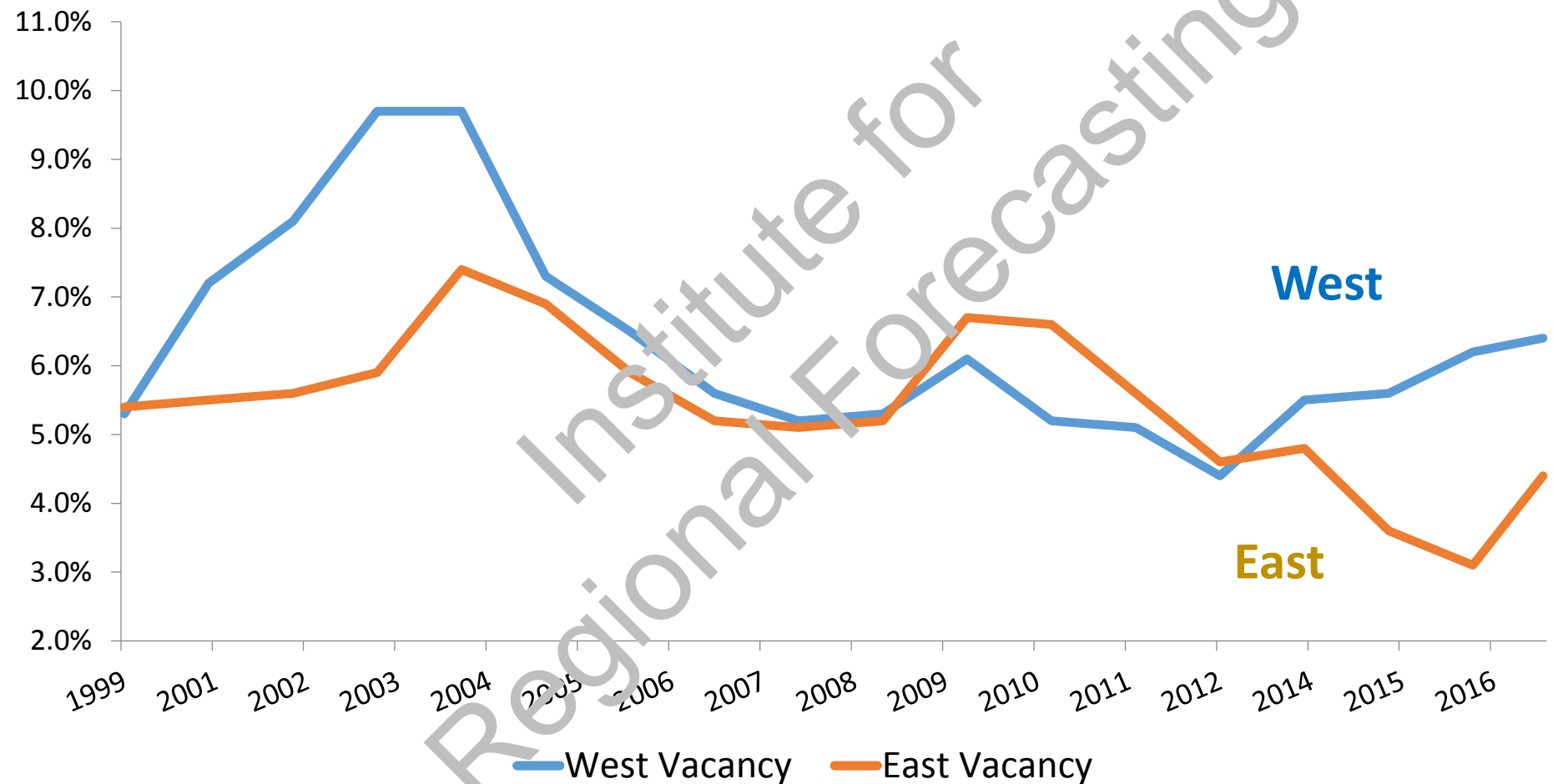
Industrial and Retail?
No Real Excitement Here!

Institute for
Regional Forecasting

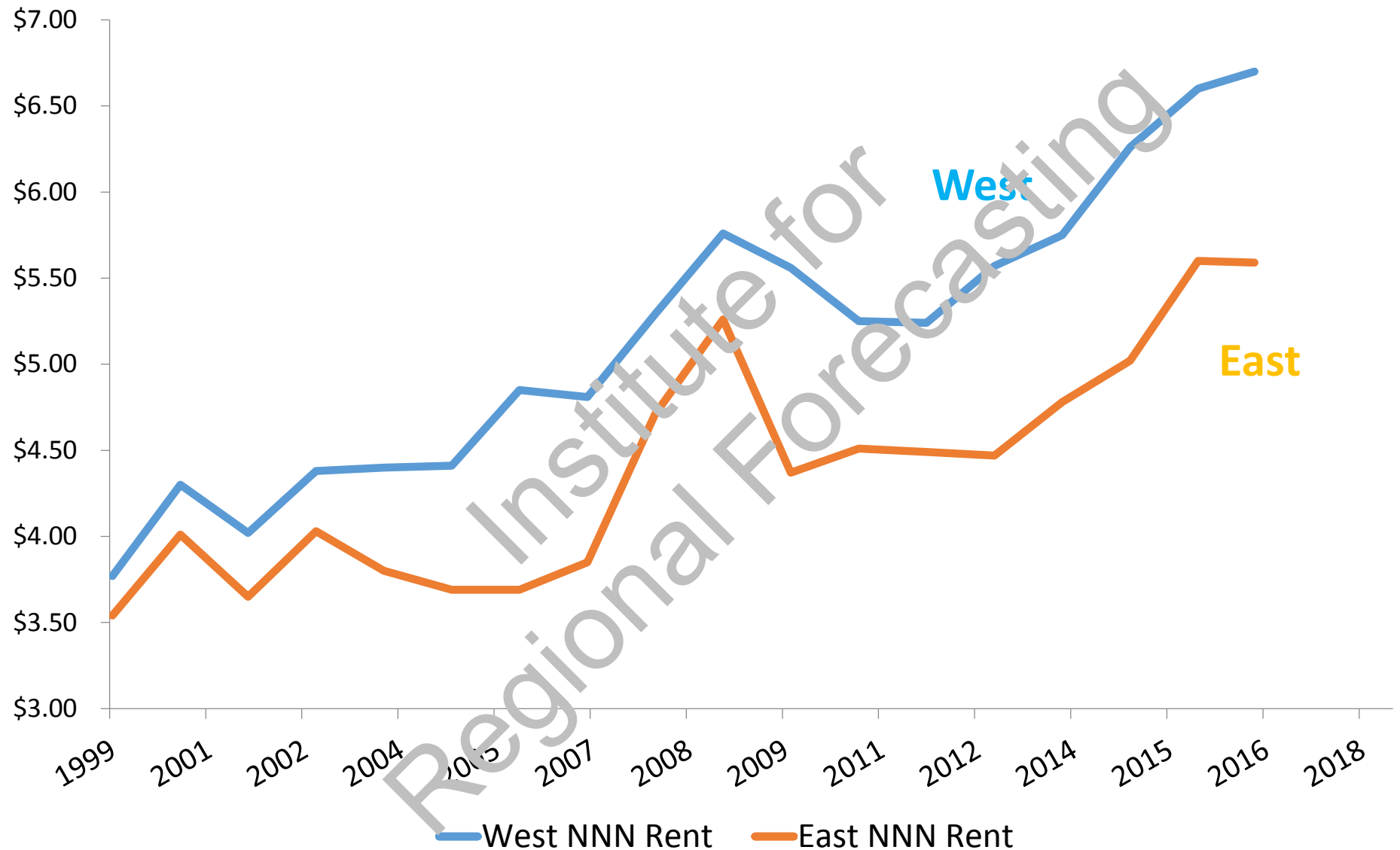
Industrial Projects Delivered Since 2010: East versus West



Industrial East And West Vacancy: East Side Boom Fading?

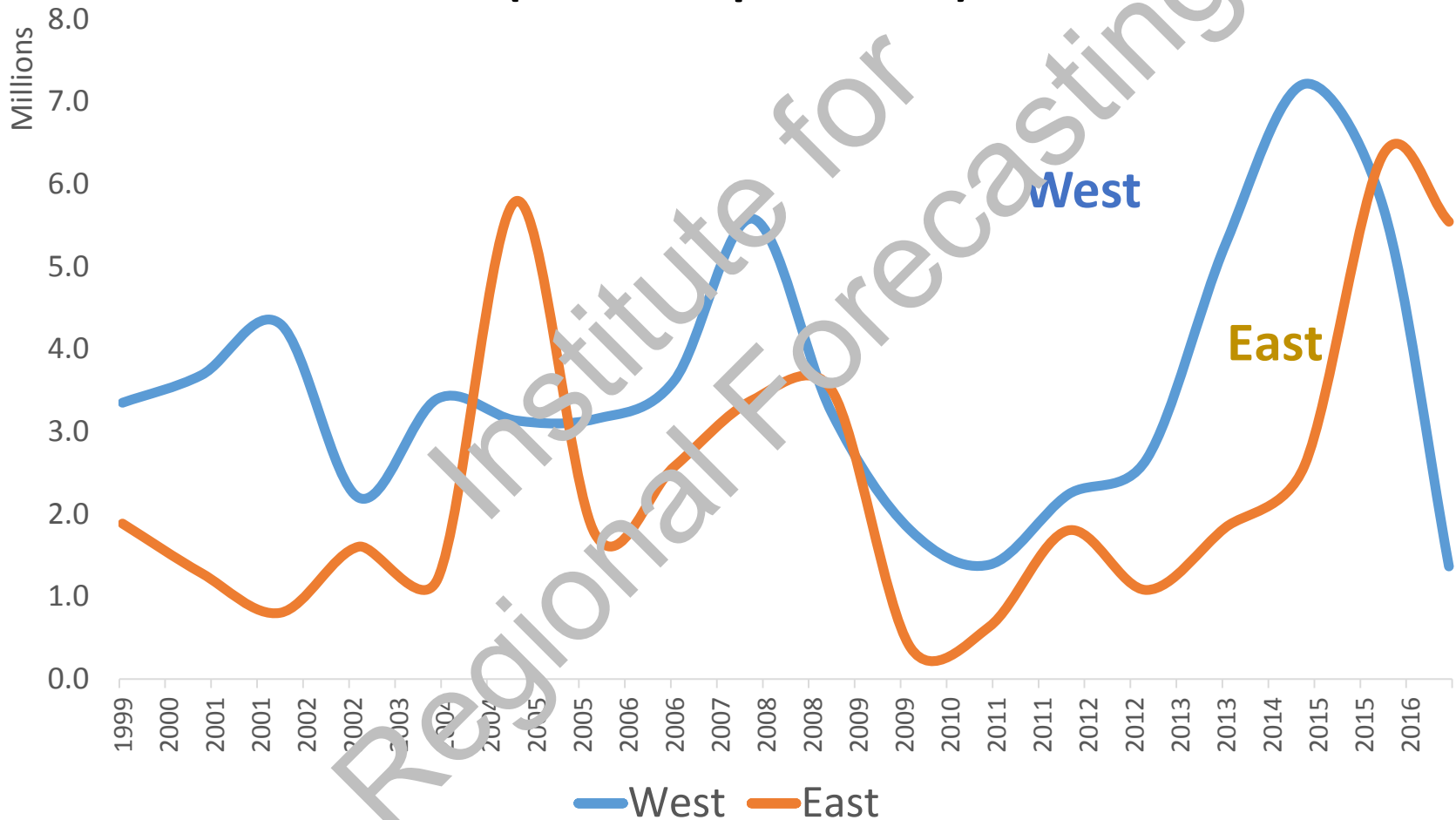


Industrial East And West Rent



Industrial Construction Slows In East And West Houston

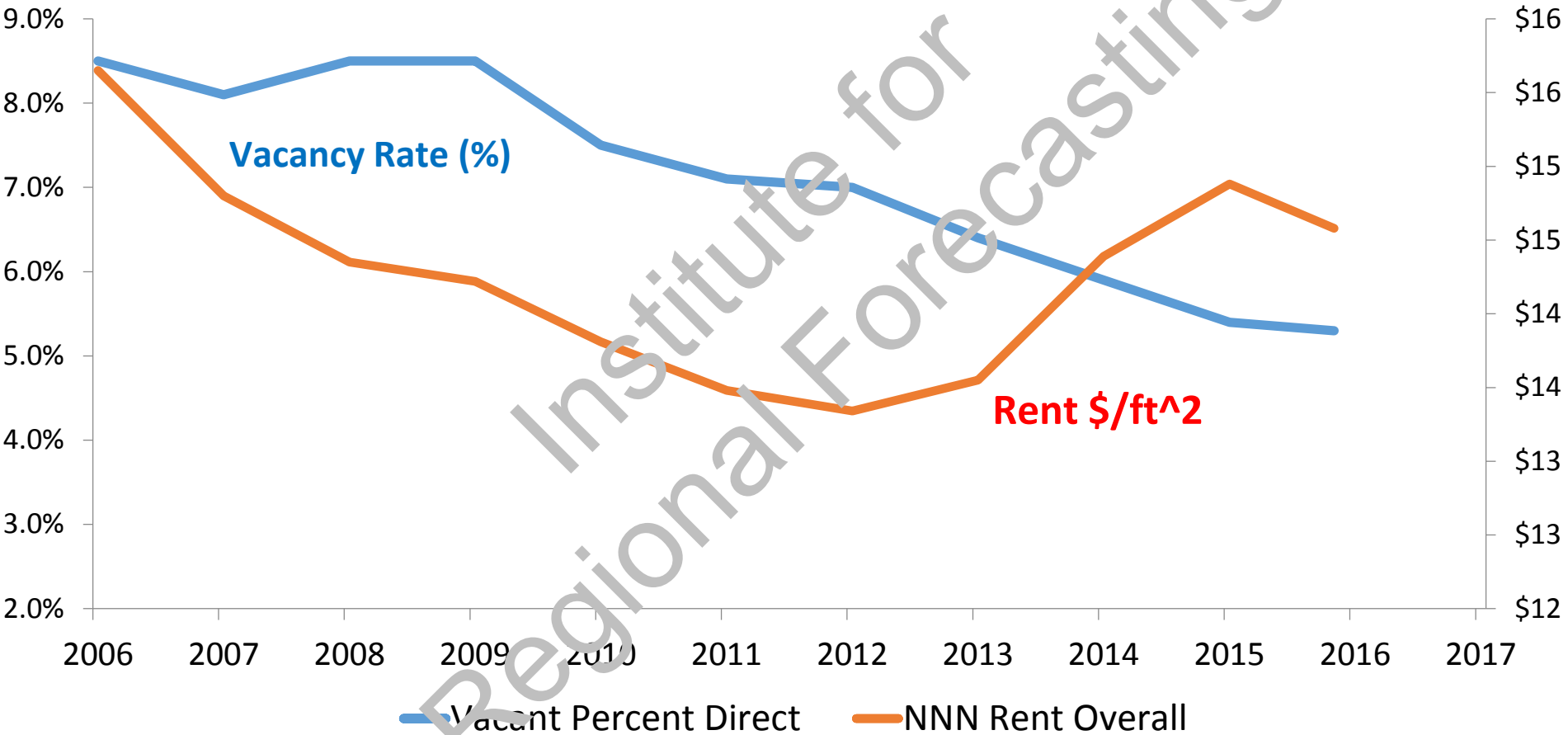
(million square feet)



Retail: Waiting For A Rebound

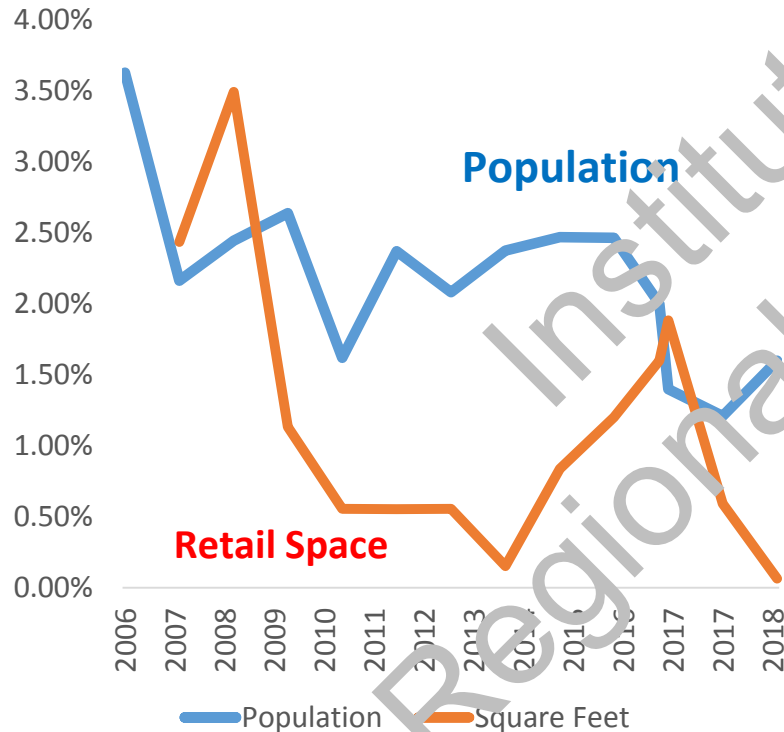
- Retail missed the boom of recent years after delivering 16 million square feet in 2006-07, leaving a glut of space in the Great Recession
- Retail has been relegated in recent years to following the grocery store anchored shopping centers, chasing new home construction around the Grand Parkway
- Local growth caught up with retail space needs in 2013-14, and vacancy rates turned healthy and rents began to rise – just in time for the current oil bust
- The current construction pipeline is no threat to the market, growing more slowly than population. But be careful – real retail sales have been flat for two years

Retail Rent And Vacancy Tightened Up In 2014

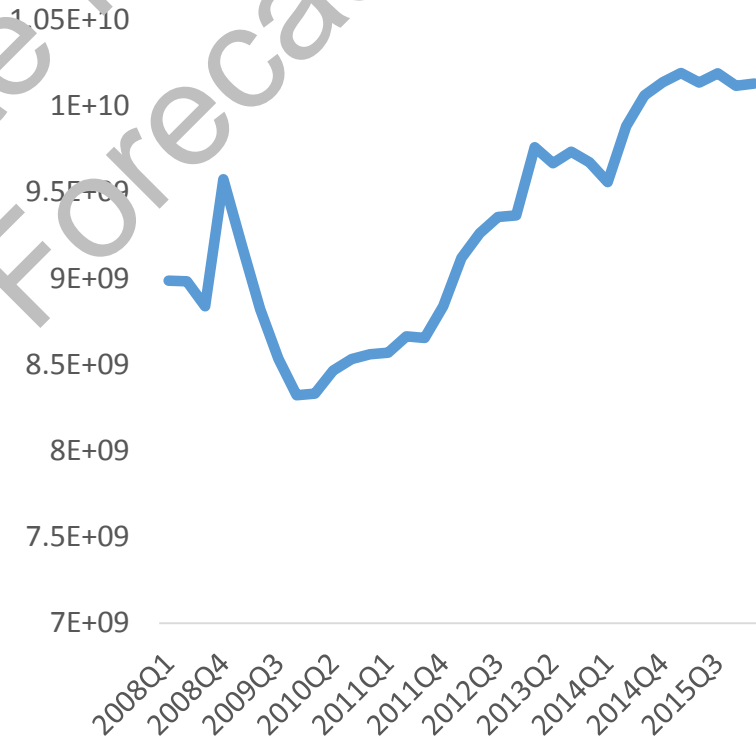


Retail Pipeline Is Okay – Despite A No-growth Retail Market

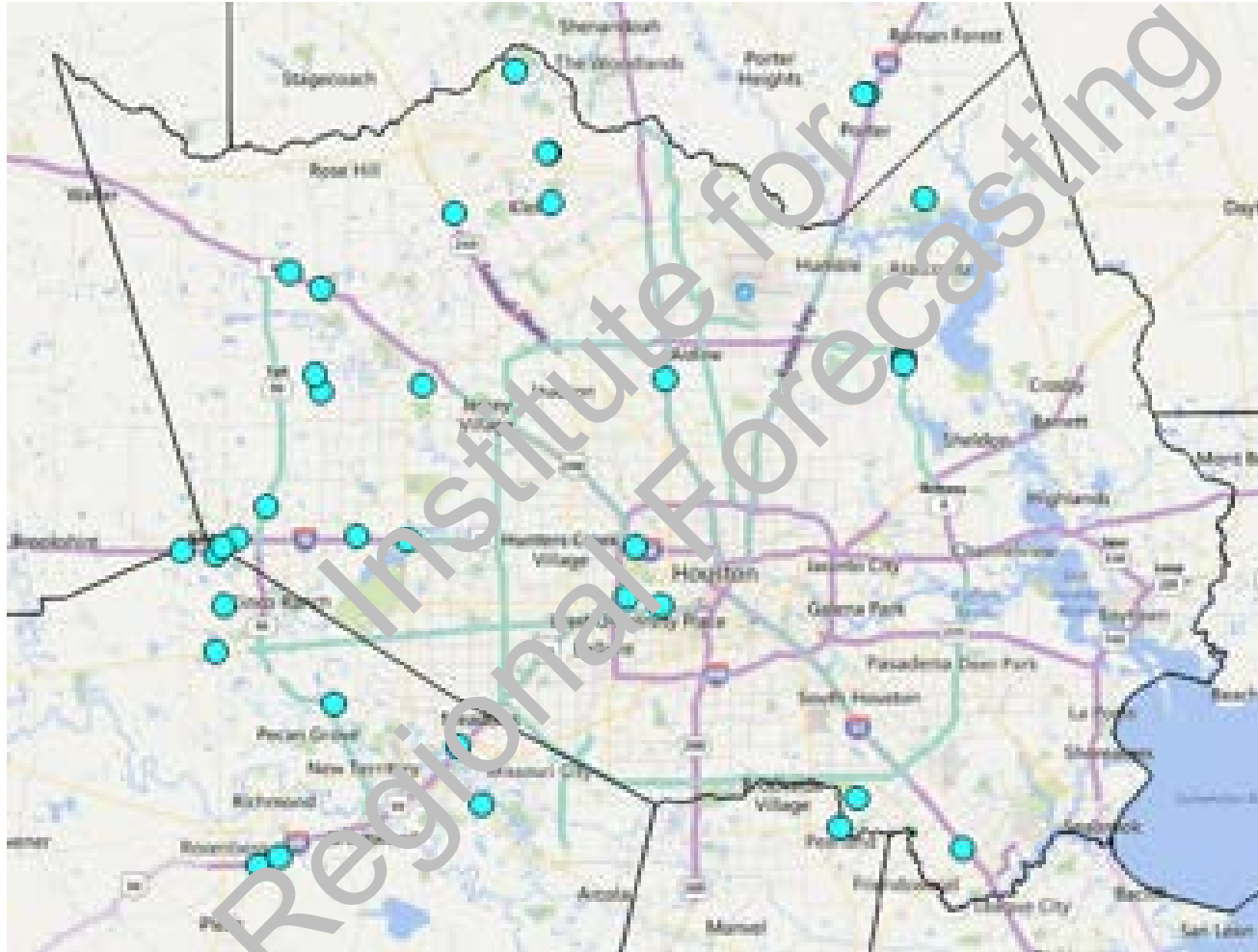
Growth Rate of Population and Retail Space: In-Line So Far



Real Retail Sales Now Flat in Metro Area for Two Years



Retail Construction Is *Still* Mostly Chasing Rooftops In The Far Suburbs





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Thank You for Attending

Our next symposium dates are to be determined
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Please give us your email address to be notified of the
finalized dates