

1Q 2017 HOUSING THEMES

TRUMPHORIA

January, 2017

DISCLAIMER

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QA@HEDGEYE.COM

**ANSWERED AT THE END OF THE CALL*

HEDGEYE HOUSING COMPENDIUM

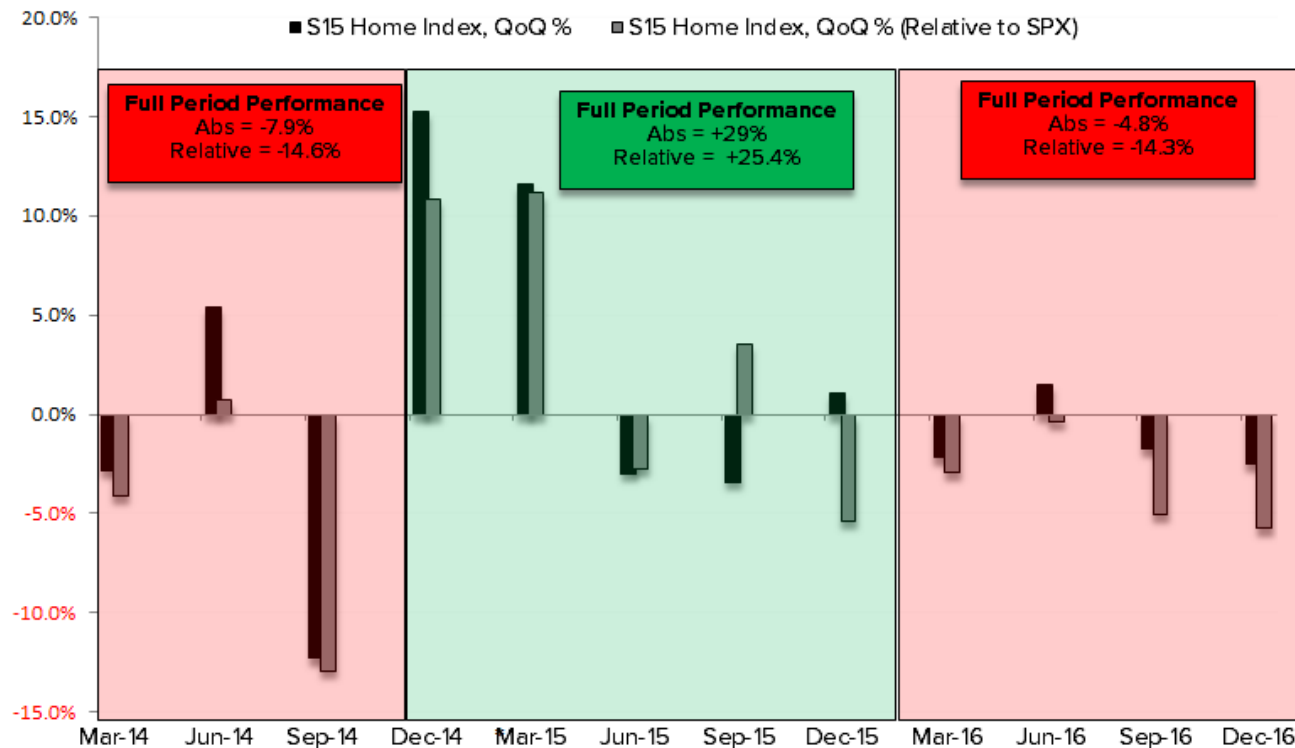
					TRADE/TREND/TAIL			Rate of Change		
					Short Term	Intmed Term	Long Term	Short Term	Intmed Term	Long Term
Most Recent Data										
		Period	Latest Data	Last Price	Prior Period	3M Ago	12M Ave	MoM Chg	3M Chg	vs 12M Avg
Home Prices	Case-Shiller 20 City HPI YoY NSA	Oct-16	Better	5.1%	5.0%	4.9%	5.3%	0.1%	0.2%	-0.2%
	Case-Shiller 20 City HPI MoM SA	Oct-16	Better	0.6%	0.5%	0.1%	0.4%	0.2%	0.6%	0.2%
	Corelogic HPI - NSA YoY % Chg	Aug-16	Better	6.2%	5.4%	5.1%	5.5%	0.9%	1.1%	0.8%
	Corelogic (Ex-Dist.) HPI - NSA YoY % Chg	Aug-16	Better	5.6%	4.7%	4.4%	4.7%	0.9%	1.2%	0.9%
	FHFA HPI - NSA YoY % Chg	Oct-16	Worse	6.1%	6.2%	5.9%	6.0%	-0.1%	0.2%	0.1%
Supply & Demand: Existing	MBA Purchase Apps Index (Mo. Ave)	Dec-16	Better	230.7	218.7	224.5	224.9	5.5%	2.8%	2.6%
	NAR: Pending Home Sales (Index)	Nov-16	Worse	107.3	110.0	108.4	109.5	-2.5%	-1.0%	-2.0%
	NAR: Existing Home Sales (SAAR)	Nov-16	Better	5.61	5.57	5.30	5.39	0.7%	5.8%	4.1%
	NAR: Existing Home Inv. (millions units)	Nov-16	Better	1.85	2.01	2.01	1.99	-8.0%	-8.0%	-6.9%
	NAR: Existing Home Inv: Months Supply	Nov-16	Better	3.96	4.33	4.55	4.43	-8.6%	-13.0%	-10.7%
Supply & Demand: New Homes	NAHB: HMI	Dec-16	Better	70	63	65	61	7.0	5.0	0.2
	Census: Total Starts	Nov-16	Worse	1090	1340	1164	1164	-18.7%	-6.4%	-6.3%
	Census: SF Starts	Nov-16	Worse	828	863	724	781	-4.1%	14.4%	6.0%
	Census: Total Permits	Nov-16	Worse	1212	1260	1152	1179	-3.8%	5.2%	2.8%
	Census: SF Permits	Nov-16	Better	780	774	736	739	0.8%	6.0%	5.5%
	Resi Construction Spending (in Billions)	Nov-16	Better	470	465	463	457	1.0%	1.5%	2.7%
	Census: New Home Sales	Nov-16	Better	592	563	559	557	5.2%	5.9%	6.4%
	Census: New Home Inventory (000)	Nov-16	Worse	253	248	242	240	2.0%	4.5%	5.3%
Miscellaneous	Interest Rates (30 Year FRM)	Dec-16	Worse	4.36%	4.03%	3.67%	3.89%	0.3%	0.7%	0.5%
	NAR: Affordability Index (Composite)	Oct-16	Better	170.2	166.6	160.6	166.4	2.2%	6.0%	2.3%
	ITB Price (EOP)	Dec-16	Better	28.02	26.74	27.89	26.91	4.8%	0.5%	4.1%
	XHB Price (EOP)	Dec-16	Better	34.60	33.08	34.63	33.51	4.6%	-0.1%	3.3%

Source: Hedgeye Risk Management, S&P, Corelogic, FHFA, MBA, NAR, NAHB, Census Dept., Factset, Bloomberg

HEDGEYE

4 FOR 4 IN 2016

HEDGEYE HOUSING CALL CHRONOLOGY



Data Source: Bloomberg, Hedgeye

*Turned bullish in Nov 2014

Period	Hedgeye Position	S15 Home Performance	
		Absolute	Relative
1Q14	Bearish	-2.8%	-4.1%
2Q14	Bearish	5.4%	0.7%
3Q14	Bearish	-12.3%	-12.9%
4Q14	Bullish	15.3%	10.9%
1Q15	Bullish	11.6%	11.2%
2Q15	Bullish	-2.9%	-2.7%
3Q15	Bullish	-3.4%	3.6%
4Q15	Bullish	1.1%	-5.4%
1Q16	Bearish	-2.2%	-2.9%
2Q16	Bearish	1.6%	-0.3%
3Q16	Bearish	-1.7%	-5.0%
4Q16	Bearish	-2.5%	-5.7%

HOUSING - TRUMPHORIA

1

4Q16 – A LOOK BACK

Our main call since the start of the year has been that the headwinds that began in 4Q15 would persist and grow stronger throughout 2016. To that end, volume trends have converged to zero while HPI has been steady/stagnant in both the existing and new home markets. We expect volume and price trends to be similarly underwhelming as we move into 2017.

2

TRUMPHORIA

Trump's election caused a predictable surge in confidence for consumers and businesses alike, but it also produced a surge in mortgage rates, which stymied the early advances in the housing equity complex. We look ahead to what the new administration is likely to mean for both the Housing market and Housing equities.

3

ZIKA UPDATE

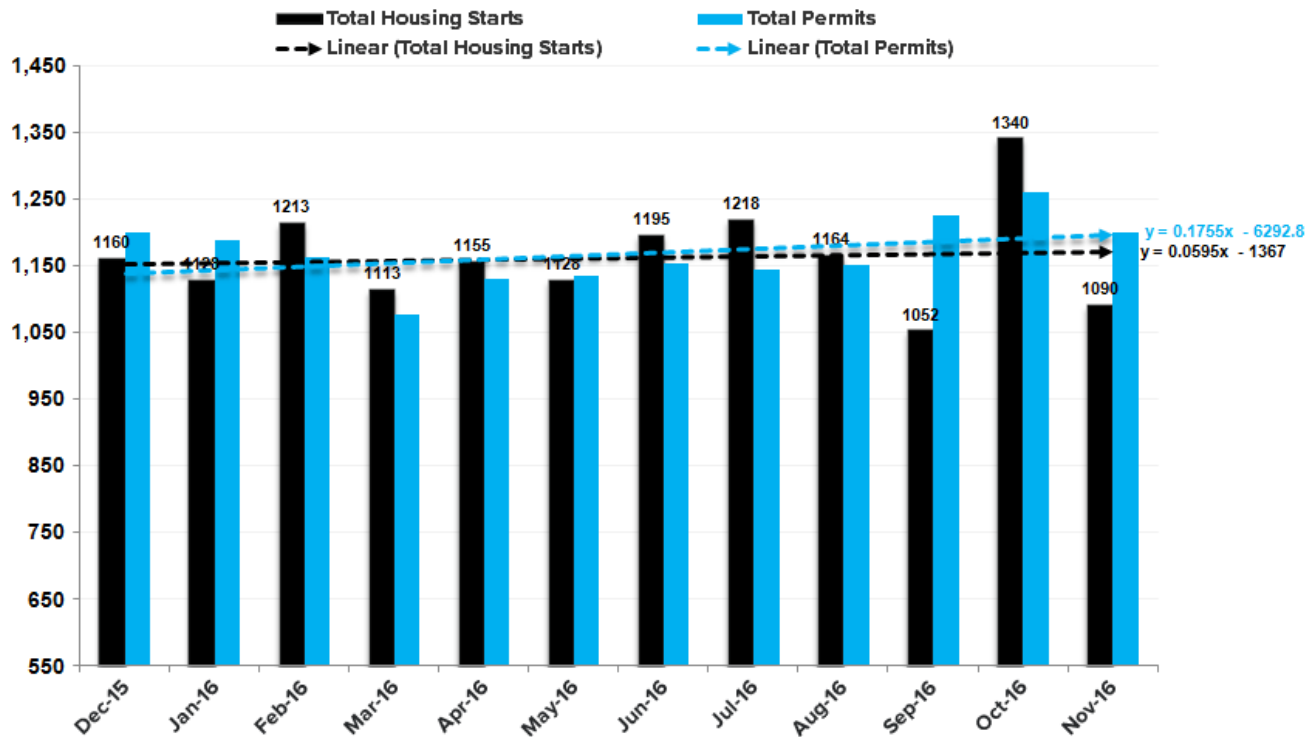
Zika risk remains and new research suggests it still has the potential to be a long-term housing phenomenon.



4Q16: A LOOK BACK

STARTS STAGNATION: 20 MONTHS & COUNTING

TOTAL HOUSING STARTS

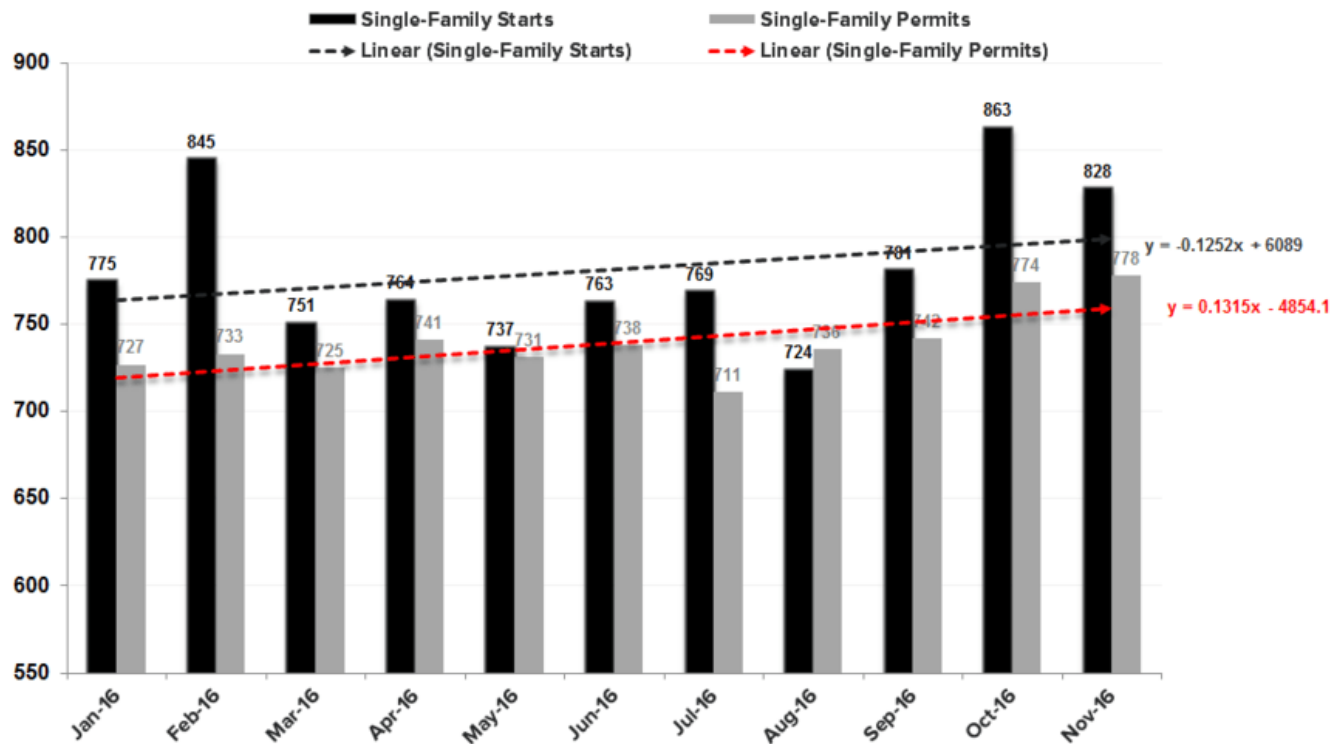


DATA SOURCE: BLOOMBERG, CENSUS BUREAU, HEDGEYE

The combination of falling MF activity and crawling improvement in SF activity has left Total new construction Starts flat for the last 20 months.

SF STARTS: SLOW MARCH TO NORMALIZATION

SINGLE FAMILY STARTS & PERMITS

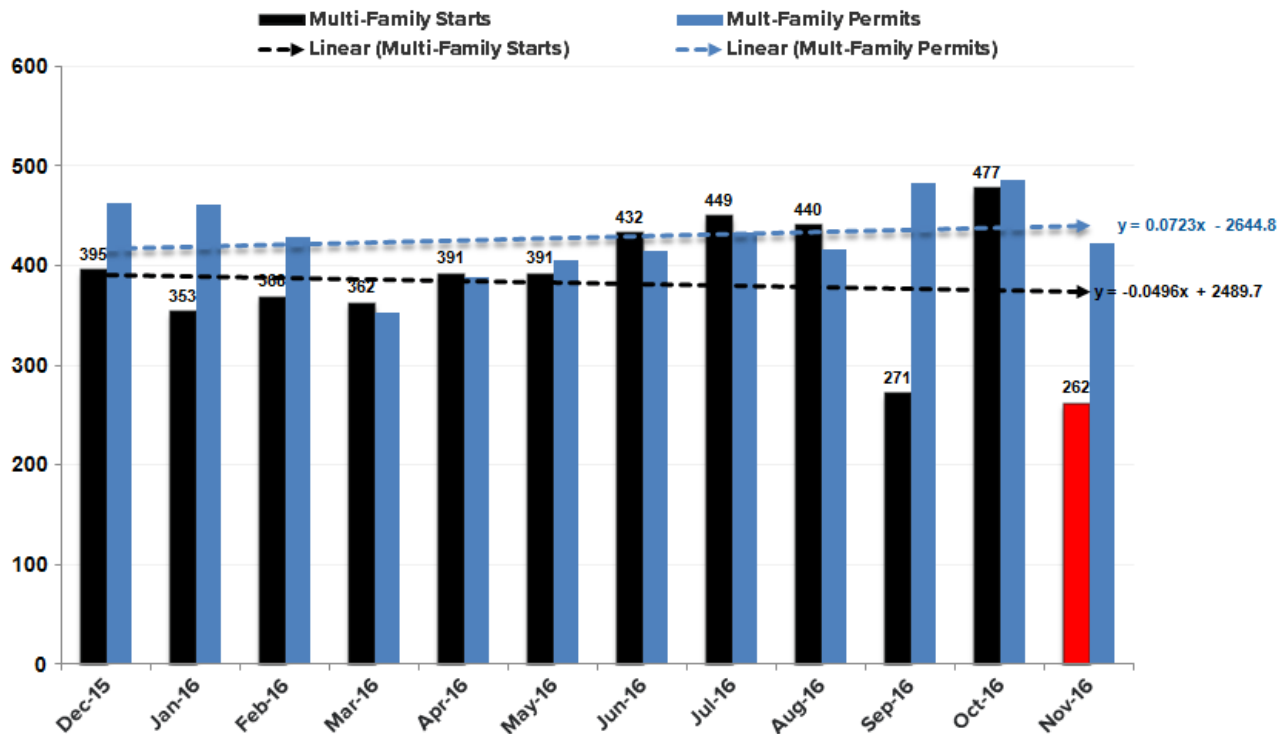


DATA SOURCE: BLOOMBERG, CENSUS BUREAU, HEDGEYE

Single-family construction activity continues to trudge higher. 11% growth in 2016 has taken SF starts to their highest level of the cycle and helped offset negative growth in multi-family.

MULTI-FAMILY: IT WAS A GOOD RUN

MULTI-FAMILY HOUSING STARTS

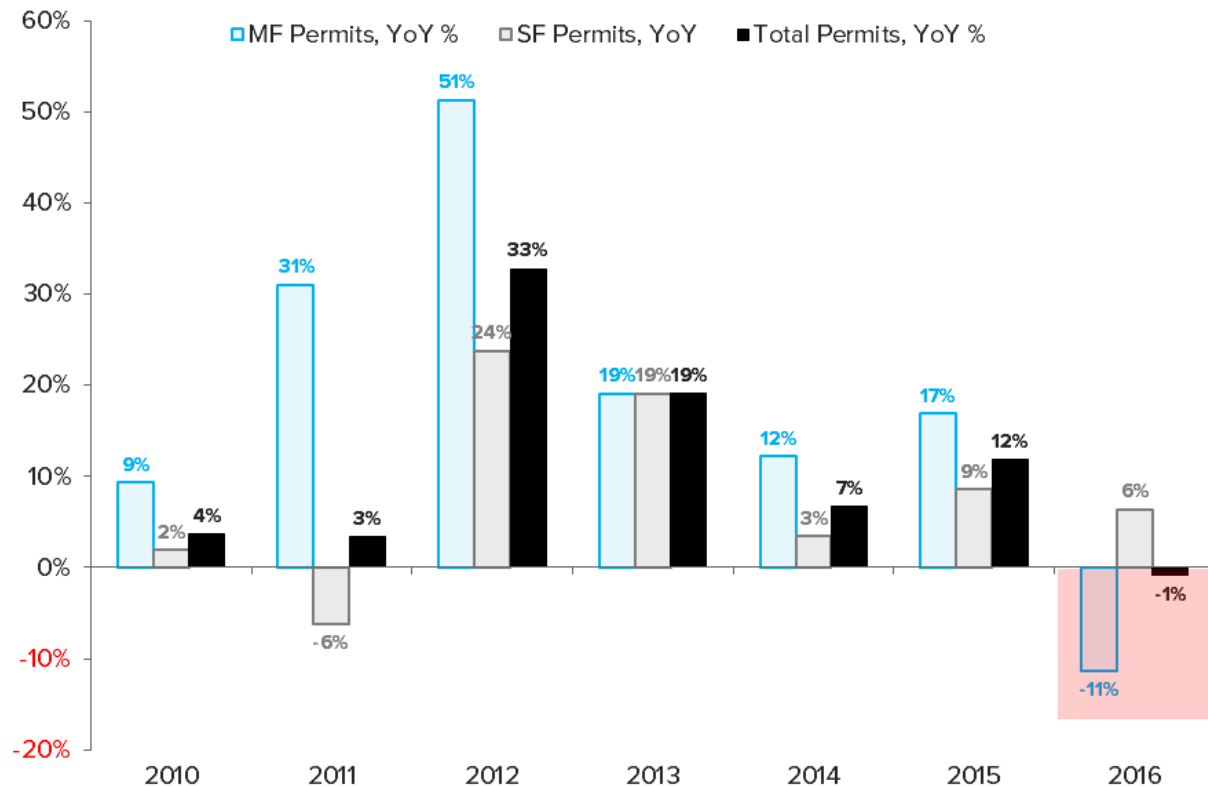


DATA SOURCE: BLOOMBERG, CENSUS BUREAU, HEDGEYE

MF starts activity is down -2% YoY in 2016 and with multi-family permit growth negative for 8 of the last 10 months and down -12% relative to the corresponding Jan-Nov period last year, the multi-year boom in multi-family construction - where annual growth averaged >20% over the preceding 5 years – looks increasingly past peak.

$$\text{MF} \downarrow + \text{SF} \uparrow = \text{TOTAL} \downarrow$$

HOUSING PERMITS



Source: Bloomberg, Census Bureau, Hedgeye

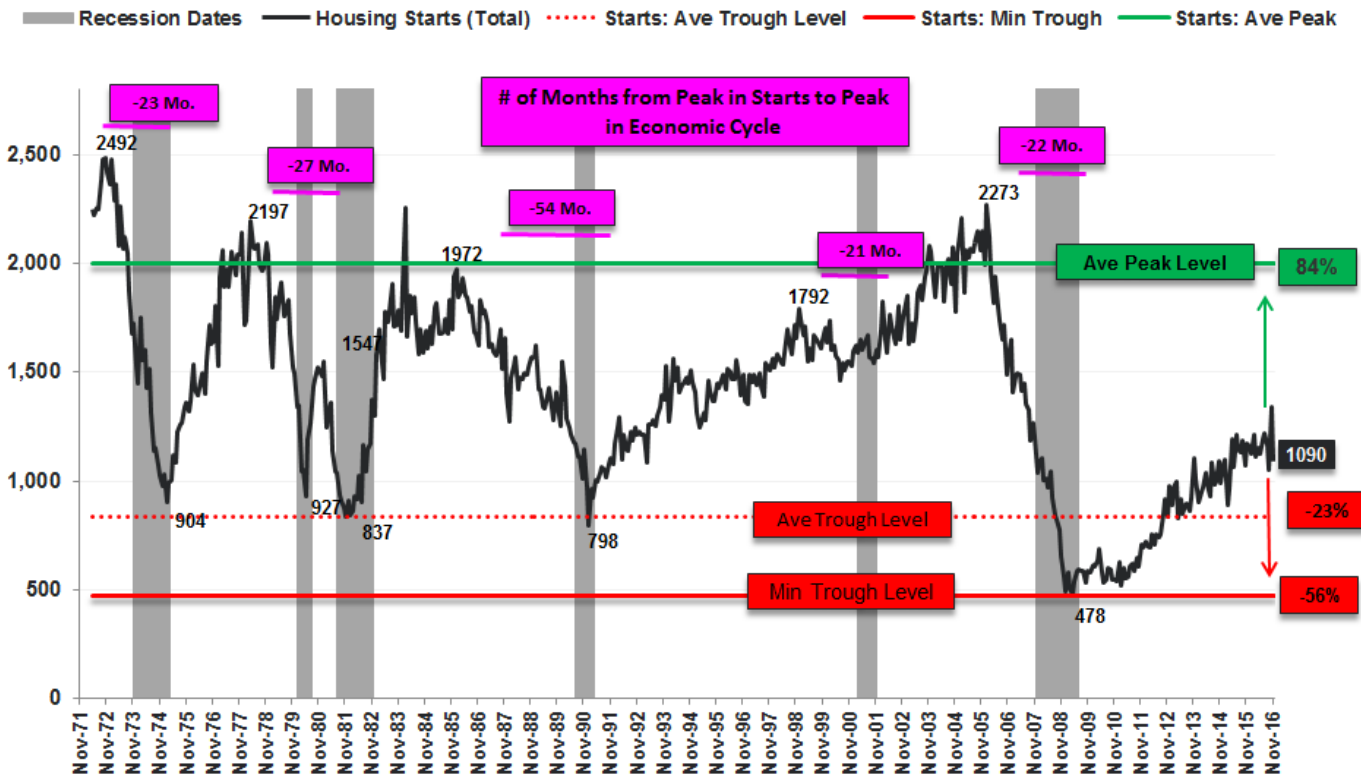
© Hedgeye Risk Management

The trend in Permit activity is similar to that prevailing in Starts with the net of rising SF activity and falling MF activity equating to zero growth in the headline.

With Permit growth running at a negative spread to Starts growth YTD near-term upside in Starts appears constrained.

STARTS: LONG-TERM CYCLE CONTEXT

HOUSING STARTS



DATA SOURCE: BLOOMBERG, NBER, CENSUS BUREAU, HRM

Historically, Peak Housing Activity is a mid-cycle phenomenon.

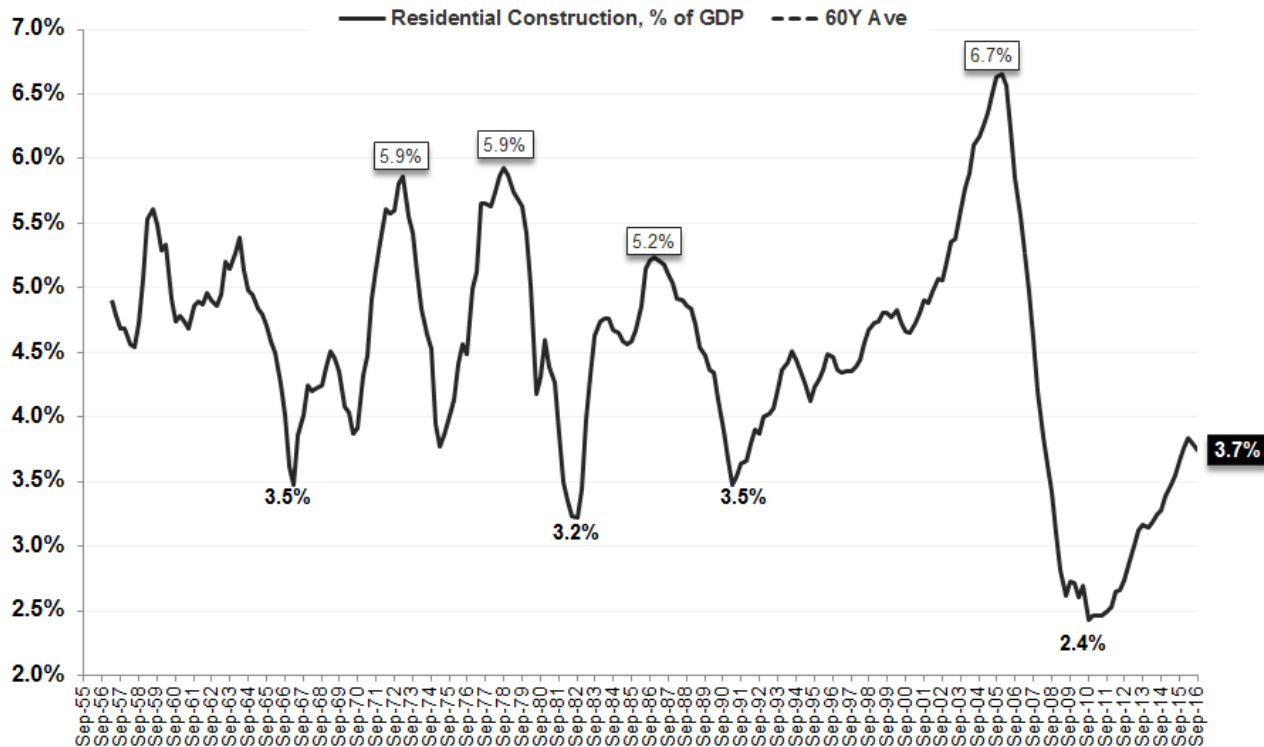
Given the lagged and muted recovery in new construction, the housing and broader macro cycles are out of phase in the current expansion.

We are currently 23% above average trough levels and average peak levels are 84% higher based on the last 7-cycles.

The medium-term upside opportunity remains compelling

BIG PICTURE: HOUSING HYSTERESIS?

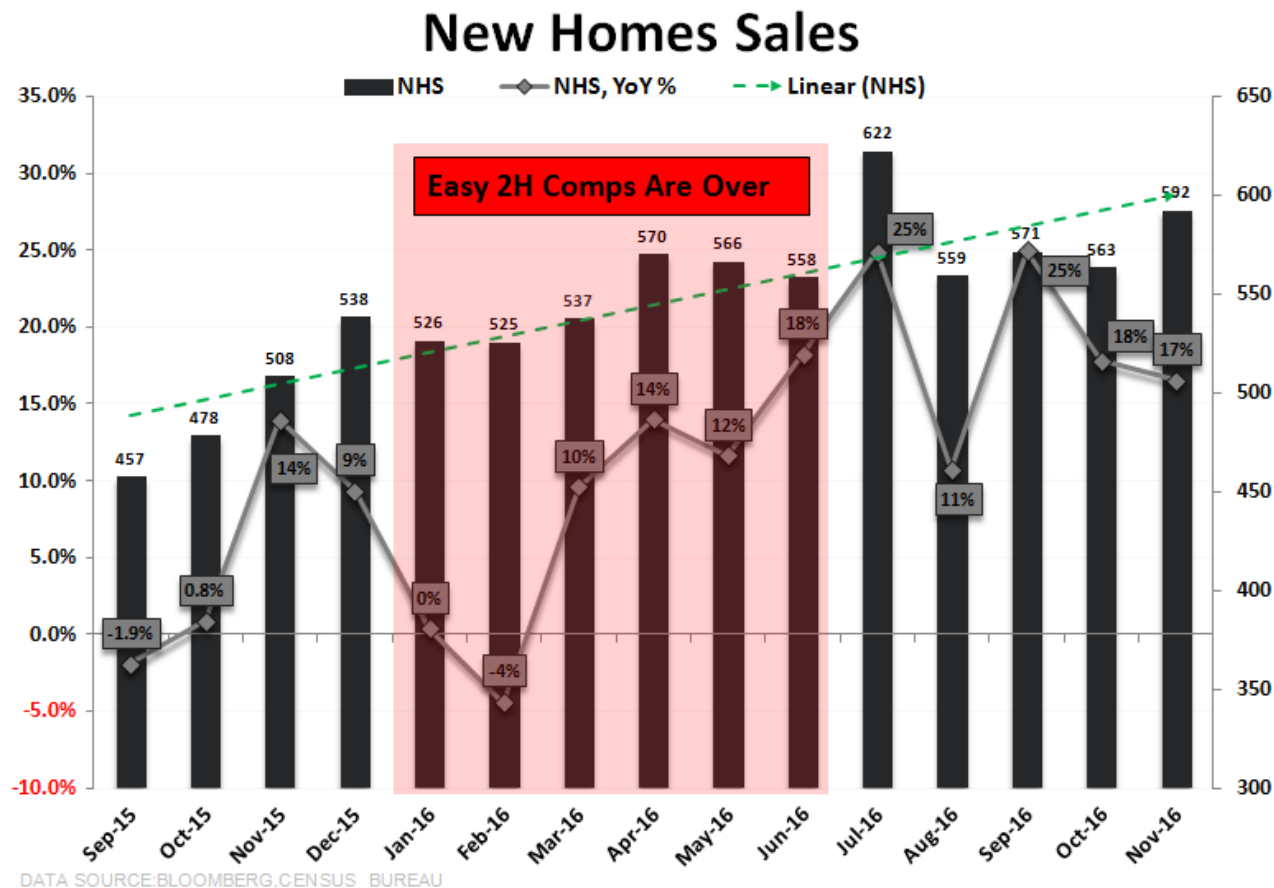
RESIDENTIAL CONSTRUCTION, % OF GDP
NOMINAL DOLLARS



DATA SOURCE: CENSUS BUREAU, BLOOMBERG

After 5 years of Housing recovery, resi construction remains just 3.7% of GDP – a level more consistent with cycle trough levels observed across the last 65 years.

NEW HOME SALES: SET TO SLOW

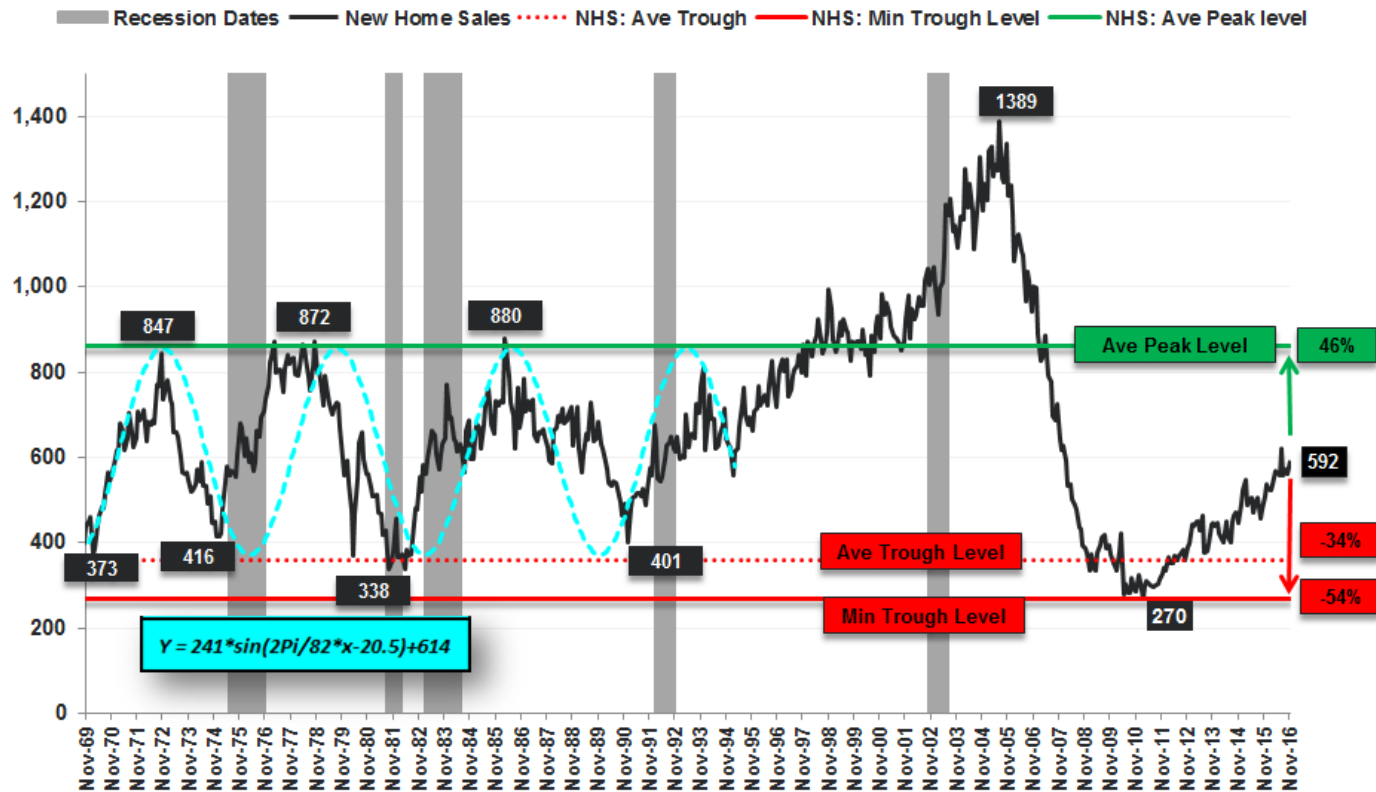


Easy comps, mean reversion upside and cumulative underperformance relative to EHS since 2012 supported relative strength in NHS over the last year.

Base effects get progressively tougher beginning in December and should drive a sizeable RoC deceleration.

NHS: GODOT'S PLAYGROUND

NEW HOME SALES

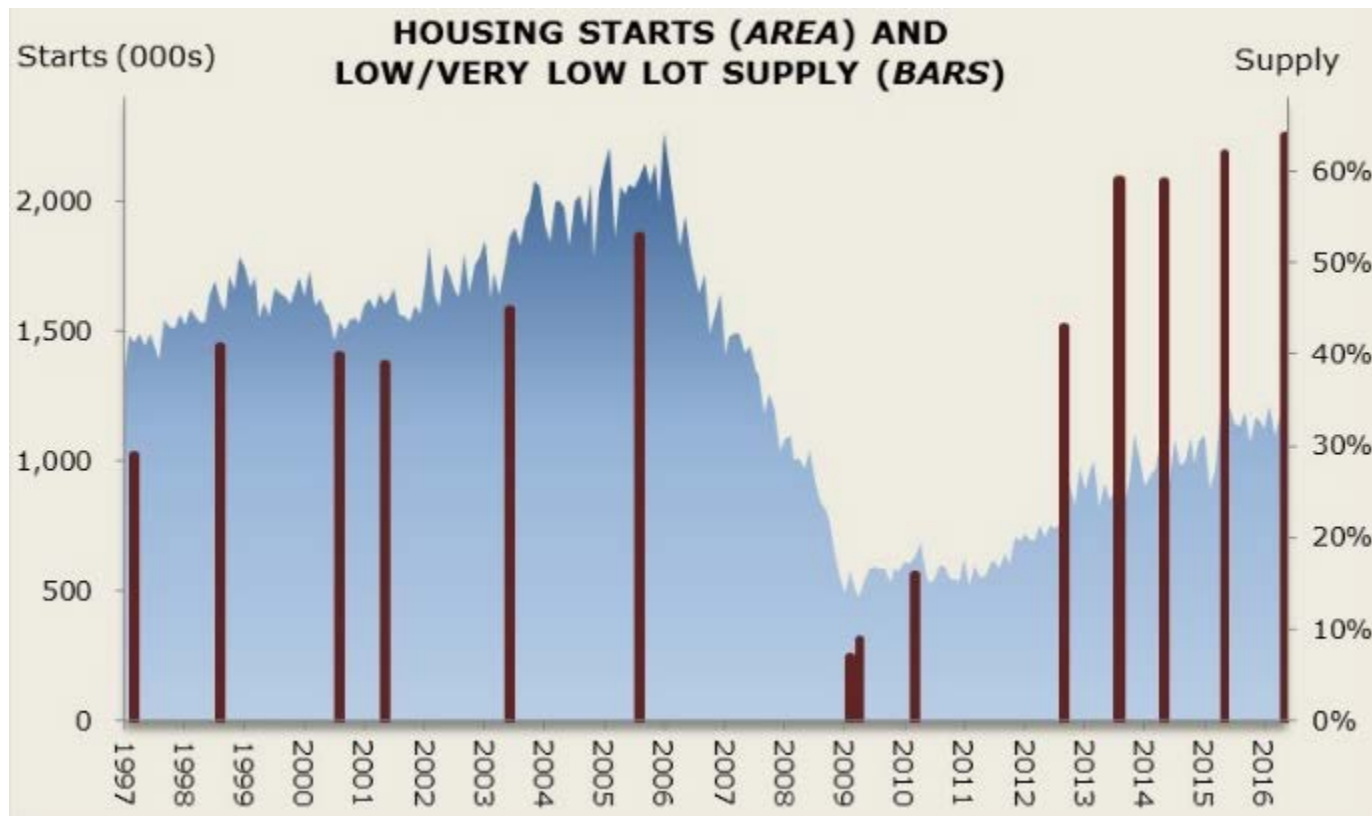


DATA SOURCE: BLOOMBERG, NBER, CENSUS BUREAU, HEDGEYE

At 592K last, the upside/downside to average peak/trough levels is moderately asymmetric at 46% and 34%, respectively.

Stagnant income growth, rising prices and higher rates on the demand side and rising input cost pressure on the supply side continue to constrain a breakout in NHS.

LOT SUPPLY PRESSURES REMAIN ACUTE



Lot supply remains near the top of builder concerns. Higher prices and rising rates suggest the margin drag on land acquisition costs is unlikely to ebb nearer-term.

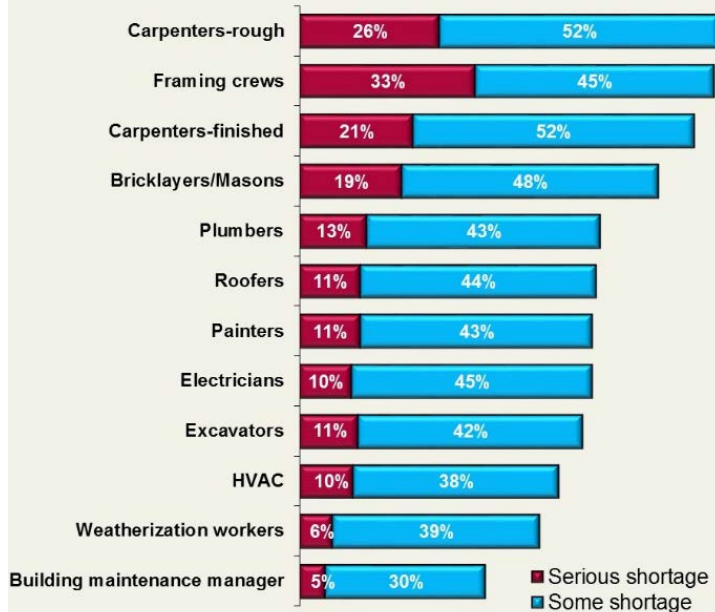
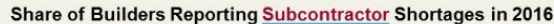
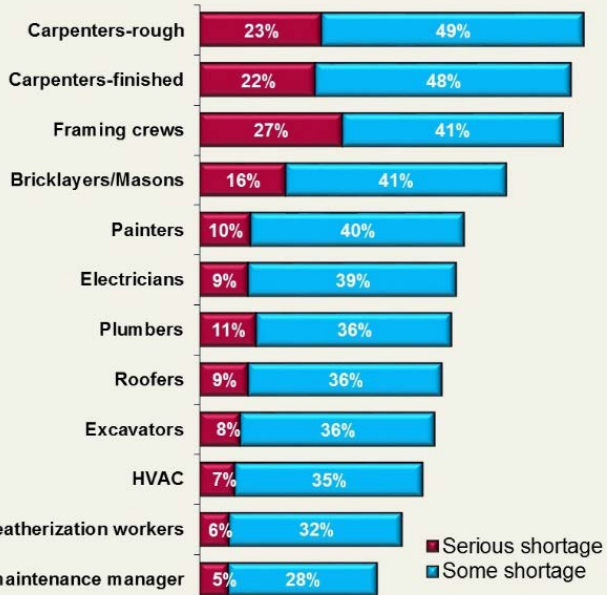
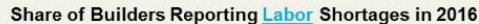
RESI LABOR MARKET TIGHTENING



Labor costs remain a primary industry concern and the skill-need mismatch will take time to resolve.

As long as the ratio of workers to starts remains flat-to-declining, margin pressures will remain elevated.

RISING SCARCITY IN SKILLED LABOR

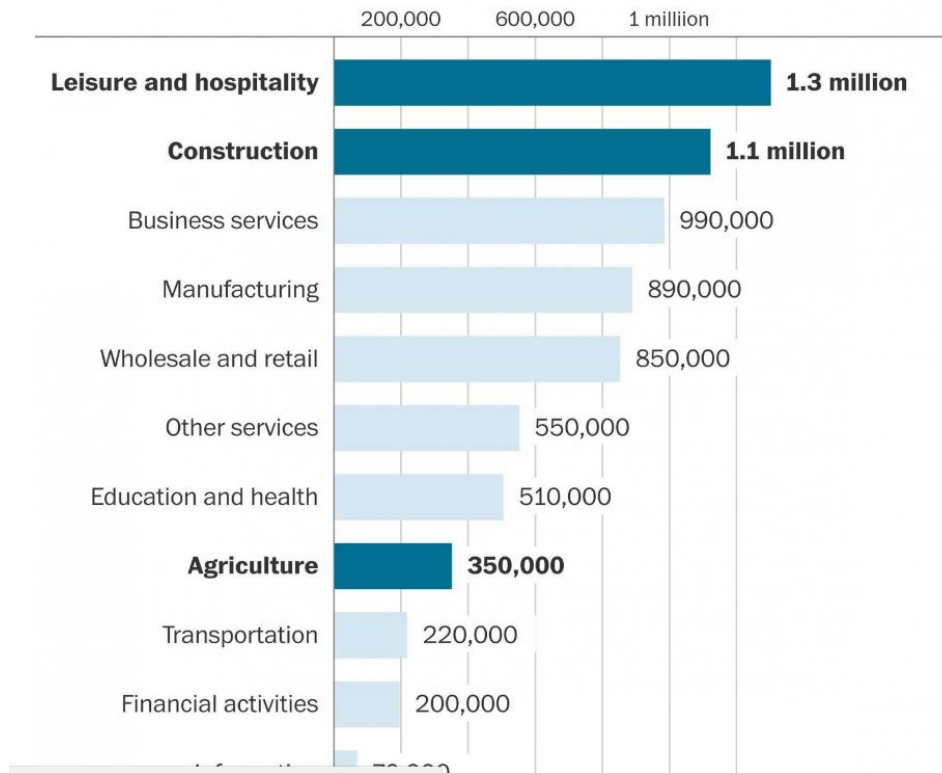


Labor shortages across Specialty Trade Contractors – a key labor input cost - remains the most acute.

IMMIGRATION: DISPROPORTIONATE IMPACT TO HOUSING

The industries that employ undocumented immigrants

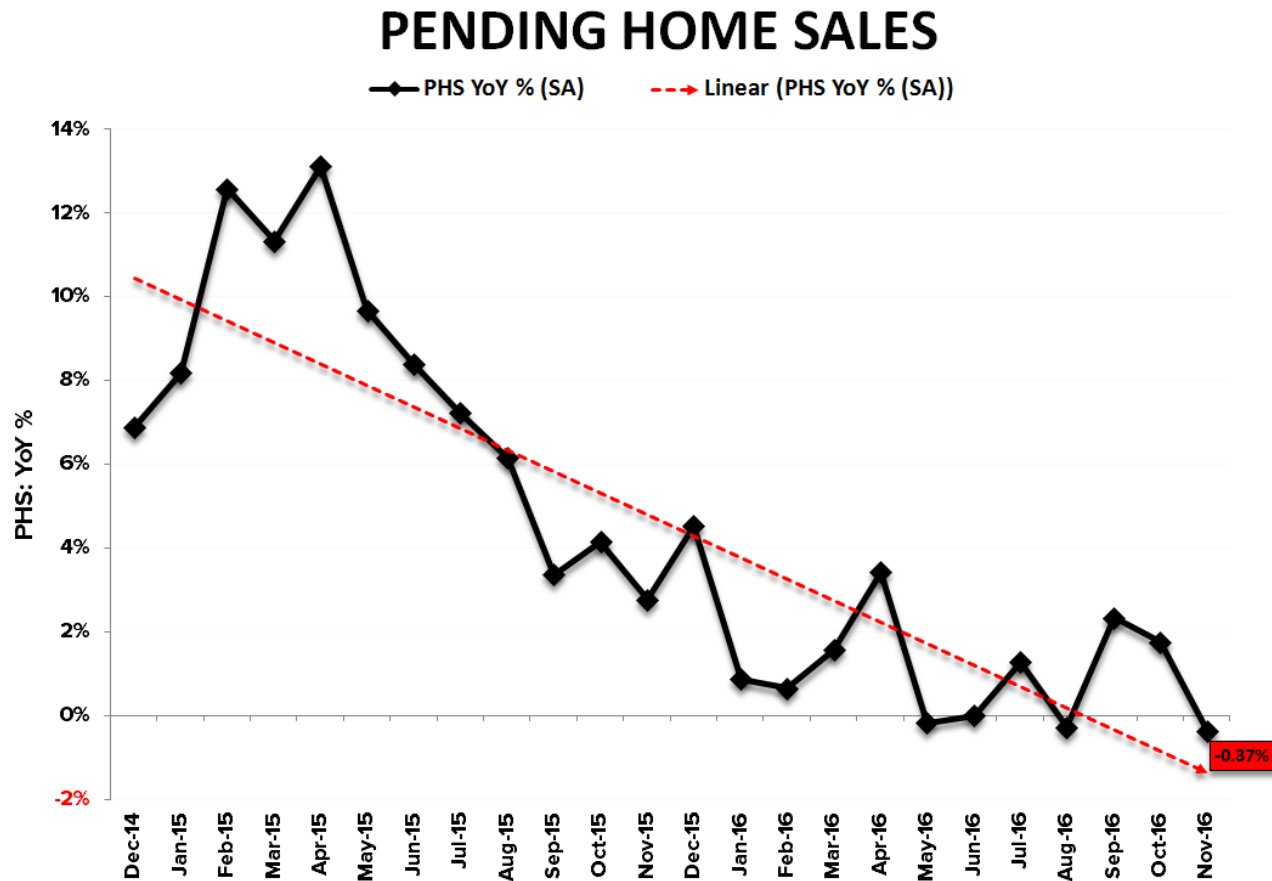
Millions of undocumented immigrants are working in leisure and hospitality, construction, business services and manufacturing.



With undocumented immigrant employment concentrated in the construction sector any large-scale deportation initiative would disproportionately impact resi construction supply and prices.

Most view Trump's threat of mass deportation (3MM workers) as hollow.

PENDING HOME SALES: CONVERGENCE TO ZERO



DATA SOURCE: BLOOMBERG, NATIONAL ASSOCIATION OF REALTORS

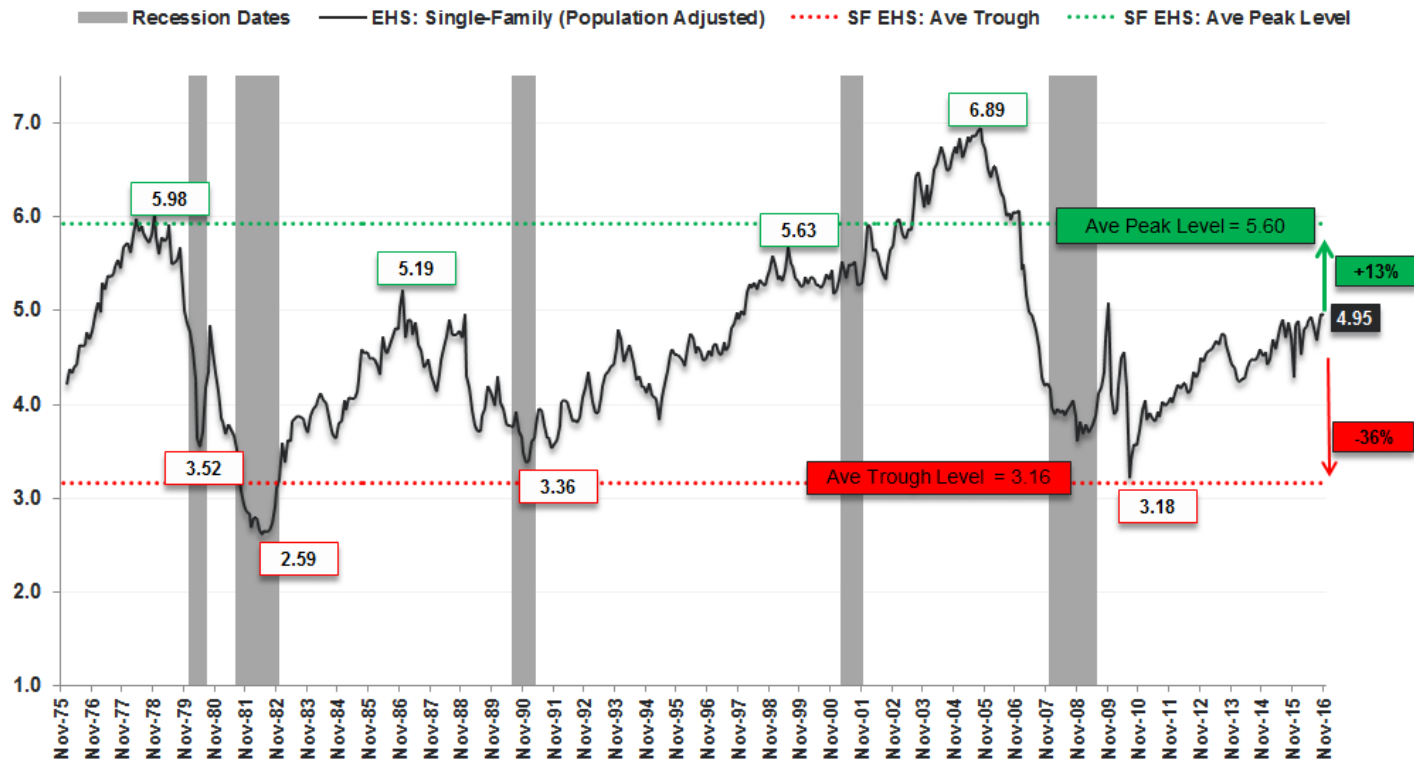
Pending Home Sales have done basically nothing over the last 6-months.

Signed contract activity has been +2% or less since May with 4 of those months printing zero or negative growth.

EHS: UNDERWHELMING, MONTH 21

SINGLE-FAMILY EXISTING HOME SALES

POPULATION ADJUSTED



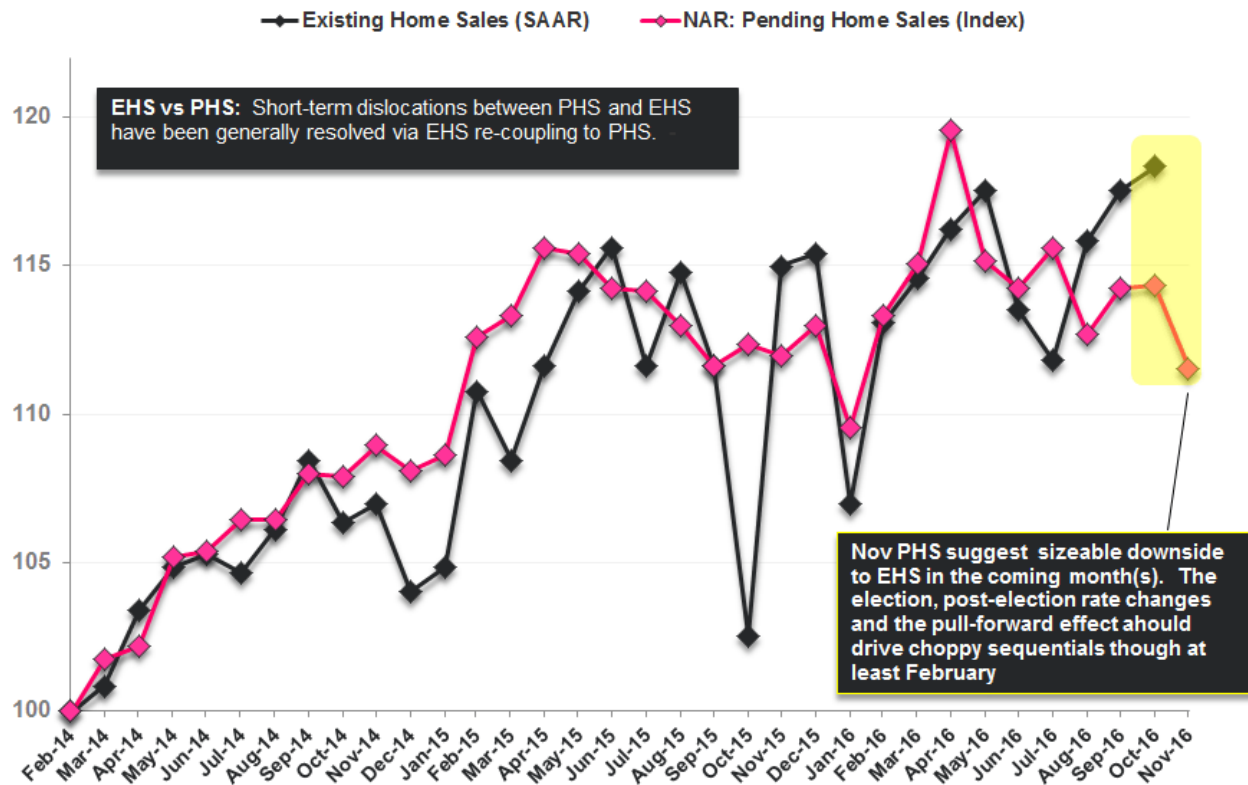
DATA SOURCE: BLOOMBERG, NBER, NAR, HRM

Single Family and Total Existing Home sales have made new highs in recent months but growth has slowed from double digits to negative over the TTM as volume has largely flatlined over the last 1.5yrs.

Any next leg higher in existing volumes will require some supply improvement and further strength in both trade-up and 1st time buyer demand.

EHS: NEAR-TERM DOWNSIDE

EXISTING HOME SALES (1-MO LAG) VS PENDING HOME SALES, SAAR
GAIN SINCE FEBRUARY 2014 TROUGH



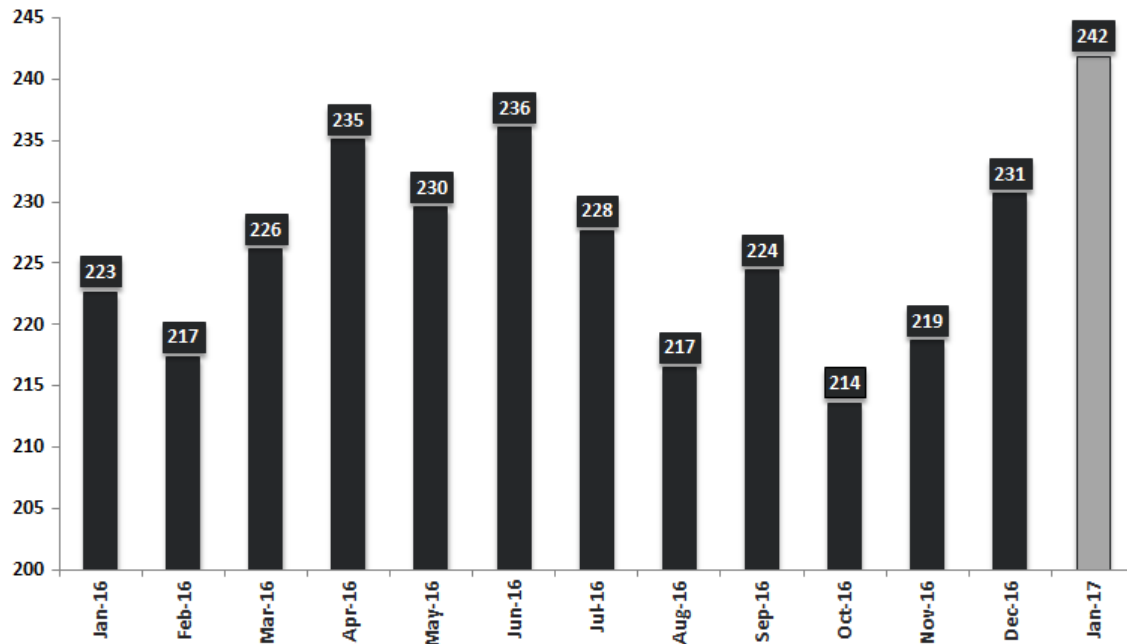
DATA SOURCE: NAR, BLOOMBERG, HEDGEYE

With PHS declining in November and EHS rising, the multi-month divergence between the two series is becoming increasingly unsustainable.

Empirically, as one would expect given the lead-lag relationship, short-term dislocations between the two series have resolved in favor of PHS in recent years – **suggesting downside in EHS in the coming month(s).**

MORTGAGE PURCHASE APPLICATIONS: ACCELERATING!

MBA Mortgage Purchase Applications
Monthly



Source: Bloomberg, MBA, HEDGEYE

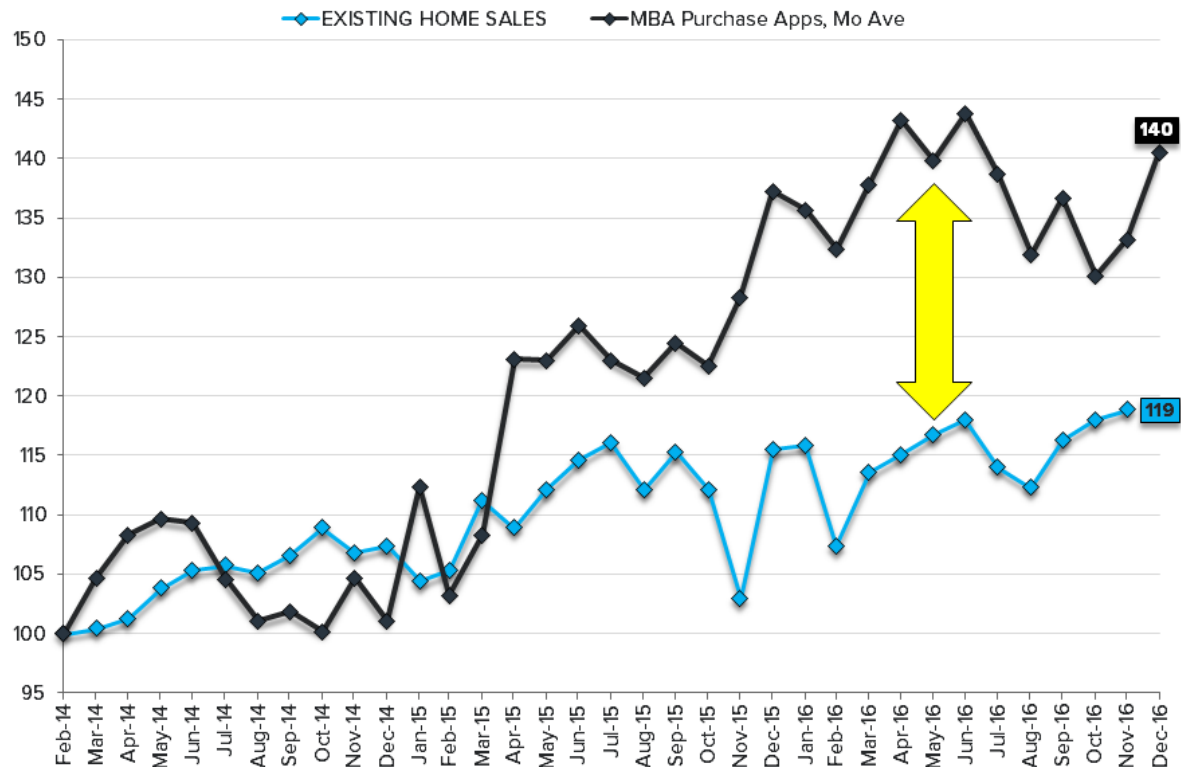
Purchase application volumes trended flat to down since June into the election with the post-election increase only managing to bring the trailing 3-month average back in line with the TTM trend.

The post-election rise in rates can be expected to shift some demand forward.

PURCHASE APPLICATION VOLUME = DECLINING UTILITY

EXISTING HOME SALES vs. MBA PURCHASE APPLICATIONS

Indexed Change Since 2014 Trough



Source: Bloomberg, NAR, Hedgeye

© Hedgeye Risk Management

The high-frequency Mortgage Purchase Application data has increasingly diverged from actual, reported EHS sales volumes, reducing its utility as a lead indicator for direction trends in demand.

The spread between Purchase Applications and EHS widened significantly in 2016.

WHY?: FOR SALE → TO PENDING SALE → BACK TO FOR SALE

Suddenly, Home Sale Agreements Are Falling Apart Across the U.S.

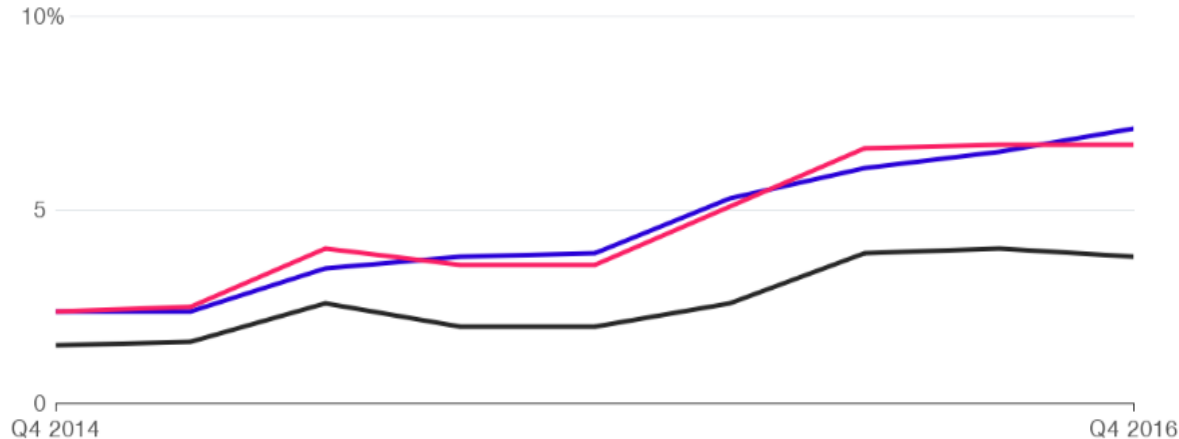
The share of sales that failed to close doubled in 2016, and nobody knows why.

by Patrick Clark
January 11, 2017, 12:01 AM EST

Falling Through

Percentage of listings that moved from for-sale to pending, then back to for-sale, by type of home

■ Starter ■ Trade-up ■ Premium

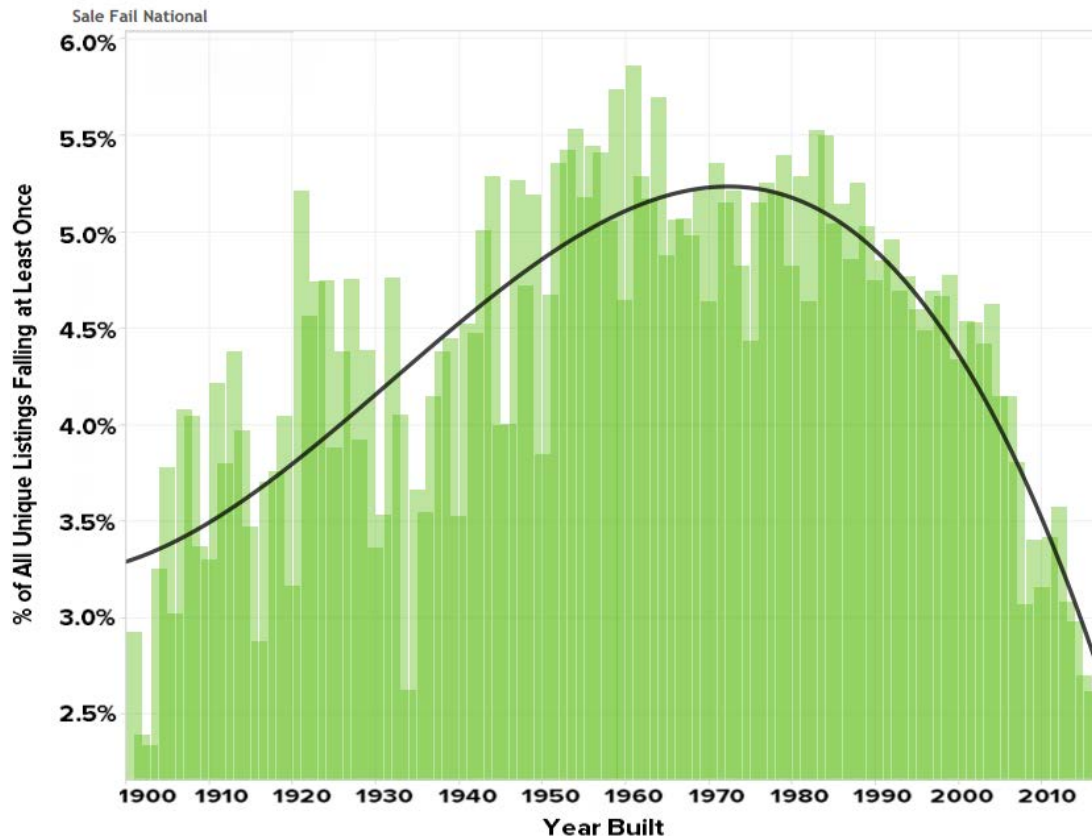


Trulia found that 4% of For Sale Listings transitioned from a Pending Sale back to For Sale in 2016, up from 2% in 2015.

Home Sales Fail for the following reasons:

1. The potential homebuyer is **unable to get approved for the mortgage**
2. The home **value is appraised for less** than the agreed upon purchase price
3. Home **inspections reveal more extensive or costly repairs** than previously expected

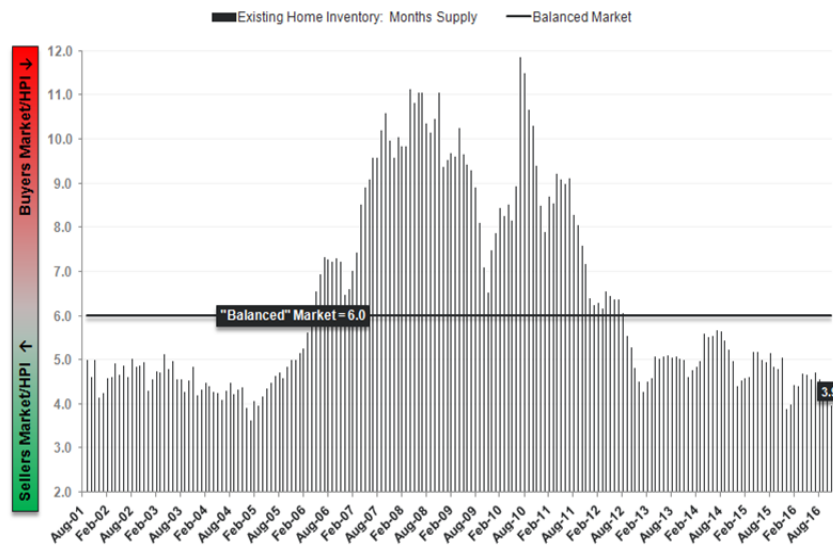
FOR SALE → TO PENDING SALE → BACK TO FOR SALE



One interesting phenomenon appears to be that sales of older homes (>15 years of age) seem to fail at higher rates. Low levels of new construction mean that the average age of the existing housing stock is getting older. This is causing a rising percentage of transactions to fail.

EXISTING MARKET: SUPPLY IS (STILL) TIGHTENING

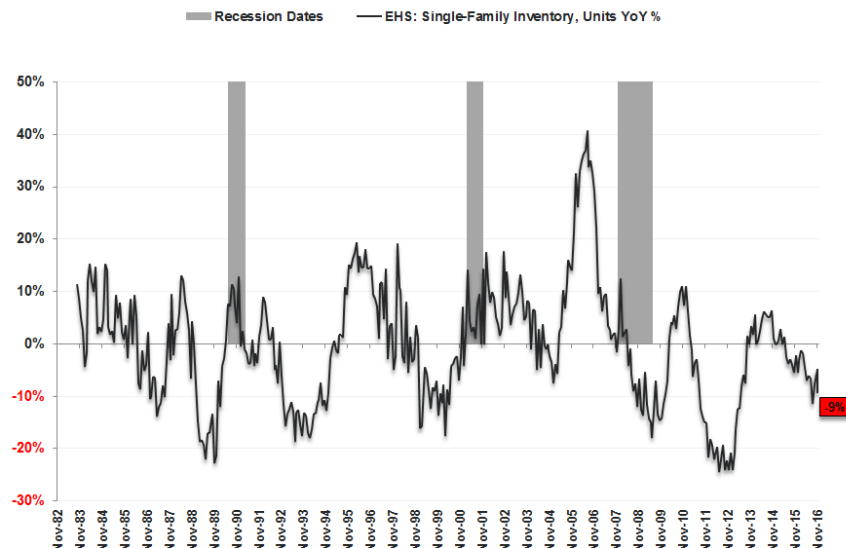
EXISTING HOME INVENTORY: MONTHS SUPPLY



MONTHS SUPPLY

With inventory falling and sales rising in November, months supply fell to 3.96 months, marking the 1st month below 4-months supply in a year and the 52nd month below the conventional balanced market level of 6-months

INVENTORY: SINGLE-FAMILY EXISTING HOMES



UNIT SUPPLY

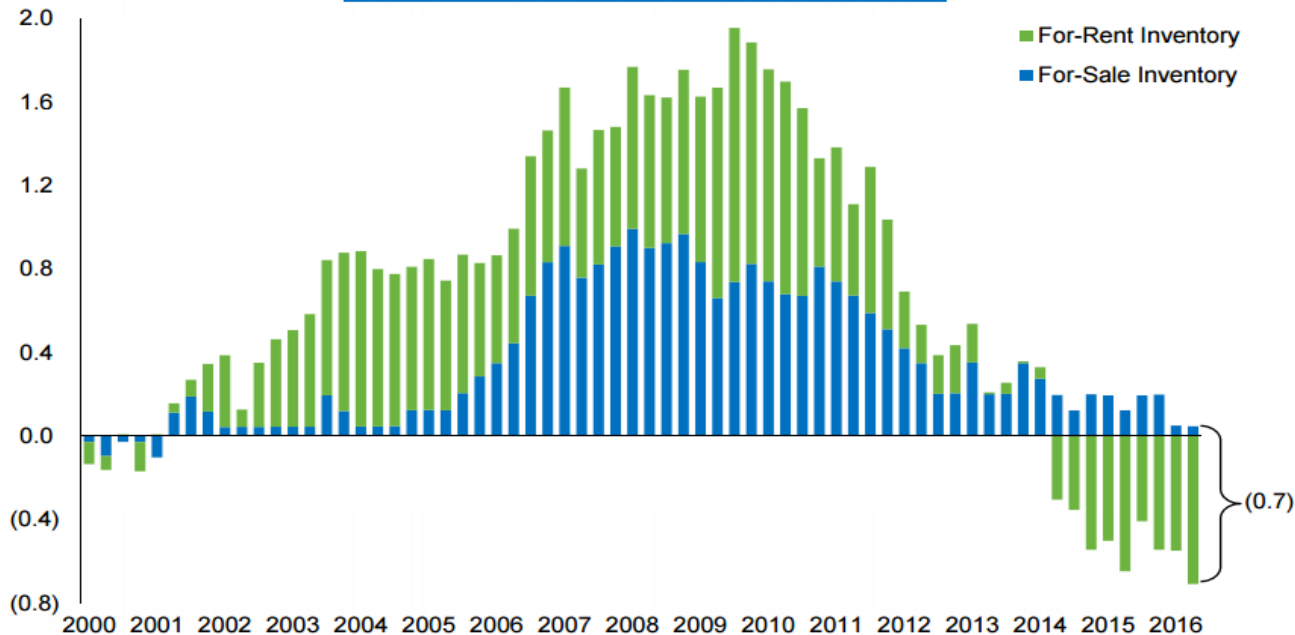
Unit supply growth held negative year-over-year for an 18th consecutive month in November and at -9% YoY, the pace of inventory decline remains at multi-year lows.

VACANT SUPPLY: UNDERSUPPLY WORSENING

Vacant housing over/undersupply



Surplus/Shortage of Vacant Homes
Numbers in Millions



Source: Freddie Mac calculations using U.S. Census Bureau data. Negative values reflect shortage or undersupply relative to the historical benchmark. The over/undersupply of vacant housing was estimated based on the average vacancy rate from 1994Q1 to 2003Q4. 2016 data as of June 30, 2016.

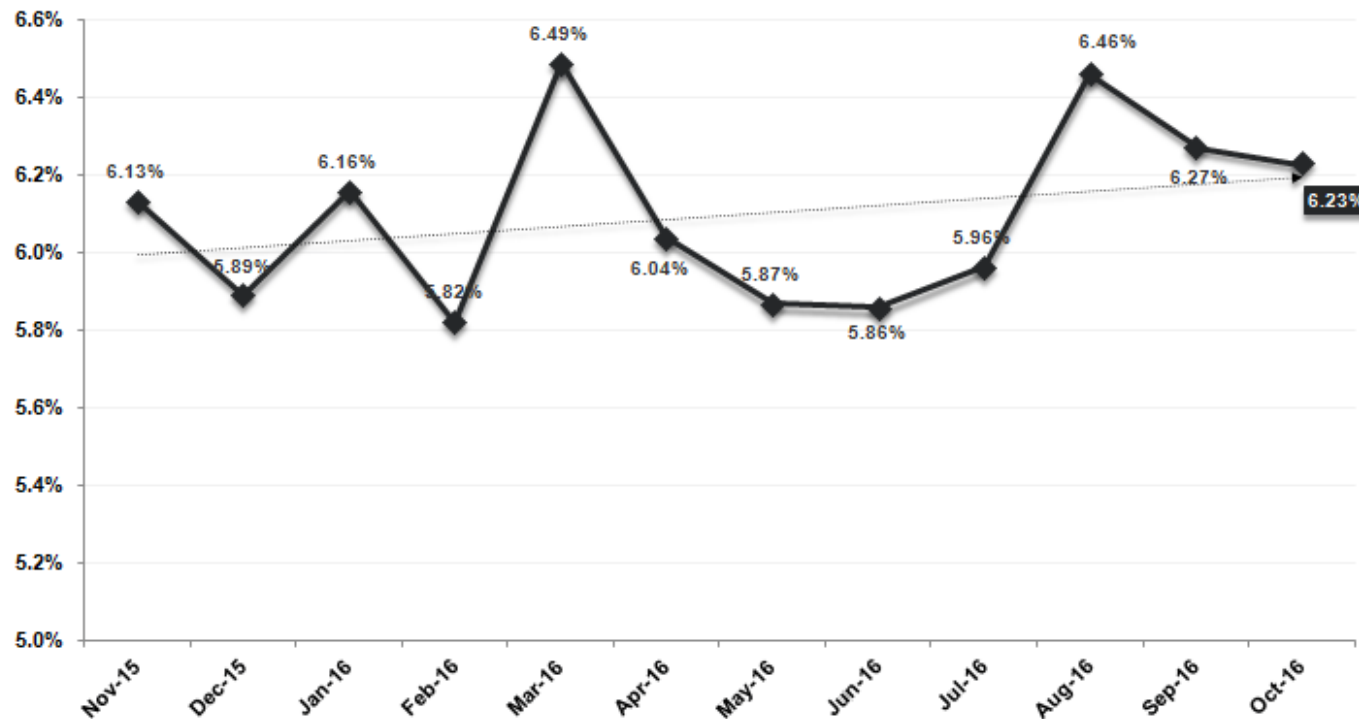
Both For-Sale and For-Rent Inventory remain in undersupply.

Collectively, vacant housing supply is in deficit to the tune of 0.7MM units relative to historical norms.

The latest reading from Freddie Mac shows the largest deficit in the history of the series.

HPI → STALEMATE

FHFA HPI - NSA YOY % CHG



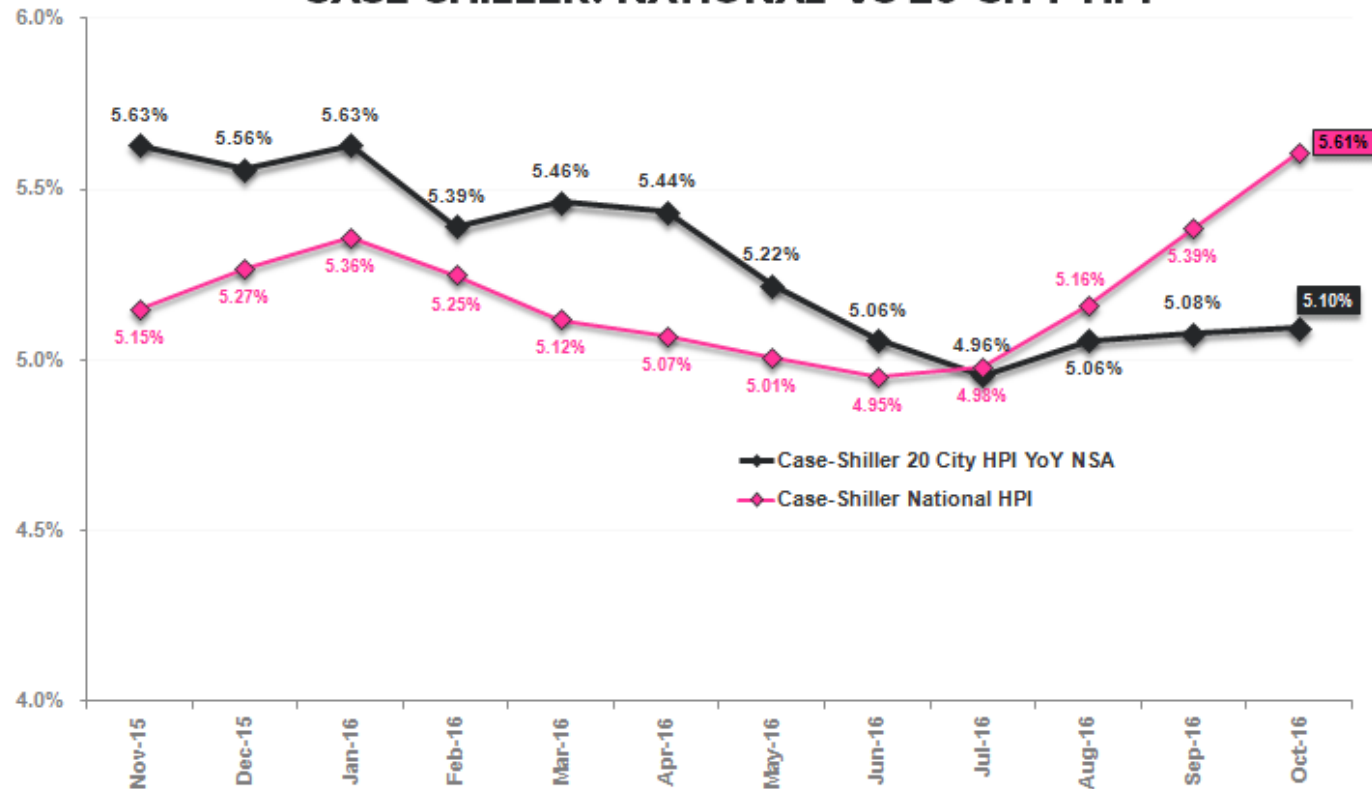
DATA SOURCE: BLOOMBERG

The HPI tug of war remains in effect as tight supply continues to support prices while rising rates, declining affordability, and flagging demand weigh on the opposite side.

Price growth in the conforming market has now tracked sideways for over a year.

HPI → STALEMATE

CASE-SHILLER: NATIONAL VS 20-CITY HPI



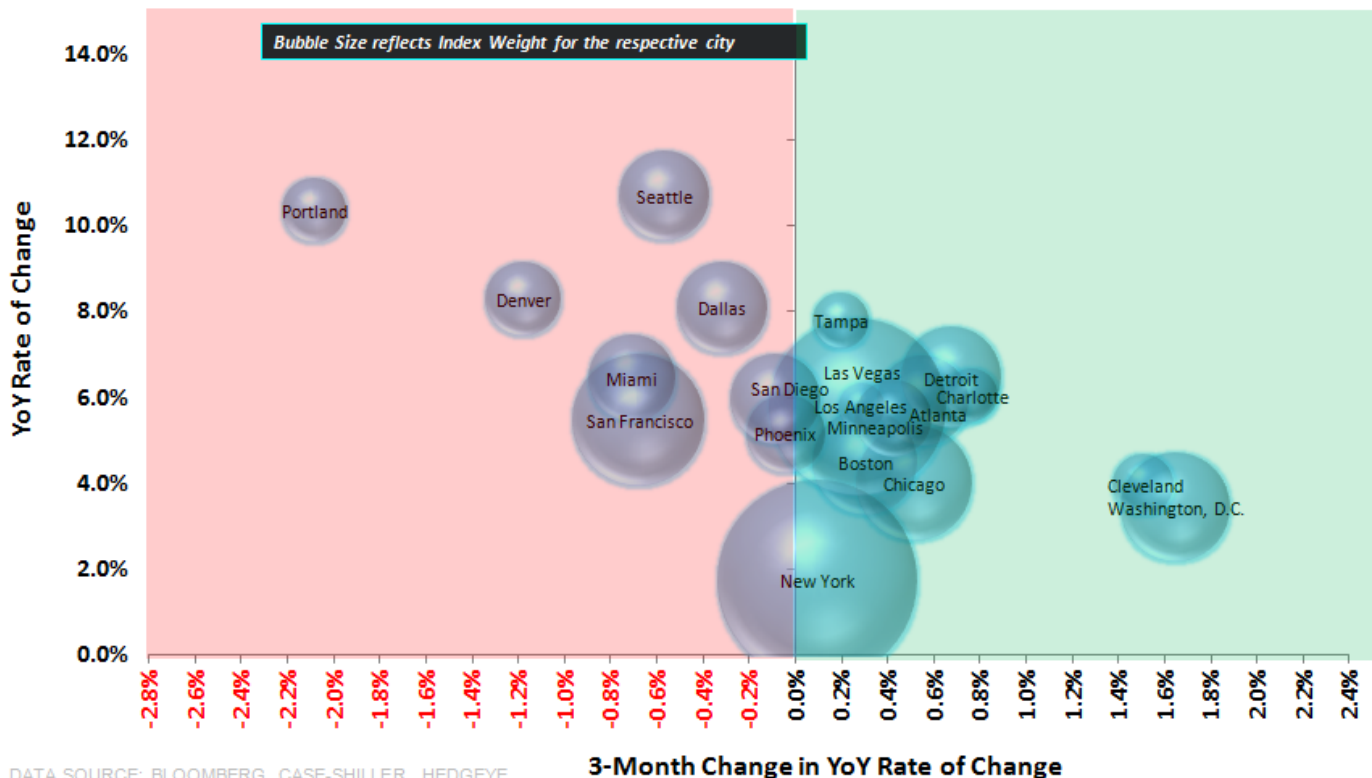
DATA SOURCE: BLOOMBERG

The 20-city series has decelerated over the last year with the 2nd derivative trend flat-lining in recent months.

The national series, meanwhile, has shown a moderate acceleration over the last 3 months.

HPI → INDEX HEAVYWEIGHTS SLOWING

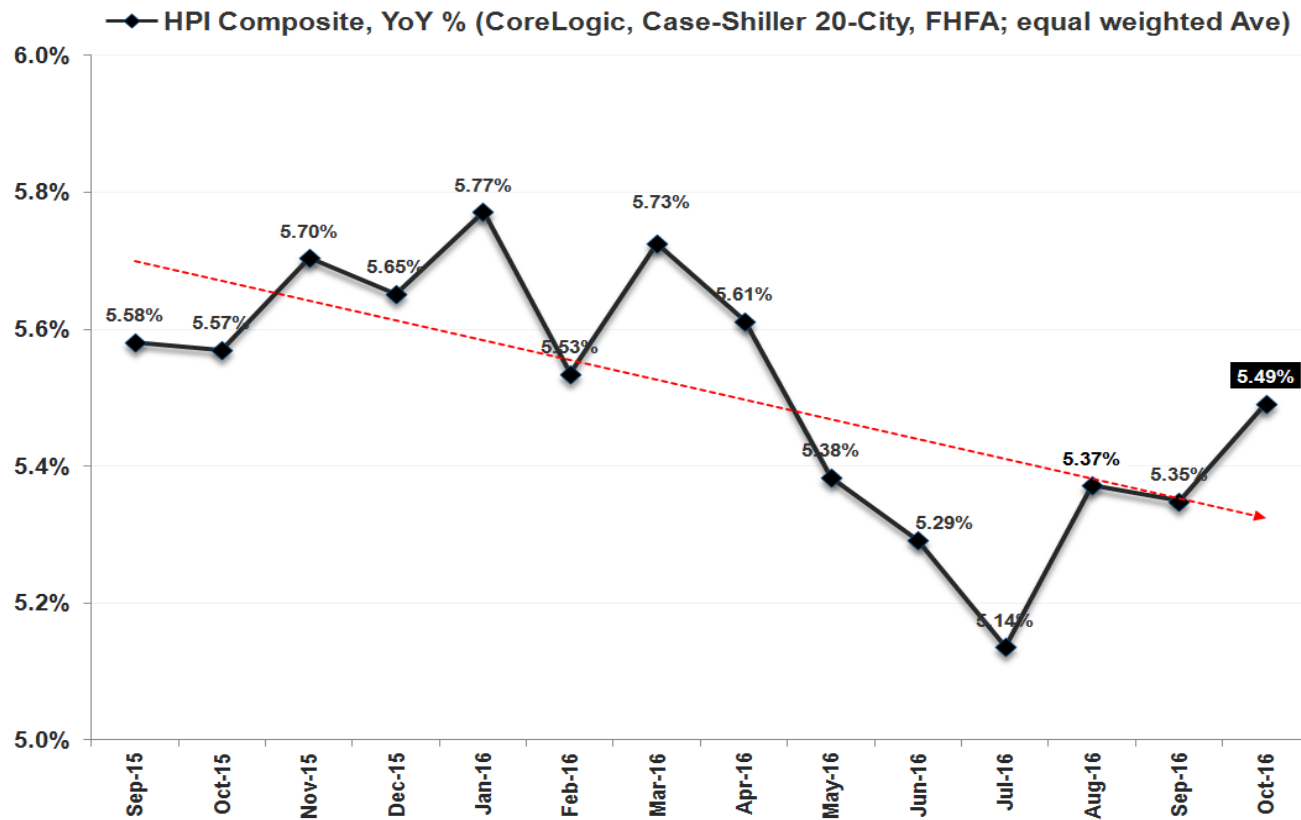
CASE-SHILLER: Acceleration/Deceleration Metro Home Prices



The divergence between the Case-Shiller 20-city index and the National series is largely a function of decelerating price growth in the 20-city index heavyweights and improving HPI trends more broadly.

New York, LA, and San Fran alone represent a collective 43% weighting in the 20-city index and each has slowed notably over the last couple quarters.

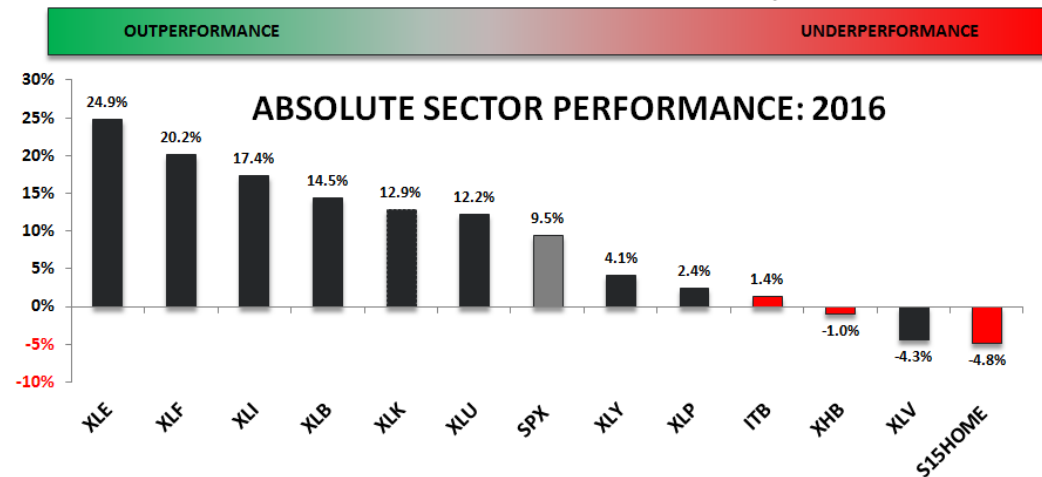
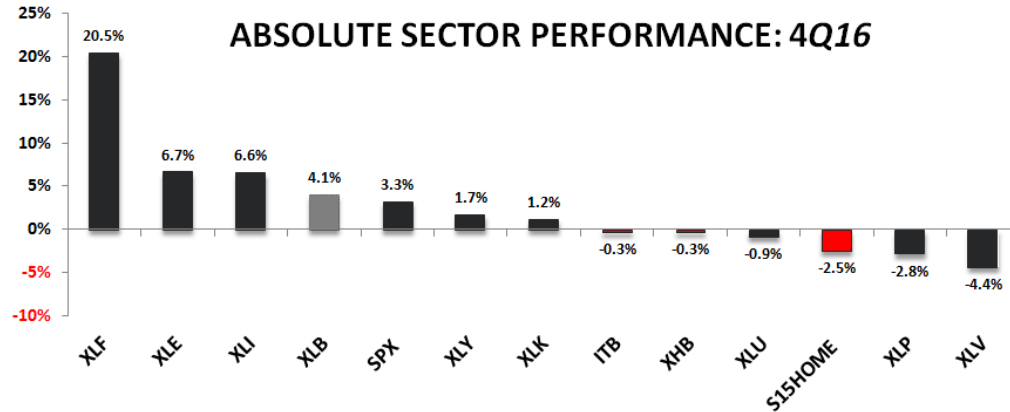
HOME PRICES STILL TRENDING NEGATIVE



DATA SOURCE: CORELOGIC, CASE SHILLER, FHFA, BLOOMBERG, HEDGEYE

Inclusive of a moderate pickup the last few months, the larger trend remains toward HPI deceleration.

SECTOR PERFORMANCE RANKING → 2016 HOUSING ↓



Negative absolute and relative returns have characterized performance across the primary housing proxies (XHB, ITB, S15 Home Index) in 2016.

4Q16: 3 of 3 Industry proxies have negative returns and all 3 have underperformed.

SUBSECTOR PERFORMANCE: BROAD UNDERPERFORMANCE

HOUSING: SUBSECTOR PERFORMANCE

HEDGEYE HOUSING

INDEX	Ticker	1Q16 % Chg	2Q16 % Chg	3Q16 % Chg	4Q16 % Chg	2016 % Chg
S&P 500	SPX	0.8%	1.9%	3.3%	3.3%	9.5%
HOMEBUILDERS						
S&P Homebuilder Index	\$15HOME	-2.2%	1.6%	-1.7%	-2.5%	-4.8%
	Relative	-2.9%	-0.3%	-5.0%	-5.7%	-14.3%
BUILDING PRODUCTS						
S&P Building Products Index	\$15BUILX	4.2%	4.5%	7.1%	-3.6%	12.3%
	Relative	3.4%	2.6%	3.7%	-6.9%	2.8%
HOME IMPROVEMENT						
S&P Home Improvement Index	\$SHOMI	0.5%	-1.7%	-2.2%	2.6%	-0.9%
	Relative	-0.3%	-3.6%	-5.5%	-0.7%	-10.4%
REITs						
Apartment REITs*	REIT U Index	2.4%	-0.6%	-2.4%	0.9%	0.1%
	Relative	1.6%	-2.5%	-5.8%	-2.4%	-9.4%
REAL ESTATE SERVICES						
Real Estate Services*	RESRVCS U Index	0.9%	-8.2%	-3.1%	12.1%	0.6%
	Relative	0.1%	-10.1%	-6.4%	8.9%	-8.9%
MORTGAGE INSURERS						
Mortgage Insurers*	MI U Index	-12.6%	-8.0%	30.9%	30.1%	36.9%
	Relative	-13.4%	-9.9%	27.6%	26.9%	27.4%
TITLE INSURERS						
Title Insurers*	TI U Index	-0.9%	12.3%	2.8%	-4.8%	8.9%
	Relative	-1.7%	10.4%	-0.6%	-8.0%	-0.6%
SUBSECTOR AVE						
	Abs	-1.1%	0.0%	4.5%	5.0%	7.6%
	Relative	-1.9%	-1.9%	1.2%	1.7%	-1.9%

*Equal Weighted Composites: REITs: *AN, AIV, CPT, EQR, ESS, MAA, PPS, UDR*; RE Services: *RLG, RMAX*; MI: *ESNT, MTG, NMIH, RDN*; TI: *FN, FAF, STC, BKFS*

Source: Bloomberg, HEDGEYE

2016 PERFORMANCE



5 of the 7 primary Housing subsectors underperformed in both 4Q16 and FY16.

Mortgage Insurers were the notable outperformer in 2H alongside the rise in interest rates.



POST-ELECTION: TRUMPHORIA !!!

MAPPING TRUMP

\$USD/EQUITIES/RATES/EXPECTATIONS/CONFIDENCE ↑

EM, BONDS, GOLD, SLOW GROWTH ↓

ASSET PERFORMANCE

		Absolute Performance			Relative Performance		
		5D	1Y	Since	5D	1Y	Since
SECURITY	Ticker	% Chg	% Chg	11/8/2016	% Chg	% Chg	11/8/2016
S&P 500	SPX	1.3%	18.0%	6.0%			
Domestic Equities							
Russell 2000	RTY	0.0%	29.8%	13.6%	-1.3%	11.7%	7.5%
Russell 2000 Value	RUJ	-0.9%	37.4%	16.0%	-2.2%	19.3%	9.9%
Russell 2000 Growth	RUO	1.0%	22.2%	11.1%	-0.3%	4.2%	5.1%
Cyclicals-Defensives Index	VNDACDUS	1.5%	10.4%	5.3%	0.2%	-7.7%	-0.7%
Industrials Sector	XLI	0.7%	26.0%	7.6%	-0.7%	8.0%	1.6%
Financial Sector	XLF	0.6%	30.3%	17.0%	-0.8%	12.2%	10.9%
Materials Sector	XLB	1.8%	26.3%	7.1%	0.5%	8.3%	1.0%
Biotech	IBB	7.1%	-5.9%	8.7%	5.8%	-24.0%	2.6%
Aerospace & Defense	\$SAERO	2.3%	24.9%	8.7%	0.9%	6.9%	2.6%
Construction Materials	BUSBUIL	0.2%	33.9%	7.3%	-1.1%	15.8%	1.3%
Steel	STEEL	2.3%	123.2%	12.6%	0.9%	105.2%	6.6%
Aluminum	\$15ALUM	0.7%	21.6%	7.7%	-0.7%	3.5%	1.7%
Base Metals Spot Commodity	CMDIBASS	1.1%	28.0%	4.2%	-0.2%	9.9%	-1.8%
Diversified Metals & Miners	\$15DIVM	-0.7%	82.8%	9.8%	-2.0%	64.8%	3.7%
EM Assets							
EM Equities	MXEF	1.2%	18.7%	-2.7%	-0.2%	0.6%	-8.7%
Latin America Equities	MXLA	1.8%	42.3%	-8.4%	0.4%	24.2%	-14.4%
Asia Ex-Japan Equities	MXAPJ	2.1%	14.7%	-1.0%	0.7%	-3.4%	-7.0%
EM Currency	MXEF0CX0	0.3%	5.5%	-2.4%	-1.0%	-12.6%	-8.4%
EM Debt	EMB	1.6%	6.3%	-2.8%	0.2%	-11.8%	-8.9%

FX. RATES & SPREADS

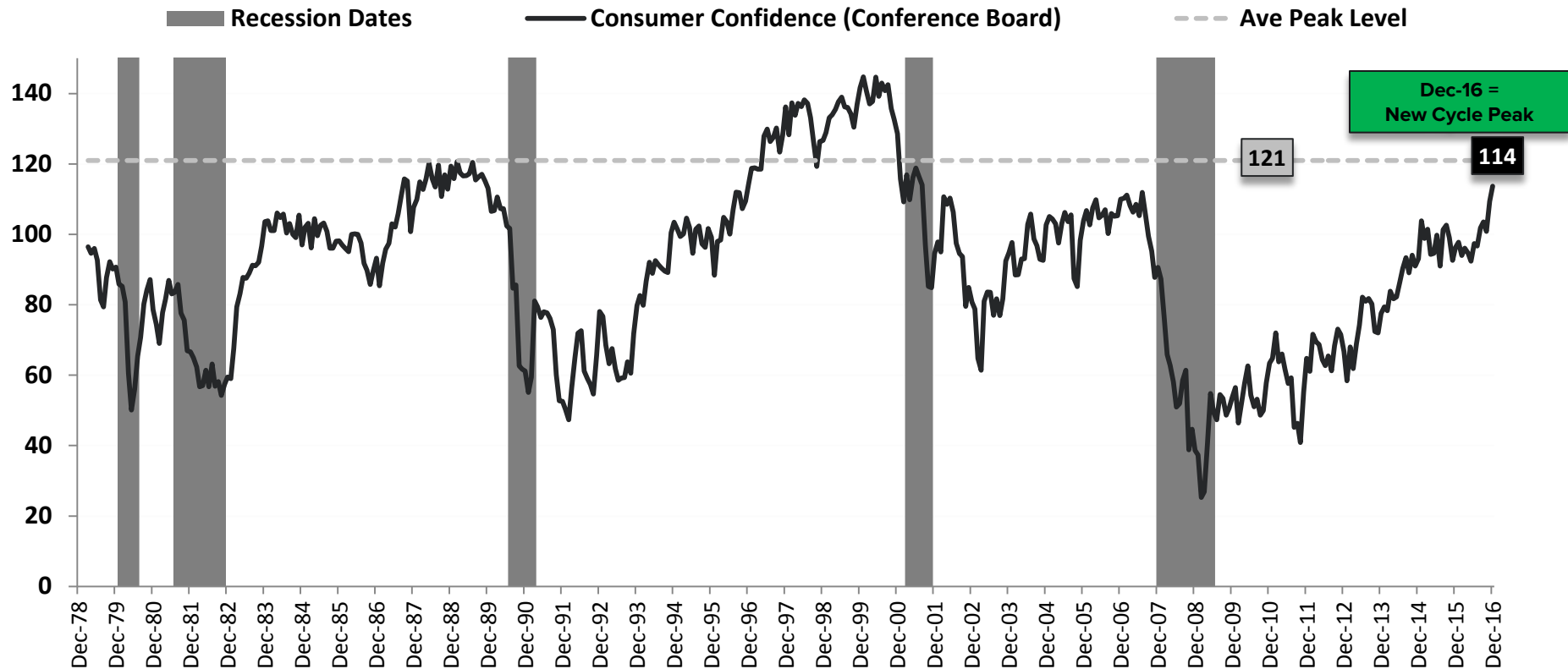
	Price	5D	1M	3M	vs. 52-Wk Low	vs. 5Y Ave	Since 11/8/2016
DXY	101.93	-1.3%	0.3%	5.1%	10.9%	16.3%	4.2%
EUR-USD	1.06	1.6%	0.1%	-5.1%	2%	-14%	-4.1%
GBP-USD	1.22	-0.6%	-3.3%	-1.6%	3%	-21%	-1.7%
USD-JPY	116.03	-1.5%	0.6%	12.0%	17%	13%	10.3%
USD-MXN	21.38	1.3%	4.9%	12.9%	25%	44%	16.7%

CONSUMER & BUSINESS SURVEYS

	Since Oct 16
Univ Michigan Confidence	11.00
Conference Board Confidence	12.90
Bloomberg Consumer Comfort	2.44
Univ. Michigan Expectations	12.70
Conference Board Expectations	19.50
Bloomberg Consumer Expectations	8.50
CEO Confidence (1Y Exp)	1.03
NFIB Optimism	10.90
NFIB 6M Outlook	57.00
Fed Mfg Surveys (6M Expectations)	
Dallas Fed: 6M Conditions	22.50
Empire State: 6M Conditions	14.20
Philli Fed: 6M Conditions	13.00
Kansas City Fed: 6M Conditions	2.00
Dallas Fed: (New Orders, 6M)	7.00
Empire State: (New Orders, 6M)	7.70
Philli Fed: (New Orders, 6M)	9.20
Kansas City Fed: (New Orders, 6M)	17.00
Richmond Fed: (New Orders, 6M)	15.00
Fed Services Surveys (6M Expectations)	
Dallas Fed: ↑ in Business Activity	30.70
Richmond Fed: Expected Demand	13.00

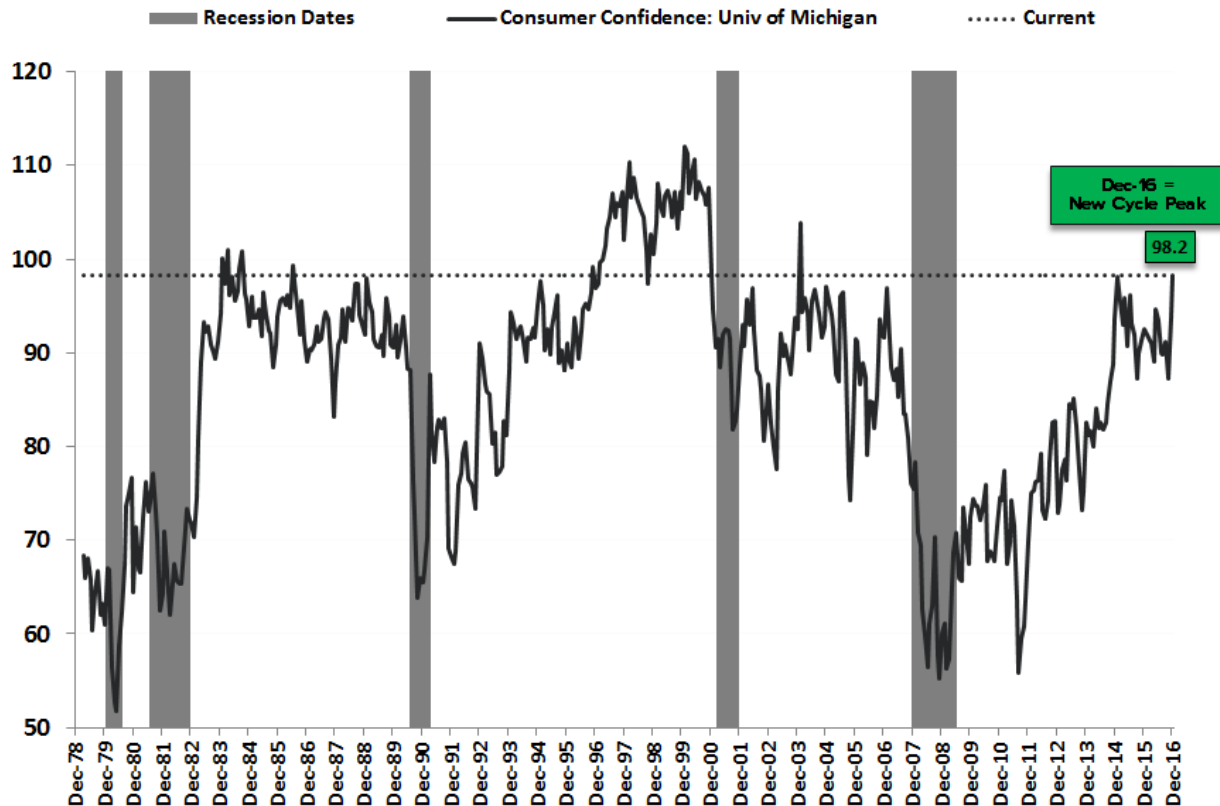
CONSUMER CONFIDENCE = ACCELERATING

BOTH THE CONFERENCE BOARD AND UNIVERSITY OF MICHIGAN CONFIDENCE SERIES HAVE REACCELERATED TO NEW HIGHS WITH HEADLINE, PRESENT CONDITIONS AND FORWARD EXPECTATIONS READINGS ALL STEP FUNCTIONING HIGHER SINCE OCTOBER.



CONSUMER CONFIDENCE = ACCELERATING

CONSUMER CONFIDENCE: UNIVERSITY OF MICHIGAN

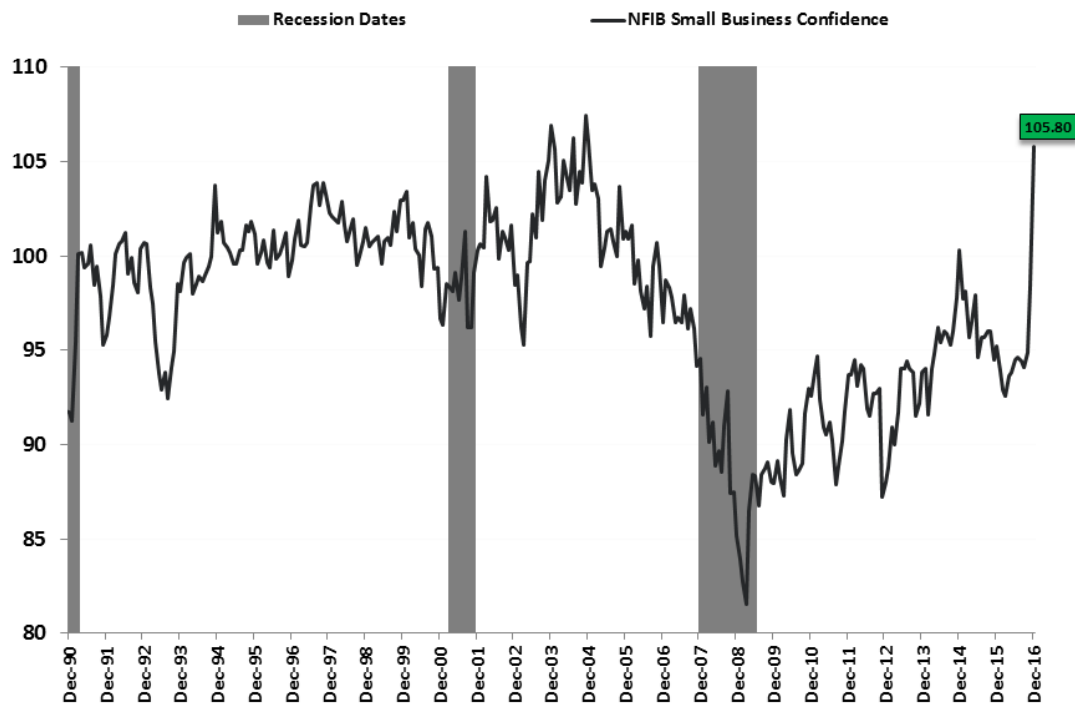


DATA SOURCE: BLOOMBERG, BEA, UNIV MICHIGAN

BUSINESS CONFIDENCE = RE-INFLECTING

TRUMPHORIA IS NOW UBIQUITOUS ACROSS ALL CONSUMER AND BUSINESS SERIES WITH ALMOST EVERY MEASURE GAPPING HIGHER POST-ELECTION.

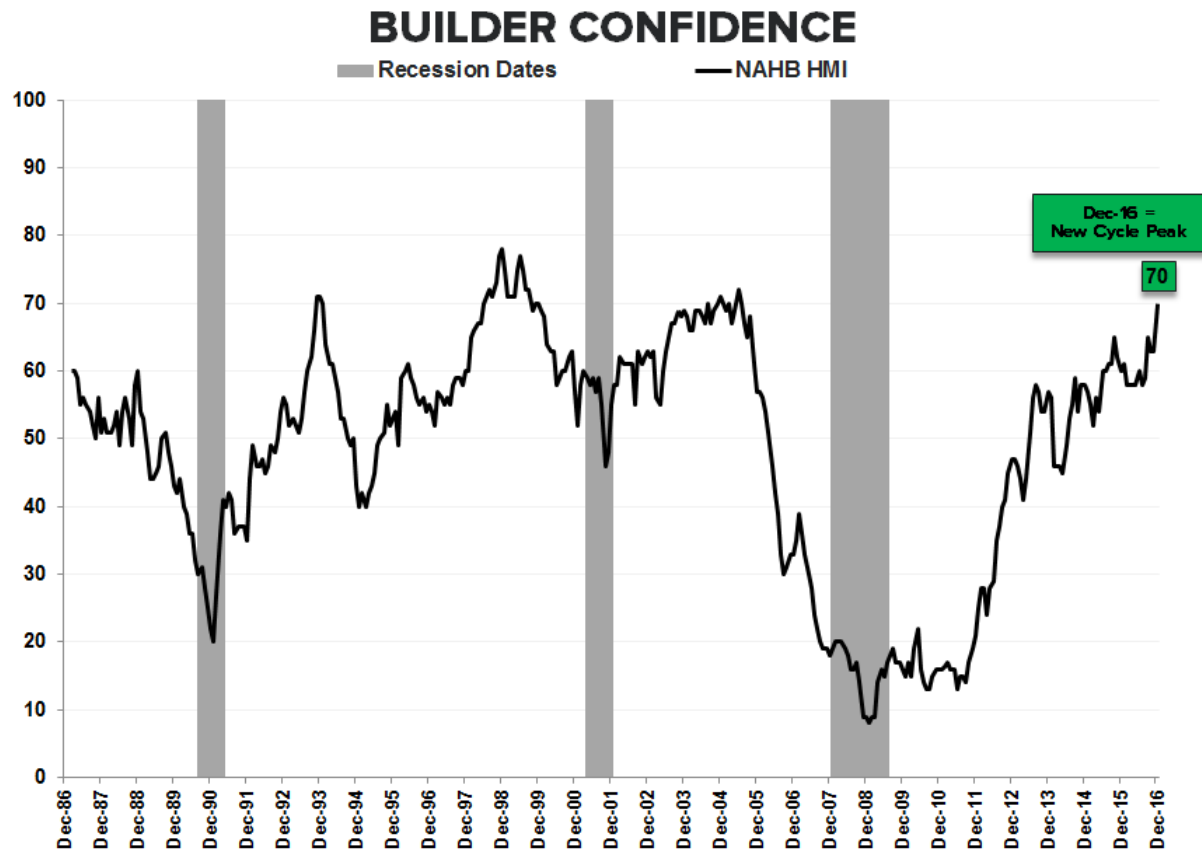
NFIB SMALL BUSINESS OPTIMISM



CONSUMER & BUSINESS SURVEYS

	Last	Latest	Since Oct 16
Univ Michigan Confidence	98.2	Dec-16	11.00
Conference Board Confidence	113.7	Dec-16	12.90
Bloomberg Consumer Comfort	45.1	Jan-17	2.44
Univ. Michigan Expectations	89.5	Dec-16	12.70
Conference Board Expectations	105.5	Dec-16	19.50
Bloomberg Consumer Expectations	53.5	Dec-16	8.50
CEO Confidence (1Y Exp)	6.9	Dec-16	1.03
NFIB Optimism	105.8	Dec-16	10.90
NFIB 6M Outlook	50.0	Dec-16	57.00
Fed Mfg Surveys (6M Expectations)			
Dallas Fed: 6M Conditions	47.2	Dec-16	22.50
Empire State: 6M Conditions	50.2	Dec-16	14.20
Philli Fed: 6M Conditions	48.7	Dec-16	13.00
Kansas City Fed: 6M Conditions	19.0	Dec-16	2.00
Dallas Fed: (New Orders, 6M)	55.4	Dec-16	7.00
Empire State: (New Orders, 6M)	46.7	Dec-16	7.70
Philli Fed: (New Orders, 6M)	48.8	Dec-16	9.20
Kansas City Fed: (New Orders, 6M)	33.0	Dec-16	17.00
Richmond Fed: (New Orders, 6M)	47.0	Dec-16	15.00
Fed Services Surveys (6M Expectations)			
Dallas Fed: ↑ in Business Activity	39.8	Dec-16	30.70
Richmond Fed: Expected Demand	36.0	Dec-16	13.00

BUILDER CONFIDENCE = TO INFINITY & BEYOND!



DATA SOURCE: BLOOMBERG, BEA, HRM

Builder Confidence re-inflected post-election, following consumer confidence to new cycle highs despite rising rates and subdued improvement in housing fundamentals.

CONFIDENCE: FOLLOWING THE POST-ELECTION PLAYBOOK



Monitoring trends for over 70 years



Subject: Presidential Honeymoons
From: Richard Curtin, Director

January 6, 2017

Over the past half century, presidential elections have repeatedly caused a post-election bounce in consumer confidence. This is not surprising since economic policy has been a prominent component of most presidential elections. Kennedy used the catch phrase that his administration would “get the economy going again” and for Bill Clinton, it was “it’s the economy, stupid.” Since presidential elections are in large part a referendum on the economy, presidents are accorded a so-called “honeymoon” which gives the new president an opportunity to demonstrate the effectiveness of new economic policies.

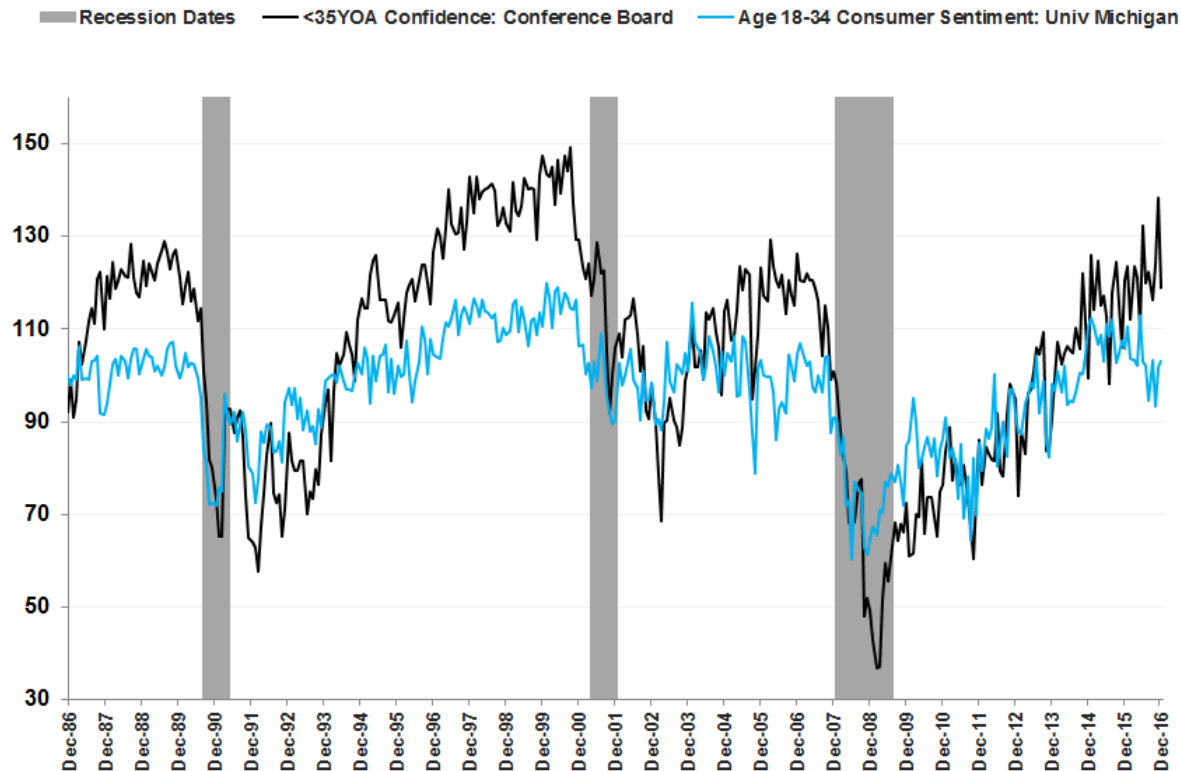
While Trump’s election was a surprise, the initial surge in optimism following his election was not. The honeymoon grant of optimistic expectations does not usually last past the first 100 days before some initial reinforcement from positive economic results is required. This time the honeymoon period may be different since Trump’s opposition is less likely to be accommodative and more likely to actively resist his policies. Nonetheless, changes in the economy, whether favorable or unfavorable, cannot be denied or ignored for long. Given that the consensus points toward a modestly improved economic outlook for the year ahead, each side needs to adjust its economic assessments. The Michigan surveys are based on a rotating panel design, with one-third of any month’s respondents having been initially interviewed six months earlier. Thus, the December 2016 survey included 200 consumers who were also interviewed in June. The rotating panel has statistical as well as substantive advantages for measuring change in expectations. This report highlights how consumers have changed their expectations over the past six months by whether they self-identified as Democrats, Republicans or Independents.

Increases in
Sentiment are typical
in the post-election
honeymoon period.

Fundamental
improvement needs
to materialize to
solidify the optimism.

MILLENNIAL CONFIDENCE = EQUIVOCAL

18-34 YEAR OLDS: CONSUMER CONFIDENCE



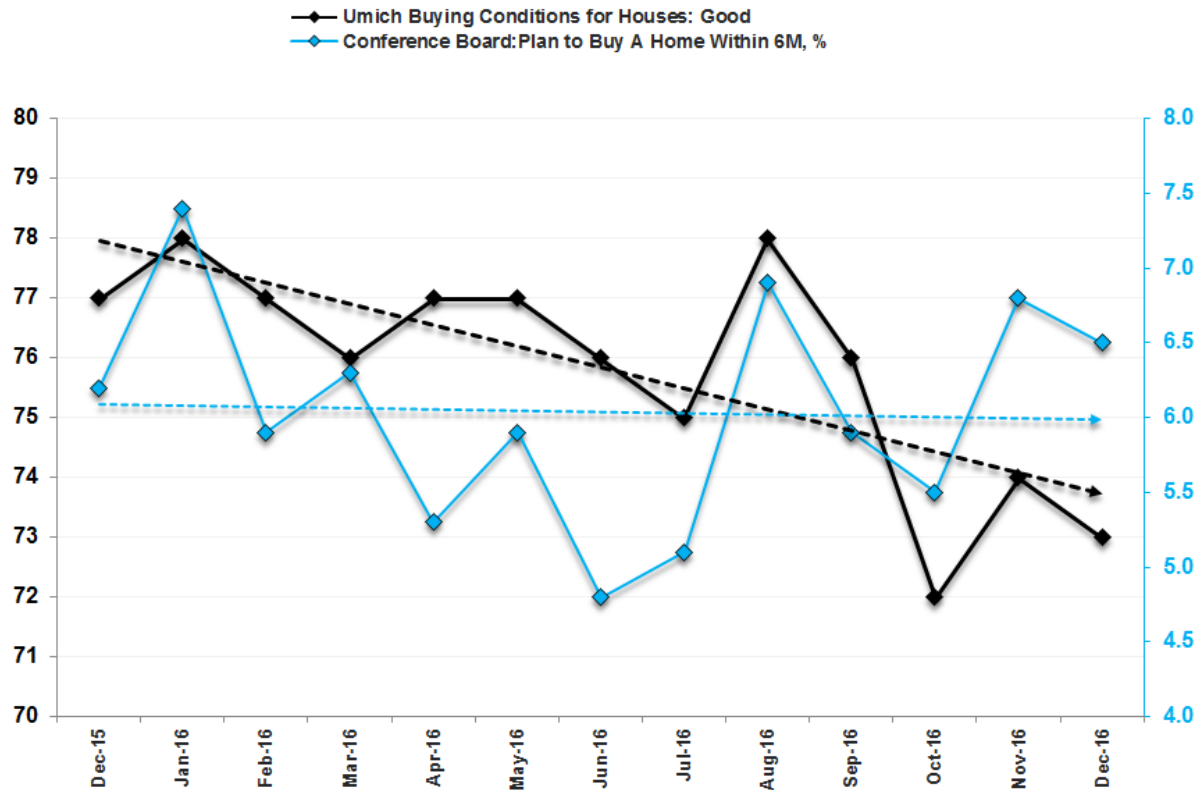
DATA SOURCE: BLOOMBERG, CONFERENCE BOARD, UNIV MICHIGAN,HRM

The post-election rise in confidence among 18-35 year olds is decidedly more muted than the broader increase.

In fact, according to the University of Michigan Series, confidence among the cohort continues to trend lower.

HOUSING CONFIDENCE = ↓

CONSUMER CONFIDENCE AROUND HOUSING



DATA SOURCE: BLOOMBERG, CONFERENCE BOARD, UNIV MICHIGAN, HRM

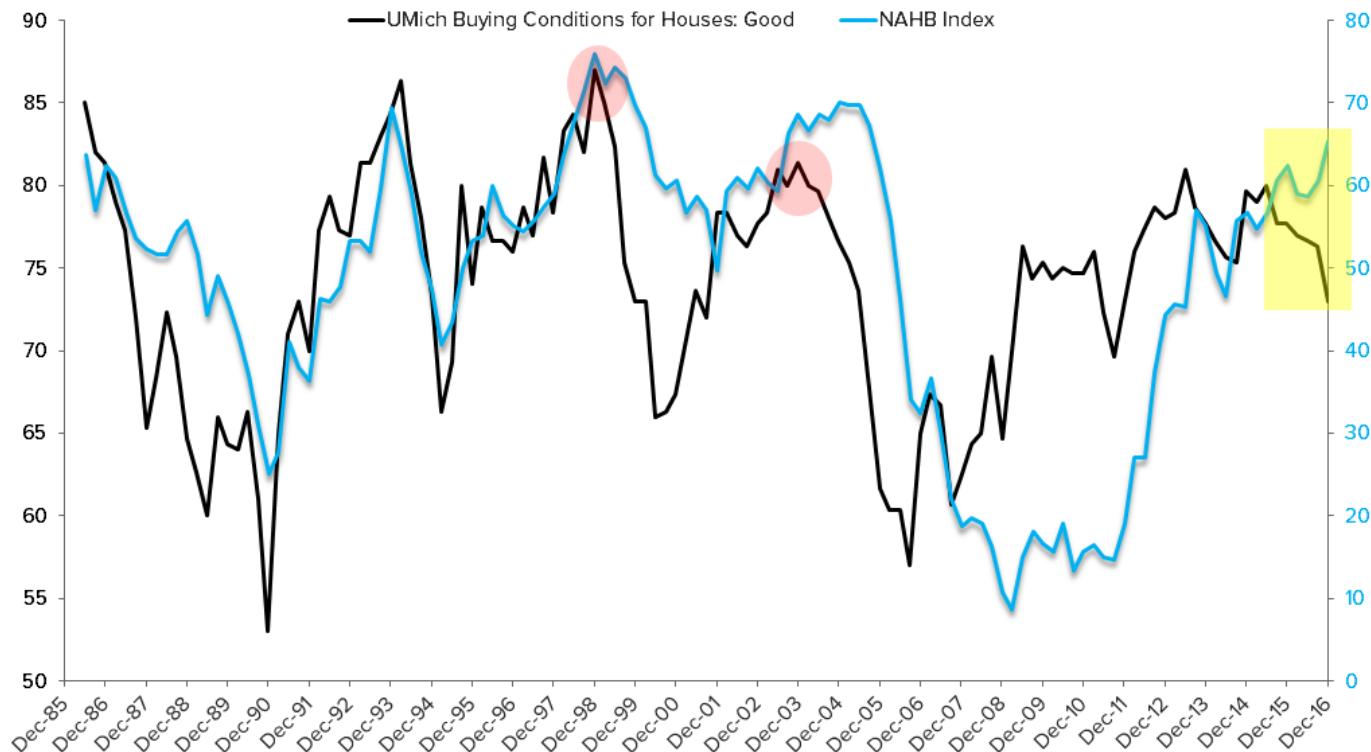
Confidence around housing, meanwhile, remains in downtrend over the TTM.

The post-election bounce in November was unremarkable and December was softer sequentially.

HOUSING CONFIDENCE = ↓

HOUSING CONFIDENCE: BUILDERS vs. CONSUMERS

NAHB HMI vs. Univ Michigan Home Buying Conditions Index



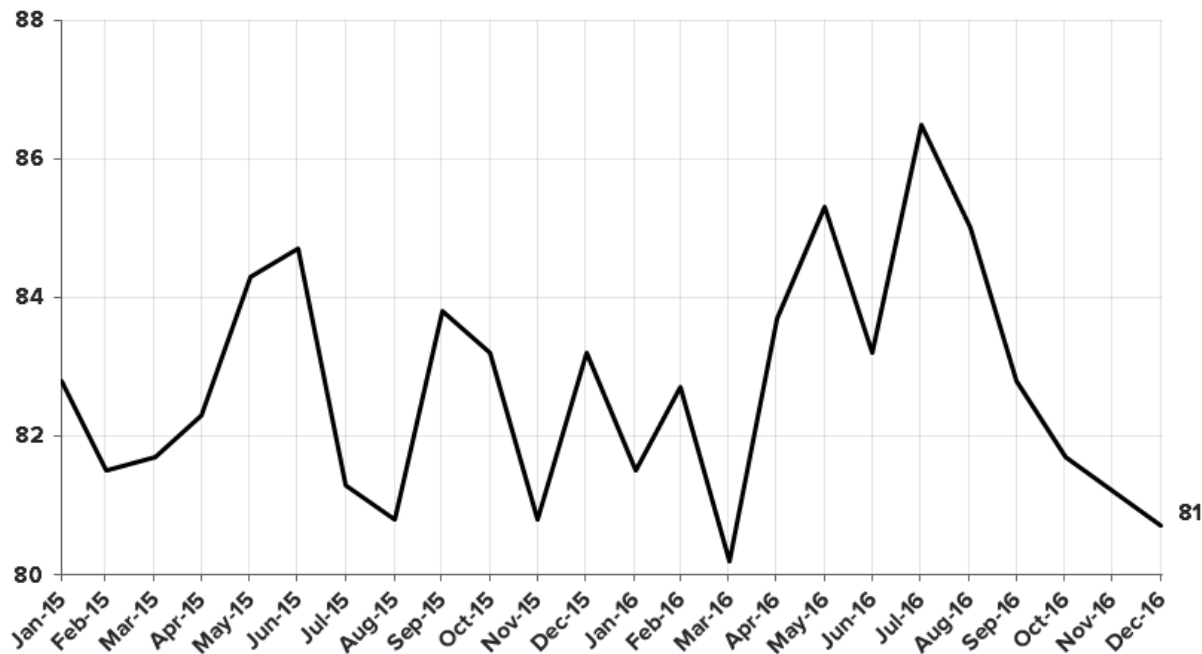
Source: Bloomberg, NAHB, Univ of Michigan, Hedgeye

© Hedgeye Risk Management

Michigan Confidence surveys around homebuying attitudes are in sharp decline, putting them completely at odds with homebuilder sentiment.

HOUSING CONFIDENCE = ↓

Fannie Mae Home Purchase Sentiment Index



Source: Bloomberg, Fannie Mae, Hedgeye

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One more for good measure. Fannie Mae's monthly phone survey of 1,000 households shows home purchasing sentiment has declined for 5 consecutive months with no bounce following the election.



THE PLAN: STIMULATE & REPEAL

... And that's when I told the Mexicans
they were paying for it and dropped the mic.

THE INDIVIDUAL TAX CODE → 7 BECOMES 3

The current tax code →

Single Filer		Married Filing Jointly	
Income	Tax Bracket	Income	Tax Bracket
\$0-\$9,275	10%	\$0-\$18,550	10%
\$9,275-\$37,650	15%	\$18,550-\$75,300	15%
\$37,650-\$91,150	25%	\$75,300-\$151,900	25%
\$91,150-\$190,150	28%	\$151,900-\$231,450	28%
\$190,150-\$413,350	33%	\$231,450-\$413,350	33%
\$413,350-\$415,050	35%	\$413,350-\$466,950	35%
\$415,050+	39.6%	\$466,950+	39.6%

Source: Internal Revenue Service (IRS)

© Hedgeye Risk Management

The proposal →

Single Filer		Married Filing Jointly	
Income	Tax Bracket	Income	Tax Bracket
\$0-\$37,500	12%	\$0-\$75,000	12%
\$37,500-\$112,500	25%	\$75,000-\$225,000	25%
\$112,500+	33%	\$225,000+	33%

Source: Trump Campaign

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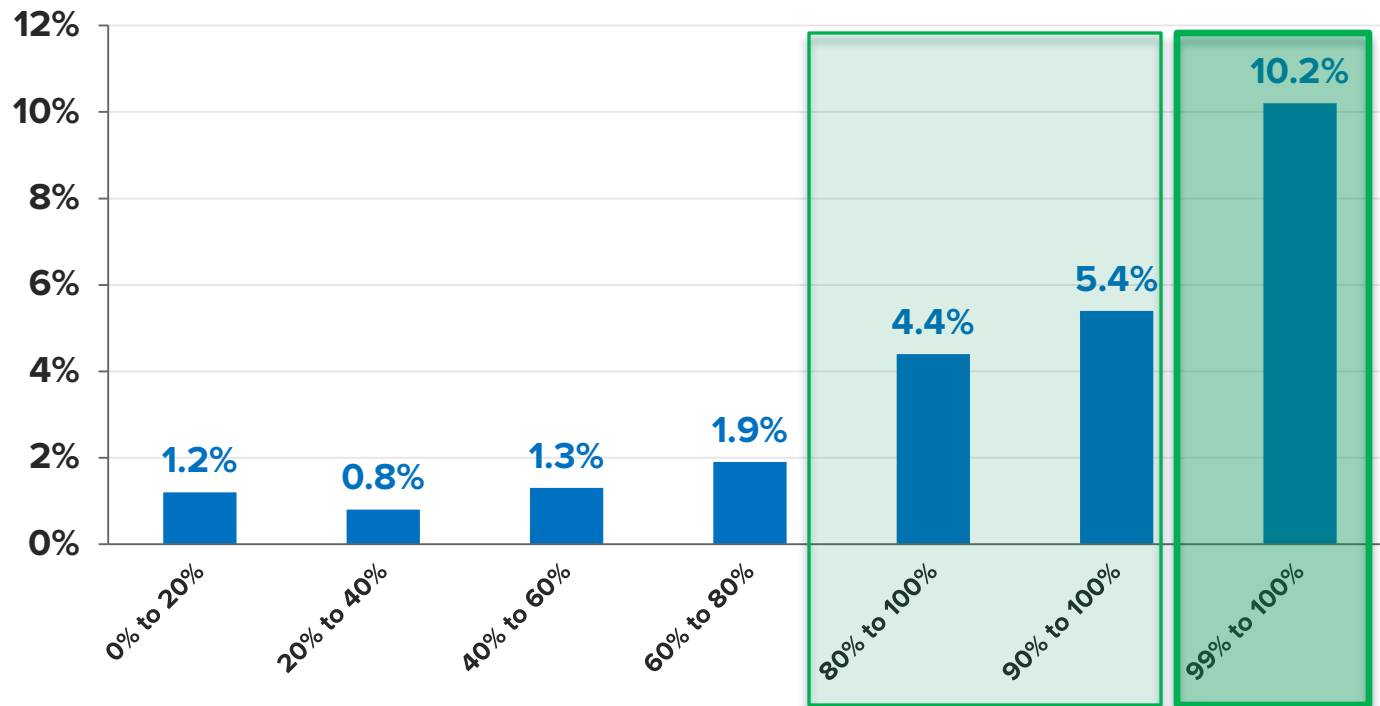
The tax code would drop from 7 brackets to 3.

Standard deductions would move from \$6,300 to \$15k for single filers and from \$12,600 to \$30k for joint filers.

Itemized deductions would be capped at \$100K for single filers and \$200K for joint filers under the new plan.

IT'S GOOD TO BE THE KING

Estimated % Chg. in After-Tax Income by Quintile



While the Trump Campaign's tax plan will positively impact the wallets of all Americans, those in the top 1% will see the largest gains, contrary to the populist messaging from the campaign. The top decile and top quintile will see comparable gains of 4-5%. Below the top quintile, gains will be de minimis.

Source: Tax Foundation,

© Hedgeye Risk Management

TAX CHANGE REALITY: THE TOP QUINTILE BENEFITS

AFTER TAX INCOME IMPACT OF TRUMP TAX REFORM PROPOSAL

Quintile	Mean Income*	# of Households (000's)*	Static Impact		Dynamic Impact	
			ATI: Static Impact**	ATI: Per Household Increase	ATI: Dynamic Impact**	ATI: Per Household Increase
1	\$12,457	14,630	1.20%	\$149	7.5%	\$934
2	\$32,631	25,811	0.80%	\$261	7.3%	\$2,382
3	\$56,832	21,026	1.30%	\$739	8.4%	\$4,745
4	\$92,031	28,670	1.90%	\$1,749	8.5%	\$7,777
5	\$202,366	35,680	5.50%	\$11,130	10.5%	\$21,248

*Census Bureau, 2016 CPS ASEC

**Tax Foundation Estimates

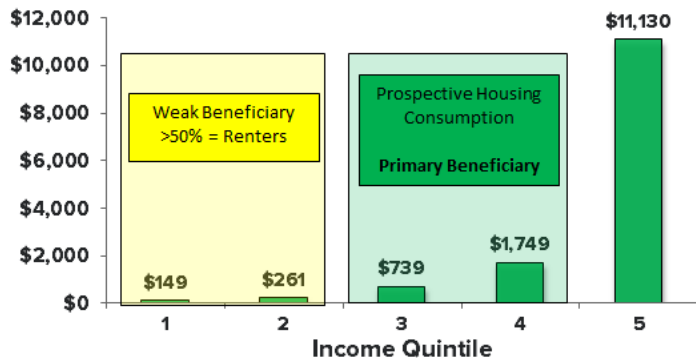
Hypothetical Housing Bull Case from Trump Tax Savings

Income Quintile	Mean Income	Monthly PITI @ 28% Front End Ratio	ATI Static Savings Annual	ATI Static Savings Monthly	ATI Savings / Current Mortgage Payment
1	\$12,457	\$291	\$149	\$12	4%
2	\$32,631	\$761	\$261	\$22	3%
3	\$56,832	\$1,326	\$739	\$62	5%
4	\$92,031	\$2,147	\$1,749	\$146	7%
5	\$202,366	\$4,722	\$11,130	\$928	20%

* Assumes all tax savings was spent on housing.

Source: Census Bureau, Tax Foundation, Hedgeye

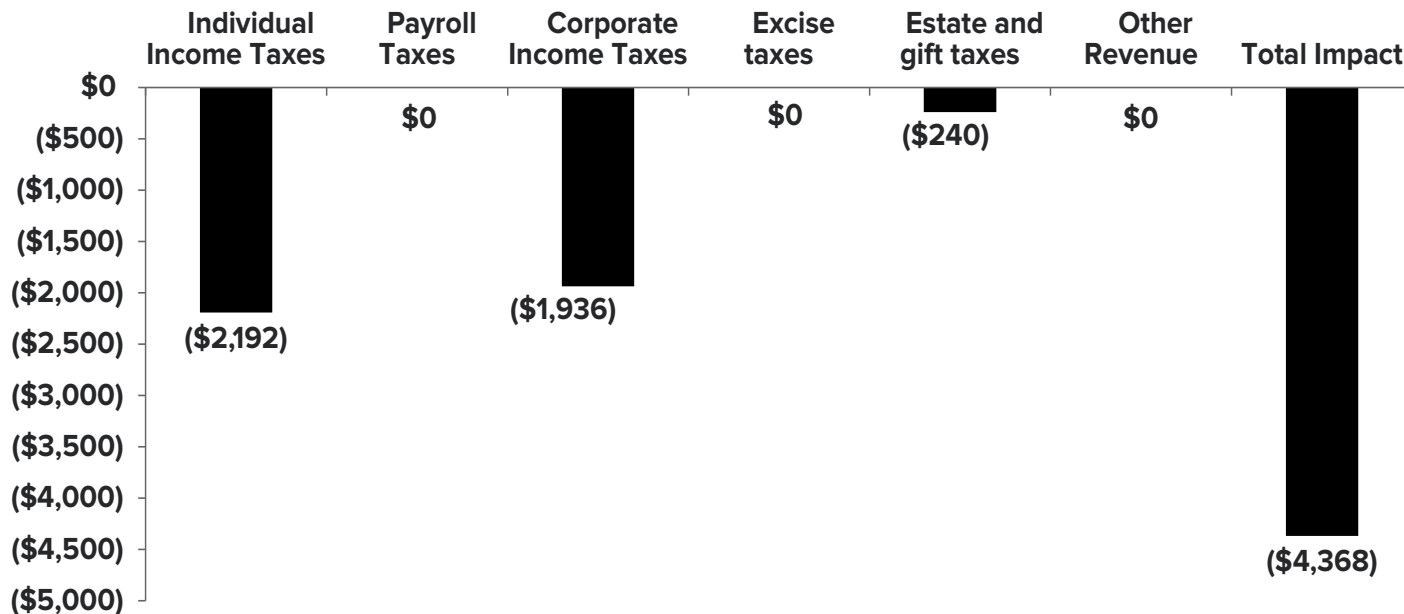
\$ Increase in After-Tax Income by Quintile



The table on the bottom left shows the average household income by quintile, what the after-tax benefit would be, and how much their potential housing expenditure could increase by. Note the increase at the top quintile.

IMPACT OF THE TRUMP TAX PLAN

Ten Year Static Revenue Impact of Trump Tax Plan (In Billions)



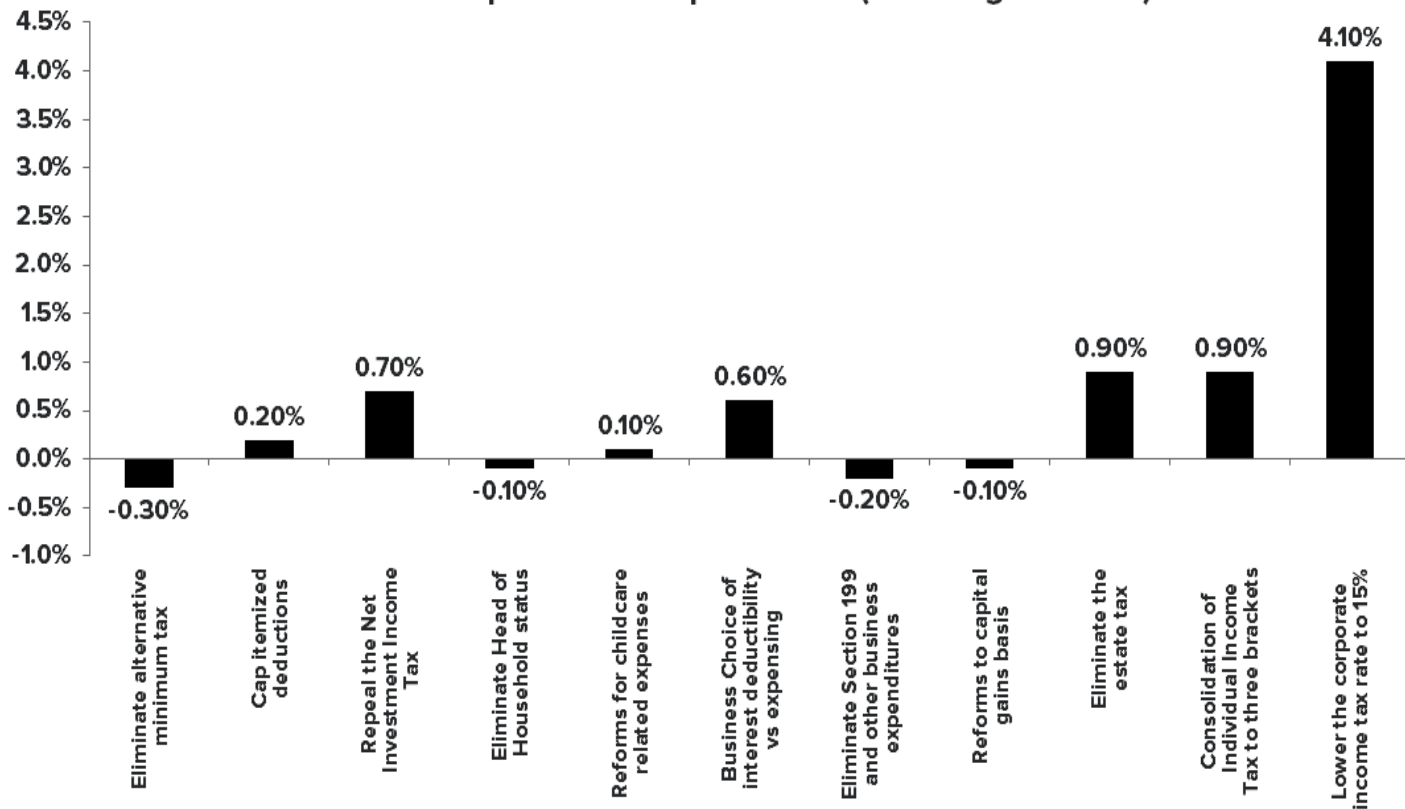
Source: Tax Foundation, Hedgeye

© Hedgeye Risk Management

President-Elect Trump's tax plan would reduce total government revenue by \$4.37 trillion over the ensuing decade. This assumes no pro-growth offsets. Assuming those offsets, the hit to revenue would instead be \$2.64 trillion. For reference, there's ~\$20 trillion in US Government debt outstanding currently.

IMPACT OF THE TRUMP TAX PLAN

Ten Year Impact of Trump Tax Plan (% change in GDP)



Source: Tax Foundation, Hedgeye

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While the proposed Trump plan will have a net negative impact on government revenues any way you slice it, it is estimated to boost GDP by ~7% over the coming decade (~+70 bps/year) and add 1.8 million jobs (+15k/mo).

THE M-I-D BEAR CASE: -16% DOWNSIDE TO HOME PRICES ??

The mortgage insurance deduction, if it were eliminated, would reduce affordability by ~16%. This would be concentrated among the top 2 quintiles where filers tend to itemize more often.

According to the Tax Policy Center, roughly 40 million (~22%) of the 170 million households in the U.S. benefit from the mortgage interest deduction.

Affordability Dynamics

Assumptions:

\$1,319

Monthly Mortgage PMT @ 28% DTI

Current 30 Year FRM, 1/11/17 3.99%

30Y FRM	Purchasing Power: PV of Mo. Payment	\$ Chg in Affordability	% Chg in Affordability	Relevance
2.99%	\$313,184	\$36,632	13.2%	
3.24%	\$303,390	\$26,838	9.7%	
3.49%	\$294,035	\$17,483	6.3%	
3.74%	\$285,097	\$8,544	3.1%	
3.99%	\$276,552	\$0	0.0%	Current 30Yr FRM: 1/11/17 3.99%
4.24%	\$268,383	(\$8,170)	-3.0%	
4.49%	\$260,568	(\$15,985)	-5.8%	
4.74%	\$253,090	(\$23,463)	-8.5%	
4.99%	\$245,931	(\$30,621)	-11.1%	
5.24%	\$239,077	(\$37,476)	-13.6%	
5.51%	\$231,997	(\$44,555)	-16.1%	Implied Impact of the Elimination of the MID 5.51%
5.76%	\$225,726	(\$50,826)	-18.4%	
6.01%	\$219,714	(\$56,838)	-20.6%	

Source: Bloomberg, Census, NAR, Bankrate

*Represents monthly mortgage payment at 28% DTI of Median Household Income

HEDGEYE

Federal Reserve Data (Dollars bn)

Total Mortgage Interest Paid	\$79.20
Debt Service Ratio	4.47%
Disposable Personal Income	\$12,761.00

Disposable Personal Income	\$12,761.00
Debt Service Ratio	x 4.47%
Dollars Spent on Mortgages (P&I)	\$570.42
Dollars Spent on Payments	\$570.42
Total Mortgage Interest Deducted	- \$79.20
Total Effective Amount Spent	\$491.22

% Increase in the Effective Mortgage Payment, without the MID

16.1%

Source: Federal Reserve, FRED, JCT, Hedgeye

THE M-I-D BULL CASE: **ACTUALLY, A BOON TO THE HIGH END**

BEFORE

Assuming a \$500,000 Home Loan Balance

Current Tax Code (MID Cap of \$1,000,000)

30 Year Fixed Rate Mortgage	4.50%
Tax Bracket	33%
Loan Balance	\$500,000
Total Annual Interest Payment	\$22,500
Mortgage Interest Deduction Tax Savings	\$10,486

Utilization of the Maximum Deductions Allowed Under the Tax Code

Current Tax Code (MID Cap of \$1,000,000)

30 Year Fixed Rate Mortgage	4.50%
Tax Bracket	33%
Loan Balance	\$1,000,000
Total Annual Interest Payment	\$45,000
Mortgage Interest Deduction Tax Savings	\$20,971

GREAT AGAIN

Trump Campaign Tax Plan (Joint Filer Itemized Deductions Capped at \$200,000)

30 Year Fixed Rate Mortgage	4.50%
Tax Bracket	33%
Loan Balance	\$500,000
Total Annual Interest Payment	\$22,500

Dollars Remaining Until Itemized Deduction Ceiling is Reached **\$177,500**

Trump Campaign Tax Plan (Joint Filer Itemized Deductions Capped at \$200,000)

30 Year Fixed Rate Mortgage	4.50%
Tax Bracket	33%
Loan Balance	\$4,444,444
Total Annual Interest Payment	\$200,000

Dollars Remaining Until Itemized Deduction Ceiling is Reached **\$0**

In an ironic twist, Treasury Secretary Nominee Mnuchin's proposal to "cap" mortgage interest deductibility is actually the exact opposite of what it sounds like. The tables at left illustrate why.

Under the current system, you can deduct MI on debt up to \$1mn, which equates to around ~\$45k. Under the new system, you'd be able to deduct up to \$200k, which would equate to a \$4.4mn mortgage.

IS QM REPEAL ON THE TABLE?

Proposed Legislation	Description	Sponsor
The Mortgage Choice Act	Changes the way points and fees are calculated for purposes of complying with the Ability-to-Repay/Qualified Mortgage rule by excluding fees paid for affiliated title charges and escrow charges for insurance and taxes.	Rep. Huizenga
The Portfolio Lending and Mortgage Access Act	Creates a legal safe harbor from the ability-to-repay requirements for mortgage loans that are kept on a depository institution's balance sheet	Rep. Barr

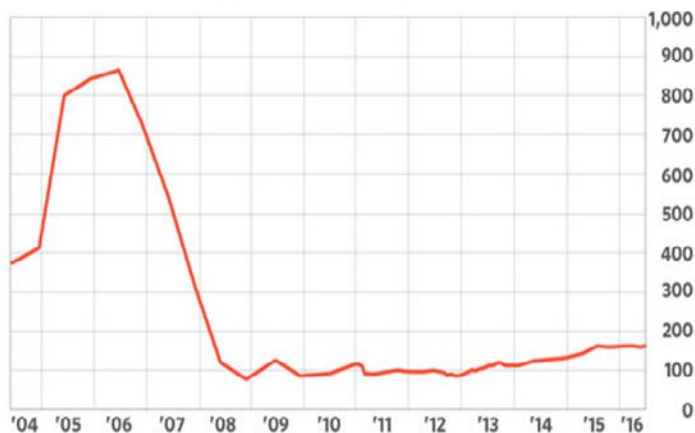
Though Mortgage Lending Standards have loosened since 2011, it is still much more difficult to get a mortgage than in the pre-GFC era.

One of the core reasons is the Qualified Mortgage provision that became effective in early 2014.

There is proposed legislation (H.R. 1210) to create a legal safe harbor for lenders, which, if passed, would reignite lending in the sector.

However, based on a recent policy call we hosted, it sounds like there is little support/momentum for this provision to move forward.

Mortgage Credit Availability 2004- Present



Source: Mortgage Bankers Association,

© Hedgeye Risk Management.

FOR THOSE INTERESTED, HERE'S A SNAPSHOT OF QM

2014: THE YEAR OF TIGHTER CREDIT

Qualified Mortgage (QM) Summary

Effective date: January 10, 2014

LOAN FEATURES

No negative amortization or interest only periods
No balloon payments (with small exceptions)
No term > 30 Years, fully amortizing

UNDERWRITING

Hard Verification of income/assets

Maximum DTI (debt-to-income) of 43%

Considers total debt obligations (simultaneous loans, insurance, taxes, other mortgage-related obligations)

Variable Rate calculated using maximum possible rate in first five years

CAPS ON POINTS/FEEs

No greater than 3% of total loan amount
Higher caps on loans <\$100K

LIABILITY

"Safe harbor" for low-priced QM compliant loans
"Rebuttable Presumption" for higher-priced (rate >1.5% Prime) QM compliant loans

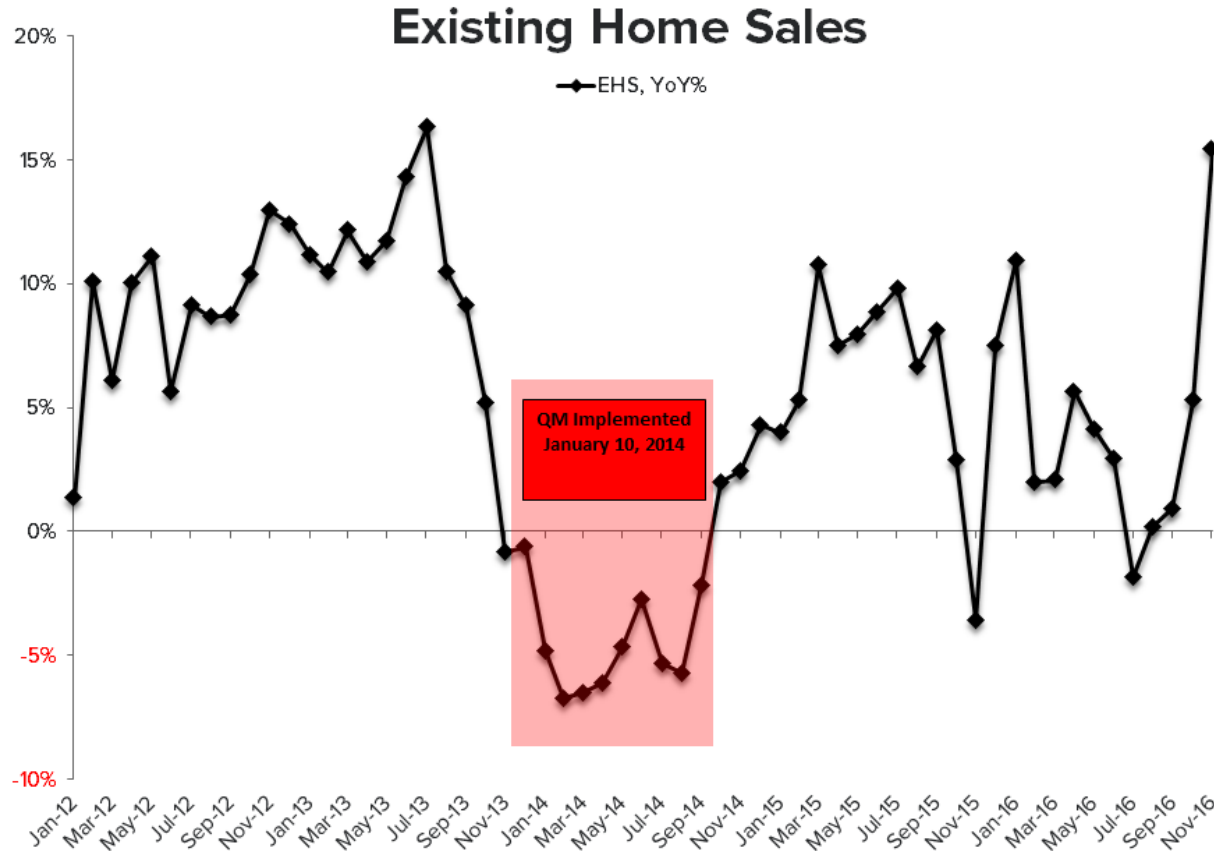
Source: consumerfinance.gov, qualifiedmortgage.com

The QM regulations that went into effect Jan '14 broadly compressed credit availability – particularly at the lower end and across non-conforming loan categories.

In the event that HR 1210 gets momentum, here's a summary table we published back in early 2014 on the key tenets of the new rule.

HEDGEYE 11

HERE'S WHY QM MATTERS



Source: Bloomberg, NAR, Hedgeye

© Hedgeye Risk Management

QM's rollout pushed housing volumes squarely into negative territory for the bulk of 2014.

THE REAL DEAL

NEW YORK REAL ESTATE NEWS

Real estate industry freaked out by Republican tax reform plan

Observers fear turmoil if proposed changes are handled wrong

December 28, 2016 10:30AM

In June, Republican federal lawmakers proposed a tax reform, and lobbyists told the Wall Street Journal that it stands a decent chance of passing now that Donald Trump is set to occupy the White House. "The House is ready to roll," said Jeffrey DeBoer of the Real Estate Roundtable.

The plan would also scrap a provision that allows companies to write off property depreciation over time. Buyers of apartment buildings can depreciate the cost over 27.5 years, with other commercial real estate being written off over 39 years. Instead, firms would be able to record the price of buying a property as a one-off business expense.

In order to pay for 15% business tax rates (vs 35% now) and lower marginal individual tax rates, there must be offsets. Two of those include eliminating business depreciation on property and eliminating interest expense deductibility.

CRE → ADIOS, INTEREST DEDUCTION

MARKETS | PROPERTY REPORT

Real-Estate Industry Braces for Tax Upheaval

Trump win sparks fear of 'radical' tax code overhaul by House Republicans for all businesses

The House proposal also would eliminate for all businesses the current deduction for debt interest payments. Leverage has long played a major role in most acquisitions of office buildings, stores, hotels and other commercial property in part because interest payments are tax deductible.

Another sea change in commercial real estate would be in the way the House blueprint would affect depreciation. Tax law currently allows buyers of rental apartment buildings to depreciate the cost over 27.5 years and other commercial real estate over 39 years.

The House plan would eliminate depreciation for real-estate companies as well as other businesses. Instead, buyers of real estate would be able to treat the entire cost of buying a property—excluding land—as a business expense that could be used to reduce income. If a buyer didn't have enough income in the year they bought the building, they could be able to carry the expense forward into future years as a net operating loss.

In order to pay for 15% business tax rates (vs 35% now) and lower marginal individual tax rates, there must be offsets. Two of those include eliminating business depreciation on property and eliminating interest expense deductibility.

MEET THE CABINET



The cabinet appointees of Donald Trump have very different backgrounds, but as a group they are notable in that there are more political outsiders than in typical administrations.

INCOMING TREASURY SECRETARY - MNUCHIN



"Our most important priority is sustained economic growth and I think we can absolutely get to sustained 3 to 4% GDP and that is absolutely critical for the country." [emphasis added]

"Any reductions we have in upper income taxes will be offset by less deductions so that there will be no absolute tax cut for the upper class. There will be a big tax cut for the middle class but any tax cuts we have for the upper class will be offset by less deductions that pay for it."

"They'll still let you do charities but there'll be other deductions that are absolutely limited to pay for this...we'll cap mortgage interest but allow some deductibility." [emphasis added]

"Biggest Tax reform since Reagan and its not just going to be a cut in corporate taxes, but it's also going to be a very large middle income tax cut that's going to help this country."

Maria Bartiromo: *"Would you move to change Fannie and Freddie at this point? Would you move to have these privatized?"*

Steven Mnuchin: *"Absolutely. We've got to get Fannie and Freddie out of government ownership it makes no sense that these are owned by the government and have been controlled by the government for as long as they have".*

Prior Experience:

- Partner, Goldman Sachs
- CEO, Dune Capital Management
- CEO, OneWest
- Founder, Relativity Media
- Finance Chairman, Trump Campaign

Education:

Yale University (BA)

Steven Mnuchin is a former Goldman Sachs partner and senior manager and hedge fund investor. After he graduated from Yale University, Mnuchin worked for investment bank Goldman Sachs for 17 years, reaching its management committee. After he left the bank in 2002, he worked for and founded a number of hedge funds. During the financial crisis, Mnuchin bought failed home lender IndyMac. He rebuilt the bank as chairman and CEO in the subsequent years under the name OneWest Bank, and sold it in 2015 to CIT Group. - Wikipedia

MNUCHIN IS PARTIAL TO GSE REFORM

IMFnews

Wednesday, Jan 11, 2017

Treasury Nominee Mnuchin Owns a Stake in Fannie & Freddie (Indirectly)

By Paul Muolo

pmuolo@imfpubs.com

In his financial disclosure form, Treasury secretary nominee Steven Mnuchin revealed that he has an investment in Paulson Advantage LLP, which owns a stake in Fannie Mae and Freddie Mac. The news was first reported by Bloomberg.

Advantage was started by hedge fund maven John Paulson, who made a killing shorting the ABX Index during the subprime crisis.

Back in November, when Mnuchin was picked by President-elect Trump to head Treasury, he said returning Fannie and Freddie to the private sector would be a key priority for him. Those comments caused the share price of GSE common and junior preferred to spike.

Although some consider the common stock of Fannie and Freddie to be worthless, the preferred is a different proposition because of the 30 or so "takings" cases filed by investors against the U.S. government.

According to his financial disclosure form, Mnuchin lists the value of his Advantage stake at \$500,001 to \$1 million.

GSE Reform remains the white whale of financial legislative priorities, but Mnuchin has been clear on multiple occasions that he'd like to see Fannie/Freddie reform. It's interesting to note that he has, at the moment, an indirect interest in the preferred stock of the GSEs.

INCOMING COMMERCE SECRETARY - ROSS



"Tariffs are part of the negotiation. The real trick is going to be increase American exports. Get rid of some of the tariff and non-tariff barriers to American exports".

"For one thing, TPP had terrible rules of origin. Rules of origin means can stuff come in from outside the boundaries of the treaty countries? In automotive, majority of a car could come from outside TPP, namely could come from china, and still get all the benefits of TPP...What has to be put into perspective, we are the big market. We are the world's biggest importer. We need to treat the other countries as good suppliers. Not as determining the whole show".

"And it's also not true that all jobs are created equal. A guy who used to working a steel mill now flipping hamburgers, he knows it's not the same. So it's the quality of jobs as well as the quantity. And one of the problems with the recovery is when the newly created jobs are not nearly as remunerative as were the jobs that were lost. That's a very big structural problem".

Michelle Caruso-Cabrera: *"What about the Volcker rule?"*

Wilbur Ross: *"Yeah, and many of the smaller banks have had to get to the point where they now have more compliance people than they have lending offices. That's crazy".*

Prior Experience:

- Sr. Managing Director, Rothschild Investments
- CEO/Founder, WL Ross & CO.

Education:

Yale University (BA), Harvard University (MBA)

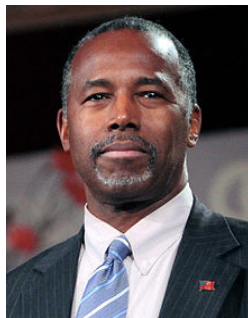
Wilbur Ross, Jr. is an American investor, and former banker, known for restructuring failed companies in industries such as steel, coal, telecommunications, foreign investment and textiles. He specializes in leveraged buyouts and distressed businesses. As of August 2014, Forbes magazine lists Ross as one of the world's billionaires with a net worth of \$2.9 billion. - Wikipedia

INCOMING HUD SECRETARY & CURRENT FHFA DIRECTOR

BEN CARSON

EDUCATION:

YALE UNIVERSITY (BS),
UNIVERSITY OF MICHIGAN (MD)



PRIOR EXPERIENCE:

- DIRECTOR OF PEDIATRIC NEUROSURGERY, JOHN HOPKINS HOSPITAL
- REPUBLICAN PRESIDENTIAL CANDIDATE

Dr. Carson has no formal experience either in government or with housing, which makes his selection as Secretary of HUD an interesting choice. That said, his acknowledgement that he did not believe he was qualified to run a federal agency because of his lack of government experience has us encouraged.

MEL WATT

EDUCATION:

UNIVERSITY OF NORTH CAROLINA,
YALE UNIVERSITY (JD)



PRIOR EXPERIENCE:

- GENERAL PRACTICE LAWYER
- CONGRESSMEN REPRESENTING NORTH CAROLINA'S 12TH DISTRICT

Mel Watt was appointed by President Obama and confirmed in 2014. Though he is not well liked among Republicans, he plans on remaining in his post until the end of his 5 year term in 2019. **Recapitalizing the GSEs (Fannie Mae and Freddie Mac) will require Watt's approval.**



THE HANGOVER: WHEN RATES & REALITY SINK IN



THREE CASE STUDIES IN RISING RATES

1

OCTOBER 1993- DECEMBER 1994

Mortgage Rates rose +240 bps over the span of 14-months. **The S&P 500 Homebuilding index lost 33% of its value over that 14 month span.** By contrast, the S&P 500 was flat over the corresponding period.

2

OCTOBER 1998 - MAY 2000

Mortgage Rates rose +180 bps over the span of 19-months. **The S&P 500 Homebuilding index lost 29% of its value over that 14 month span,** but the S&P 500 was up 44% making the **relative underperformance a whopping 73%.**

3

DECEMBER 2012 – SEPTEMBER 2013

Mortgage Rates rose +120 bps over the span of 10-months. **The S&P 500 Homebuilding index lost 3% of its value over that 14 month span.** By contrast, the S&P 500 was up 19% over the corresponding period so the **relative underperformance was 22%.**

10-YEAR TREASURY YIELDS

10-Year Treasury Yield - LTM

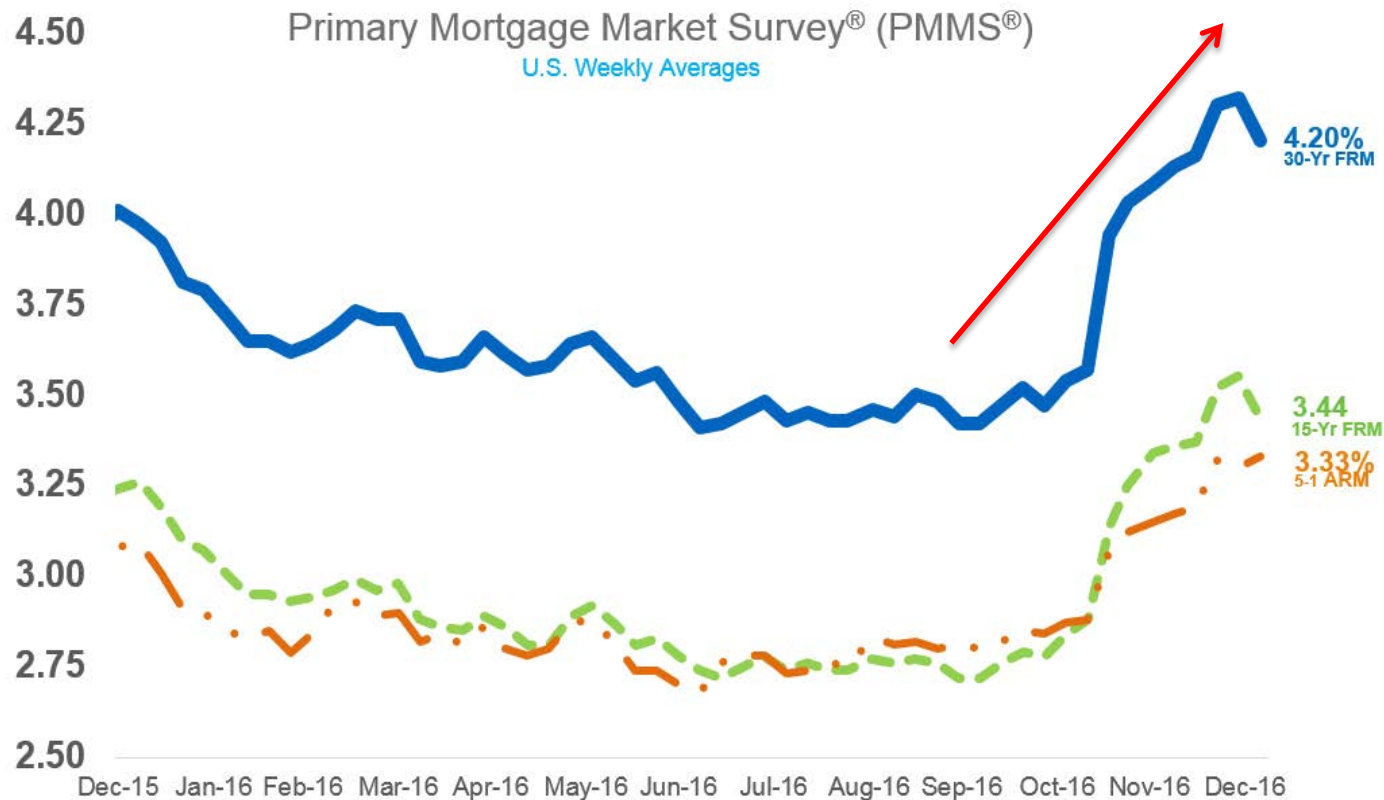


Source: Factset

© Hedgeye Risk Management

Yields have backed up sharply following the election. We expect them to remain elevated and likely to move higher over the course of 2017.

MORTGAGE RATES



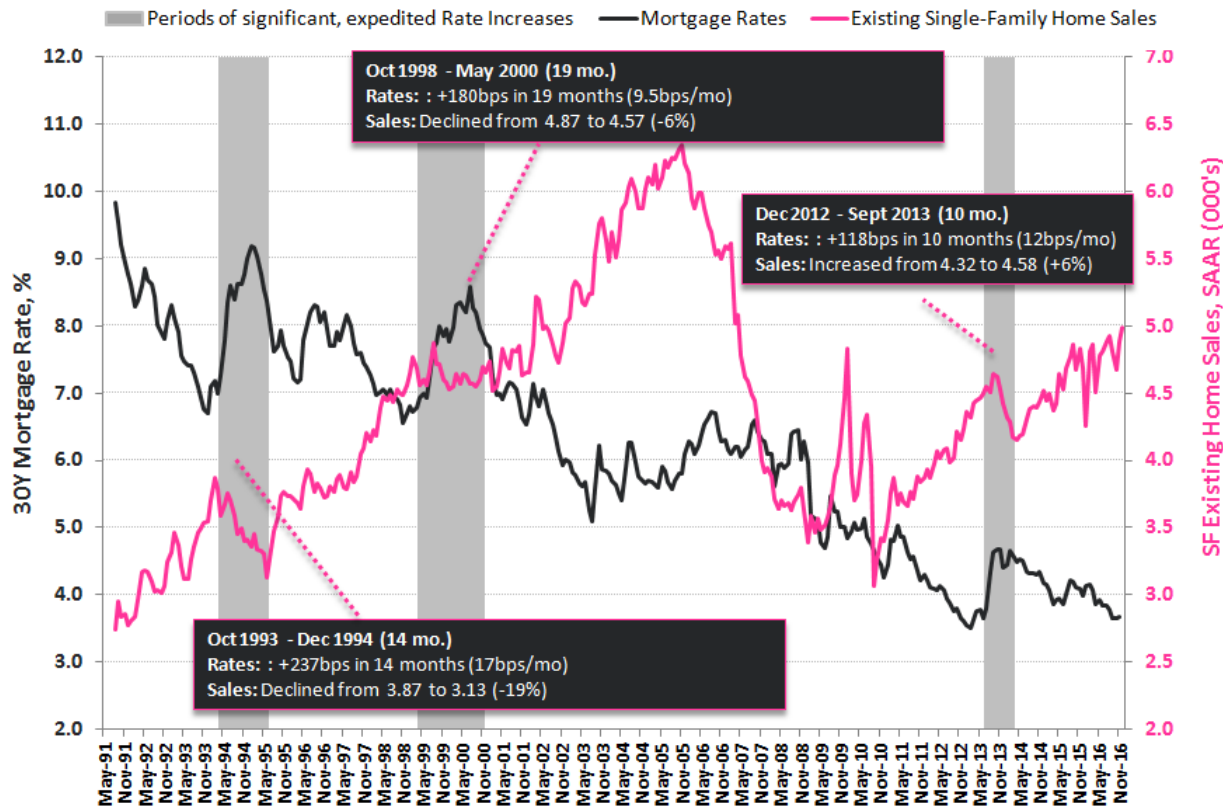
Mortgage rates have put in roughly 2/3 the rise seen in 10Yr Tsy yields.

As of January 5, 2017



MORTGAGE RATES & EXISTING HOME SALES

Mortgage Rates vs. Home Sales

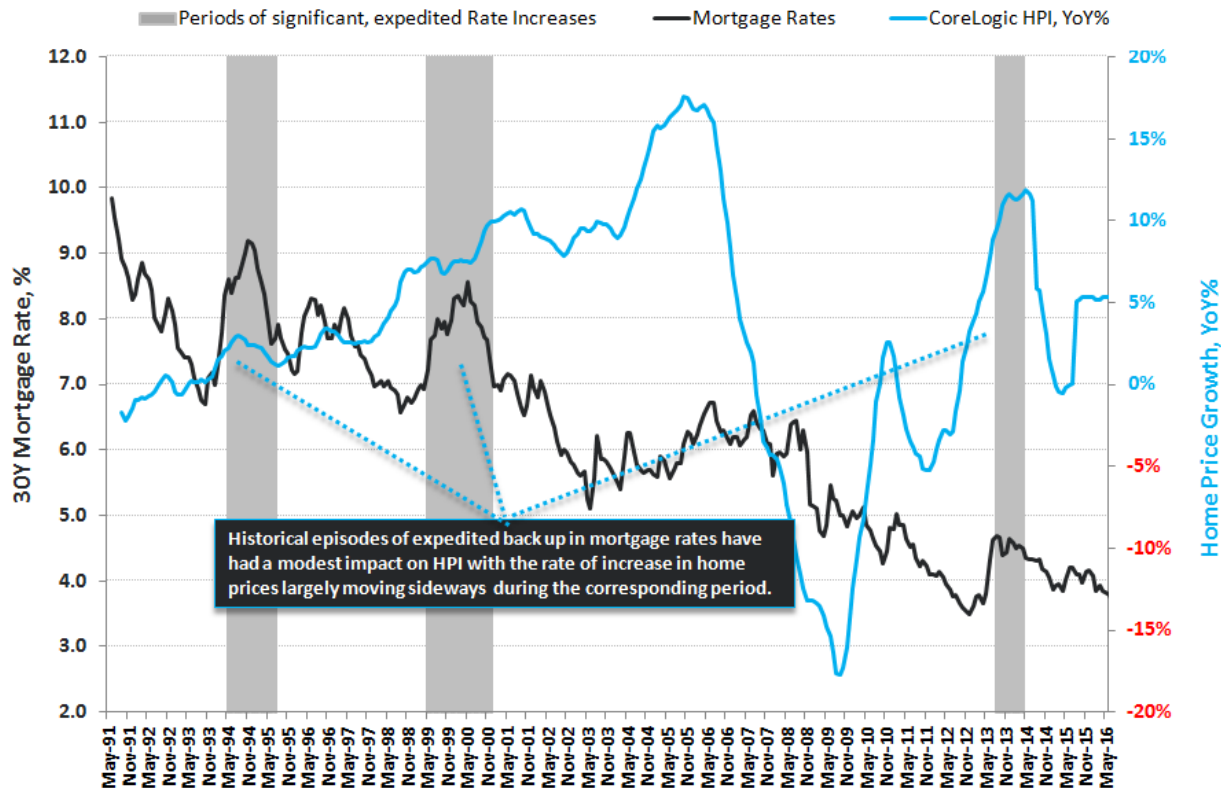


Existing Home Sales have historically slowed notably in response to sharp updrafts in mortgage rates.

Longer-term, however, it's tended to be more of a bump in the road than a full-blown reversal.

MORTGAGE RATES & HOME PRICE GROWTH

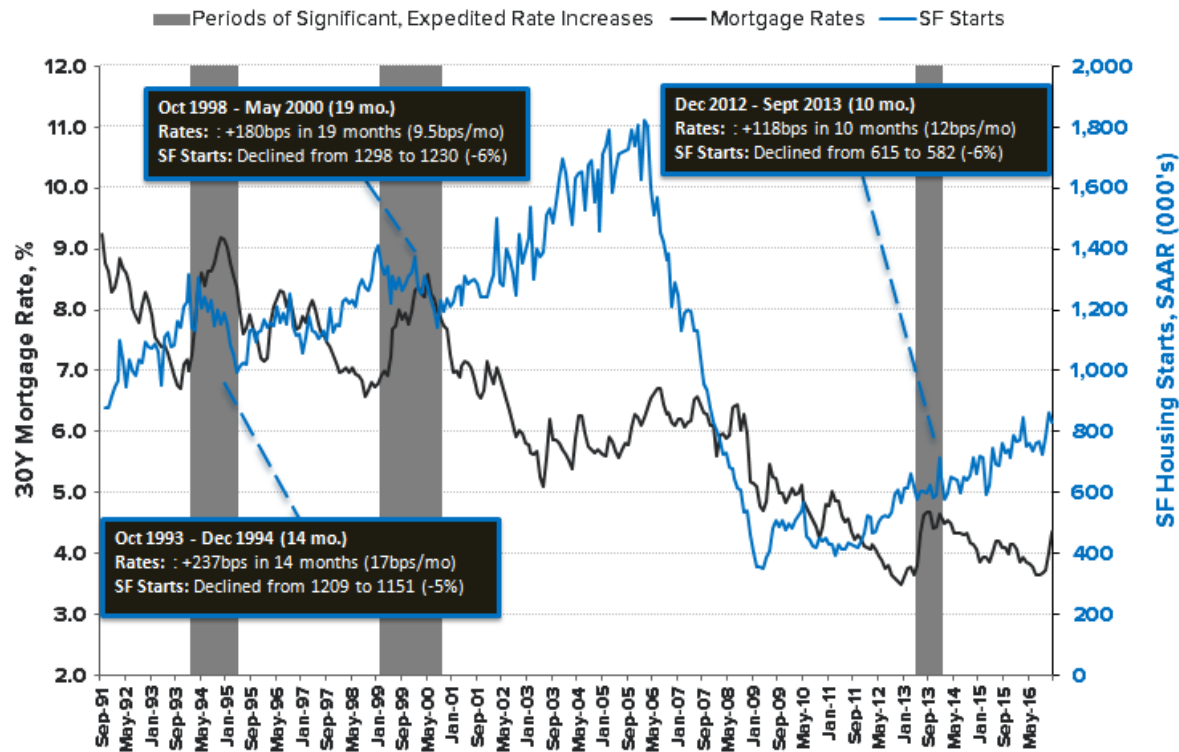
Mortgage Rates vs. Home Price Growth



HPI Growth historically has tended to remain relatively flat during periods of significant increase in mortgage rates.

MORTGAGE RATES & SINGLE FAMILY STARTS

Mortgage Rates vs. Single Family Starts



Source: Bloomberg, Freddie Mac, Census Bureau, Hedgeye

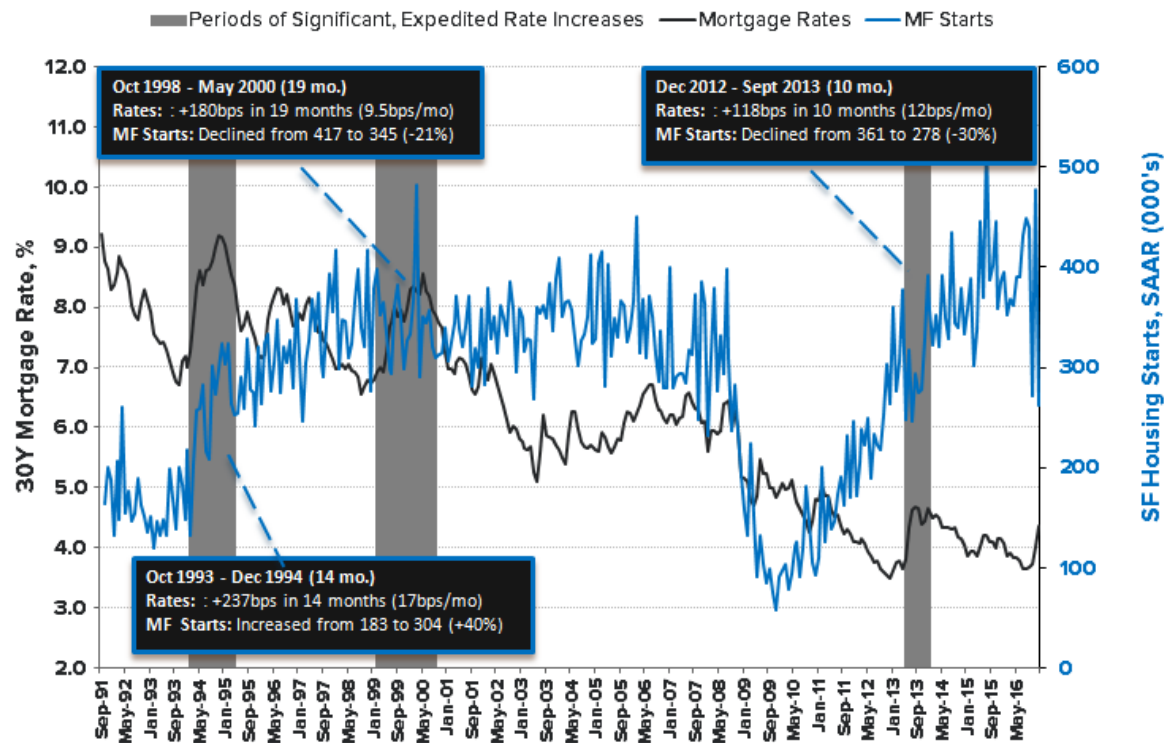
© Hedgeye Risk Management

Historically, as mortgage rates increase/decrease, Single Family Housing Starts move in the opposite direction.

In these three instances Mortgage rates increased more than + 100 bps, while SF starts declined 5%-6%.

MORTGAGE RATES & MULTI-FAMILY STARTS

Mortgage Rates vs. Multi-Family Starts



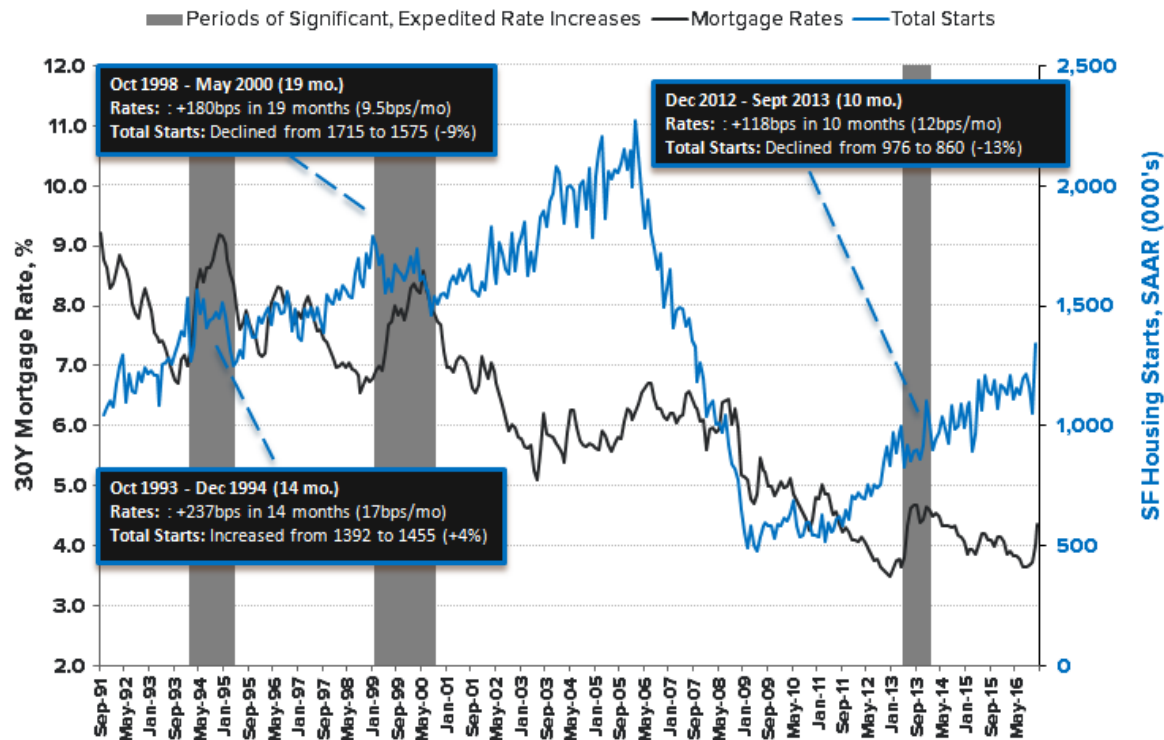
Source: Bloomberg, Freddie Mac, Census Bureau, Hedgeye

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Multi-Family Housing Starts have historically been volatile during periods of large mortgage rate increases.

MORTGAGE RATES & TOTAL HOUSING STARTS

Mortgage Rates vs. Total Housing Starts



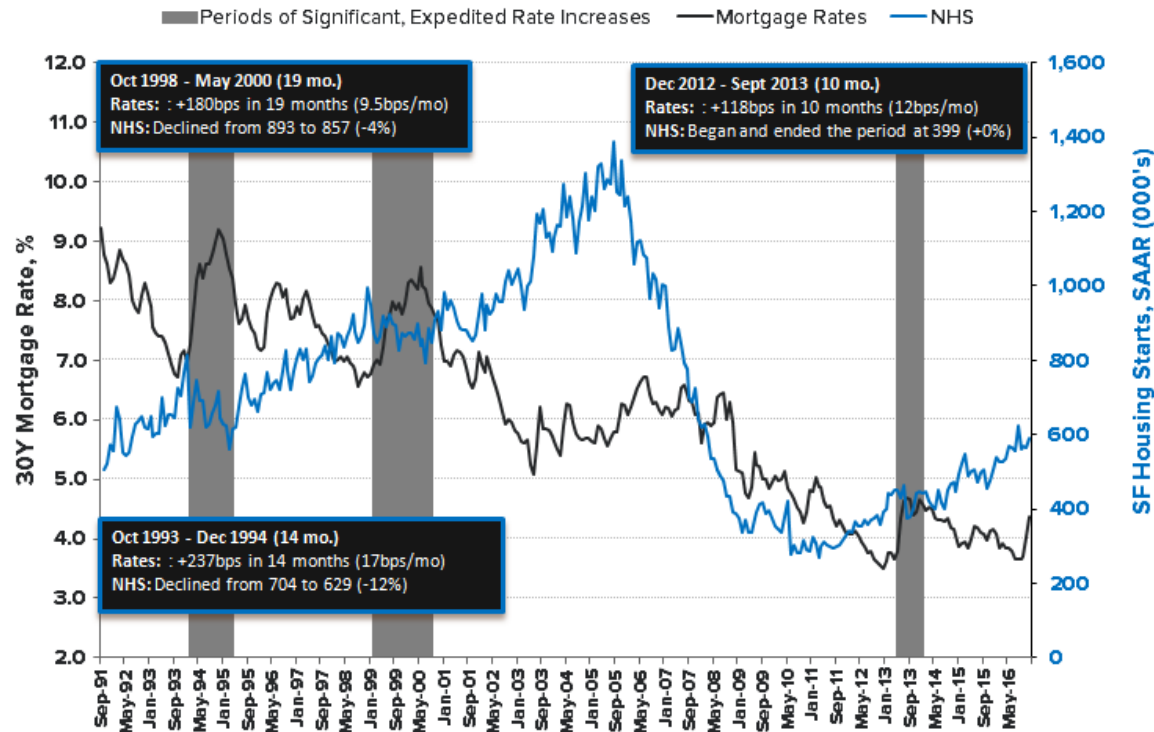
Source: Bloomberg, Freddie Mac, Census Bureau, Hedgeye

© Hedgeye Risk Management

Not surprisingly, Total Starts are equally sensitive to rapid shifts in rates.

MORTGAGE RATES & NEW HOME SALES

Mortgage Rates vs. New Home Sales



Mortgage rates have tended to have an adverse impact on New Home Sales during prolonged periods of rate increases.

WHY RATES MATTER TO HOUSING INVESTORS

LTM Correlation to the 10-Year Treasury Yield

	Avg R Value	Std Dev		Median R Value	Std Dev
1 Large Cap Banks	0.73	0.09	Large Cap Banks	0.74	0.09
2 Midcap Banks	0.72	0.08	I-Banks/Boutiques	0.74	0.11
3 I-Banks/Boutiques	0.71	0.11	Midcap Banks	0.71	0.08
4 Small Cap Banks	0.65	0.16	Small Cap Banks	0.70	0.16
5 Mortgage Insurers	0.61	0.12	Financial Guaranty	0.68	0.54
6 Reinsurers	0.56	0.26	E-Brokers	0.61	0.39
7 Life Insurers	0.52	0.29	Reinsurers	0.61	0.26
8 E-Brokers	0.46	0.39	Mortgage Insurers	0.61	0.12
9 Financial Guaranty	0.41	0.54	Life Insurers	0.57	0.29
10 Auto Insurers	0.37	0.19	Mortgage Finance	0.45	0.35
11 P&C Insurers	0.35	0.34	P&C Insurers	0.45	0.34
12 Mortgage Finance	0.33	0.35	Debt Collectors	0.43	0.47
13 Consumer Finance	0.31	0.38	Consumer Finance	0.41	0.38
14 Debt Collectors	0.29	0.47	Auto Insurers	0.40	0.19
15 CRE Brokers	0.23	0.40	Exchanges	0.30	0.30
16 Exchanges	0.21	0.30	CRE Brokers	0.23	0.40
17 RE Services	0.17	0.50	Traditional AMs	0.20	0.35
18 Traditional AMs	0.13	0.35	Alternative AMs	0.17	0.40
19 Cards/Payments	0.13	0.35	RE Services	0.17	0.50
20 Insurance Brokers	0.12	0.24	Cards/Payments	0.06	0.35
21 Alternative AMs	0.09	0.40	Homebuilders	0.03	0.42
22 Homebuilders	0.05	0.42	Insurance Brokers	0.03	0.24
23 Building Products	(0.06)	0.22	Building Products	(0.01)	0.22
24 Fin Tech	(0.07)	0.42	SF REITs	(0.08)	0.06
25 SF REITs	(0.11)	0.06	Fin Services	(0.09)	0.28
26 Fin Services	(0.12)	0.28	Fin Tech	(0.15)	0.42
27 Home Centers	(0.21)	0.29	Home Centers	(0.21)	0.29
28 Apartment REITs	(0.24)	0.19	Apartment REITs	(0.26)	0.19
29 Title Insurers	(0.33)	0.31	Title Insurers	(0.49)	0.31

Mortgage Insurers	
Ticker	R Value
MTG	0.74
RDN	0.64
NMIH	0.57
ESNT	0.47
Average	0.61
Median	0.61
Std Dev	0.12

Title Insurers	
Ticker	R Value
STC	0.02
FAF	(0.49)
FNF	(0.52)
Average	(0.33)
Median	(0.49)
Std Dev	0.31

Home Centers	
Ticker	R Value
HD	(0.01)
LOW	(0.42)
Average	(0.21)
Median	(0.21)
Std Dev	0.29

RE Services	
Ticker	R Value
RMAX	0.52
RLGY	(0.19)
Average	0.17
Median	0.17
Std Dev	0.50

Apartment REITs	
Ticker	R Value
PPS	0.11
ESS	(0.06)
EQR	(0.19)
AIV	(0.20)
UDR	(0.32)
AVB	(0.37)
MAA	(0.41)
CPT	(0.45)
Average	(0.24)
Median	(0.26)
Std Dev	0.19

SF REITs	
Ticker	R Value
AMH	(0.07)
SBY	(0.08)
SWAY	(0.17)
Average	(0.11)
Median	(0.08)
Std Dev	0.06

Homebuilders	
Ticker	R Value
HOV	0.63
BZH	0.60
TOL	0.51
TMHC	0.40
WLH	0.31
MDC	0.27
KBH	0.03
MTH	(0.12)
SPF	(0.32)
LEN	(0.36)
PHM	(0.37)
NVR	(0.38)
DHI	(0.55)
Average	0.05
Median	0.03
Std Dev	0.42

Building Products	
Ticker	R Value
IBP	0.25
PGEM	0.15
AMWD	0.10
USG	0.08
BLD	0.06
AWI	0.03
SWK	(0.05)
OC	(0.07)
MHK	(0.08)
MAS	(0.26)
FBHS	(0.40)
SHW	(0.46)
Average	(0.06)
Median	(0.01)
Std Dev	0.22

These tables show the sensitivity of the various Financials & Housing subsectors to the 10-Year Treasury yield over the past year. We've highlighted the 8 housing sectors. 6 of the 8 are in the bottom quartile for rate sensitivity, meaning that that they are among the most inversely correlated subsectors in the group.

Source: Hedgeye, Factset

POST-ELECTION PERFORMANCE SNAPSHOT

Absolute Price Performance Since the Election

Abs Price Chg Post Election

1 Consumer Finance	28%
2 Midcap Banks	25%
3 Small Cap Banks	25%
4 I-Banks/Boutiques	24%
5 Financial Guaranty	24%
6 Mortgage Insurers	22%
7 E-Brokers	19%
8 Large Cap Banks	19%
9 RE Services	17%
10 Life Insurers	16%
11 Debt Collectors	15%
12 Alternative AMs	15%
13 Traditional AMs	14%
14 Homebuilders	14%
15 Auto Insurers	14%
16 Mortgage Finance	14%
17 P&C Insurers	10%
18 Reinsurers	10%
19 CRE Brokers	9%
20 Cards/Payments	9%
21 Building Products	8%
22 Insurance Brokers	8%
23 Exchanges	7%
24 Home Centers	7%
25 Fin Tech	5%
26 Fin Services	2%
27 Apartment REITs	2%
28 SF REITs	-2%
29 Title Insurers	-2%

Mortgage Insurers	
Ticker	Px Chg
RDN	28%
MTG	22%
NMIH	20%
ESNT	17%
Average	22%
Median	21%
Std Dev	5%

Title Insurers	
Ticker	Px Chg
FNF	1%
STC	-2%
FAF	-4%
Average	-2%
Median	-2%
Std Dev	3%

Home Centers	
Ticker	Px Chg
HD	8%
LOW	6%
Average	7%
Median	7%
Std Dev	1%

RE Services	
Ticker	Px Chg
RMAX	20%
RLGY	14%
Average	17%
Median	17%
Std Dev	4%

Apartment REITs	
Ticker	Px Chg
ESS	4%
EQR	3%
UDR	3%
AVB	2%
MAA	2%
CPT	2%
AIV	0%
PPS	-4%
Average	2%
Median	2%
Std Dev	2%

SF REITs	
Ticker	Px Chg
SBY	1%
SWAY	-2%
AMH	-4%
Average	-2%
Median	-2%
Std Dev	2%

Homebuilders	
Ticker	Px Chg
HOV	69%
BZH	31%
MDC	17%
TOL	13%
MTH	12%
NVR	11%
KBH	10%
TMHC	7%
SPF	6%
LEN	5%
PHM	1%
DHI	1%
WLH	-1%
Average	14%
Median	10%
Std Dev	19%

Benchmarks	
S&P 500	6%
XLF	17%
XHB	7%
ITB	7%

Building Products	
Ticker	Px Chg
PGEM	19%
BLD	18%
IBP	17%
USG	15%
SHW	11%
OC	8%
MAS	6%
MHK	4%
AWI	4%
AMWD	1%
SWK	0%
FBHS	-1%
Average	8%
Median	7%
Std Dev	7%

For the most part, the Housing Complex has performed as one would expect given their respective sensitivities to rates. 5 of the 8 Housing subsectors were among the bottom third of performance.

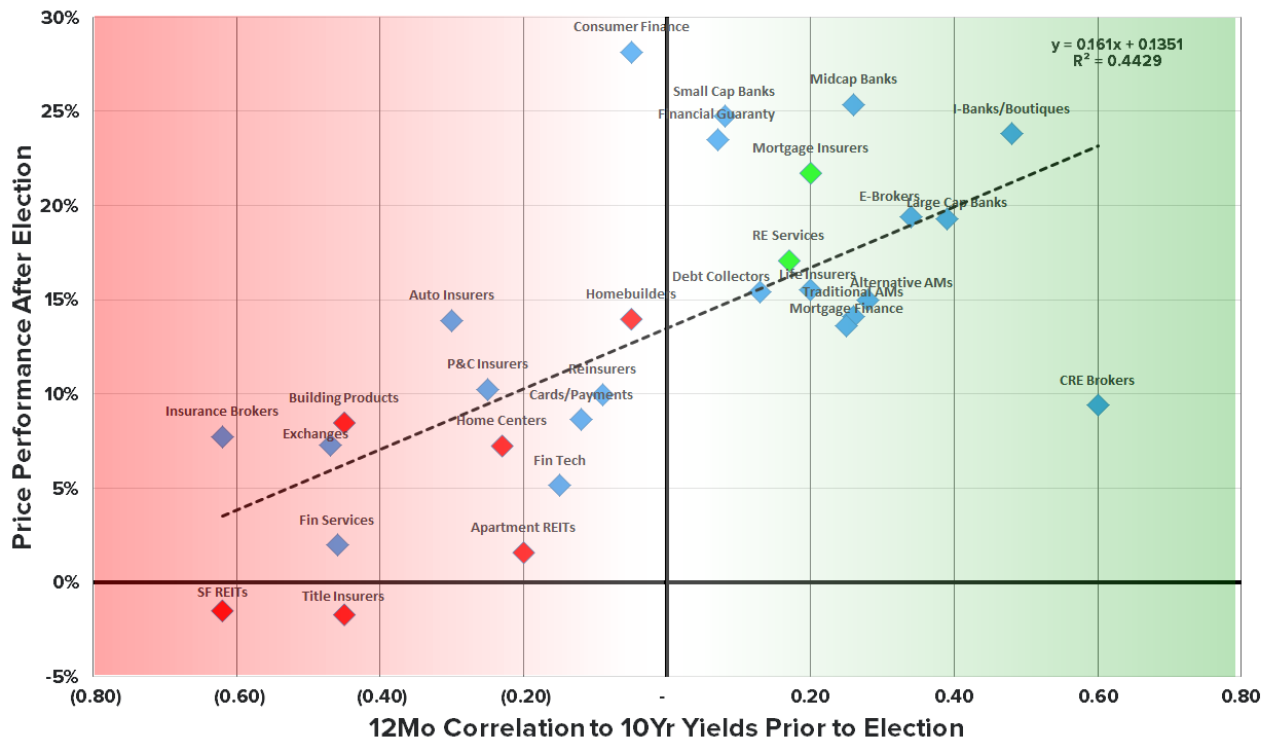
Source: Hedgeye, Factset

TEASING OUT PREDICTED VS ACTUAL PERFORMANCE

Pre-Election Correlation to 10Yr Yld vs Post Election Price Performance

X-Axis: 12Mo Correlation to 10Yr Yields (11/6/15-11/8/16)

Y-Axis: Average Price Performance Since the Election



Source: Hedgeye, Factset

© Hedgeye Risk Management

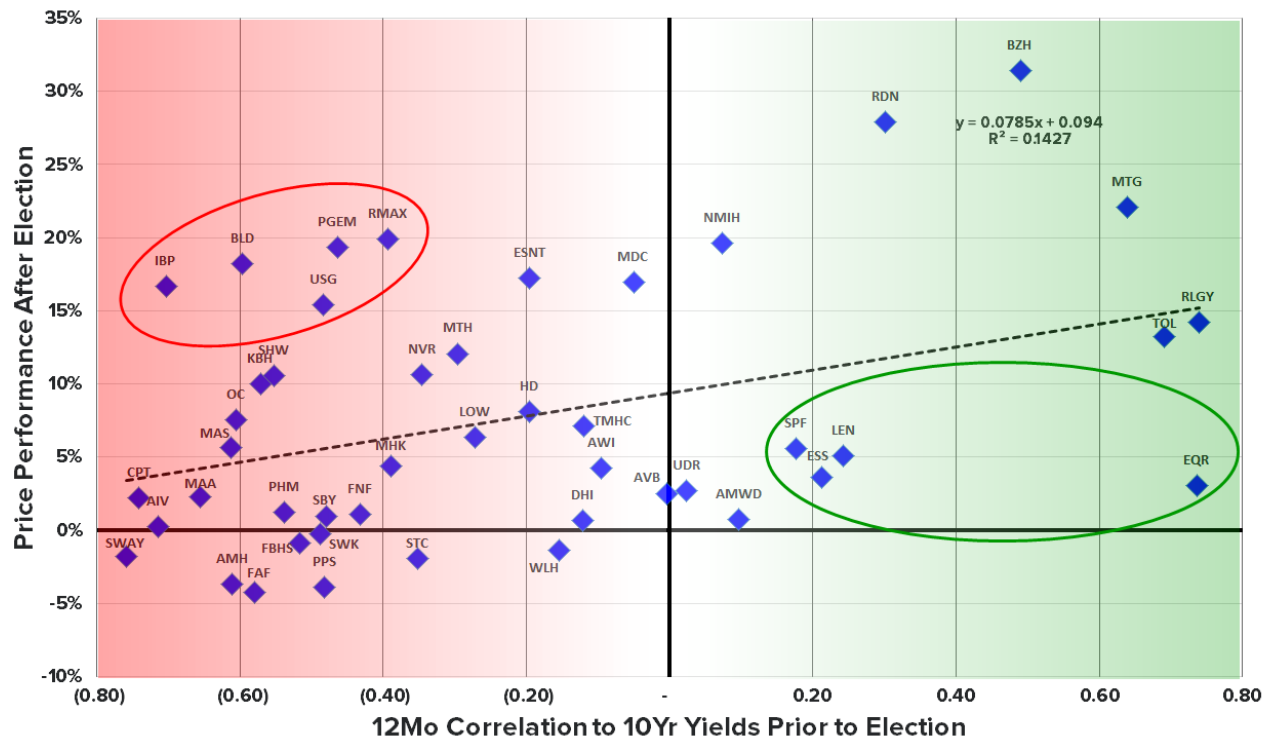
This chart shows the correlation to rates on the x-axis and the post-election price performance on the y-axis. Groups trading to the left of the zero line are those negatively exposed to rates, and vice versa. Groups trading above the regression line are overbought while those below are underbought.

INDIVIDUAL STOCKS ACROSS THE HOUSING COMPLEX

Pre-Election Correlation to 10Yr Yld vs Post Election Price Performance

X-Axis: 12Mo Correlation to 10Yr Yields (11/6/15-11/8/16)

Y-Axis: Average Price Performance Since the Election



Source: Hedgeye, Factset

© Hedgeye Risk Management

In the same vein as the last chart, this chart shows correlation (x-axis) and post-election performance (y-axis) for the 45 housing stocks we track.

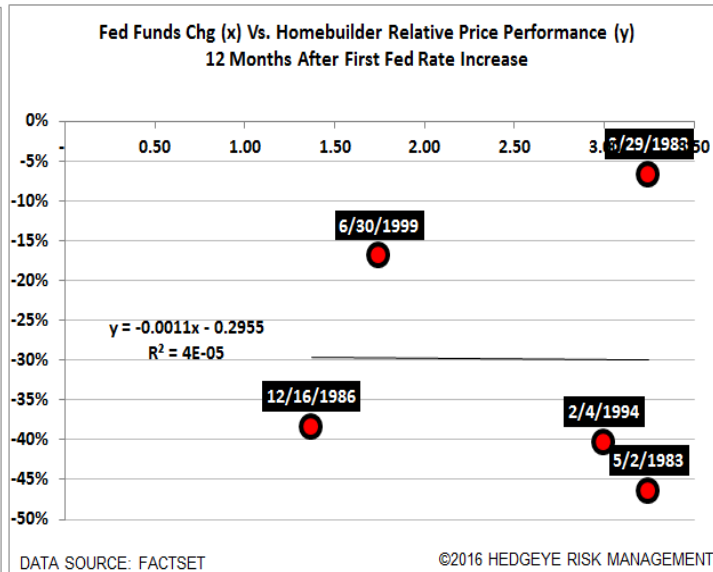
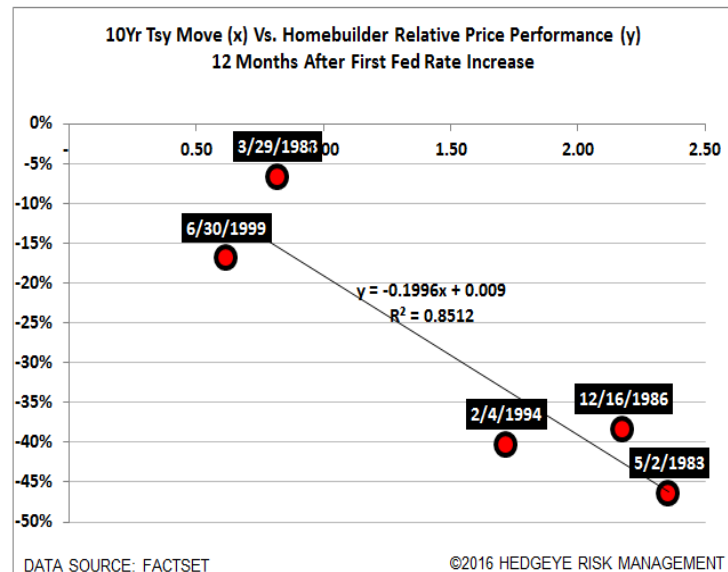
Again, those above the regression line are overvalued and those below undervalued on this 1-factor rate-based model.

A RATE CASE STUDY: HOMEBUILDERS

Not surprisingly, homebuilders hate rate hikes, and the strong negative slope (RSQ 0.85) to increases in the 10Yr Tsy show just how sensitive they are. The good news is that small increases in rates have historically produced small decreases in share prices.

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Homebuilders / Absolute Performance								Homebuilders / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	4%	-11%	0%	0%	14%	38%	86%	1%	-12%	-2%	0%	16%	32%	82%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-7%	13%	2%	0%	-17%	-19%	-12%	-19%	7%	-4%	0%	-10%	-25%	-17%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	22%	17%	3%	0%	-18%	-28%	-39%	17%	15%	3%	0%	-14%	-26%	-40%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-28%	13%	-6%	0%	5%	-6%	6%	-7%	8%	-5%	0%	1%	-10%	-7%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-4%	21%	1%	0%	52%	20%	-39%	-6%	14%	-1%	0%	36%	-1%	-38%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	60%	22%	13%	0%	-13%	-29%	-47%	47%	8%	7%	0%	-13%	-30%	-46%		
Average:		14	2.81			1.38			(1.43)		8%	13%	2%	0%	4%	-4%	-7%	5%	7%	0%	0%	3%	-10%	-11%		
Median:		11	3.13			1.27			(1.21)		0%	15%	1%	0%	-4%	-13%	-25%	-3%	8%	-1%	0%	-4%	-17%	-28%		

Source: Factset

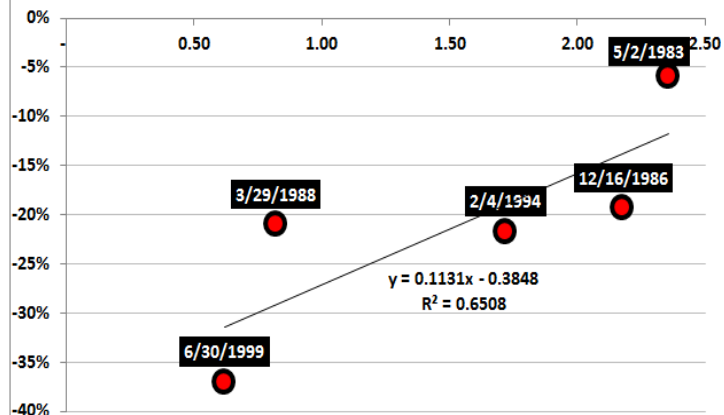


A RATE CASE STUDY: BUILDING PRODUCTS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Building Products / Absolute Performance								Building Products / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12		T-6	T-3	T-1	T-0	T+3	T+6	T+12	
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	12%	-1%	8%	0%	6%	37%	28%		9%	-2%	6%	0%	9%	32%	24%	
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-1%	7%	-2%	0%	-21%	-20%	-32%		-12%	1%	-7%	0%	-14%	-26%	-37%	
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	33%	16%	7%	0%	-9%	-18%	-20%		29%	14%	6%	0%	-6%	-17%	-22%	
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-21%	16%	4%	0%	5%	-16%	-9%		0%	11%	5%	0%	2%	-20%	-21%	
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-3%	12%	1%	0%	20%	13%	-20%		-6%	4%	-1%	0%	5%	-8%	-19%	
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	24%	22%	-3%	0%	-9%	-7%	-6%		11%	9%	-9%	0%	-10%	-8%	-6%	
Average:		14	2.81			1.38			(1.43)		7%	12%	2%	0%	-1%	-2%	-10%		5%	6%	0%	0%	-2%	-8%	-14%	
Median:		11	3.13			1.27			(1.21)		6%	14%	3%	0%	-2%	-12%	-14%		5%	6%	2%	0%	-2%	-12%	-20%	

Source: Factset

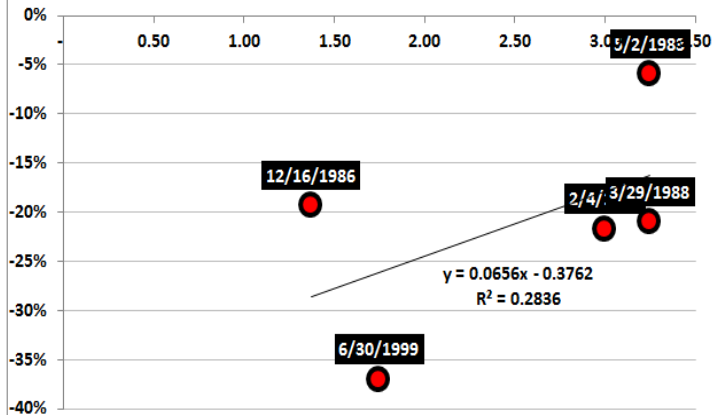
10Yr Tsy Move (x) Vs. Bldg Products Relative Price Performance (y)
12 Months After First Fed Rate Increase



DATA SOURCE: FACTSET

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Fed Funds Chg (x) Vs. Bldg Products Relative Price Performance (y)
12 Months After First Fed Rate Increase



DATA SOURCE: FACTSET

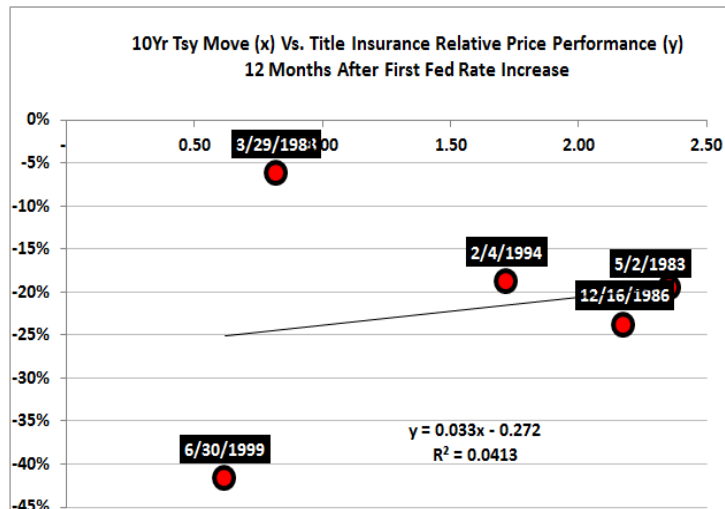
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Building products companies consistently underperform when rates rise just like homebuilders. However, the slope is positive, which makes no sense. We take it on face value that there's an adverse relationship here, but that's about it.

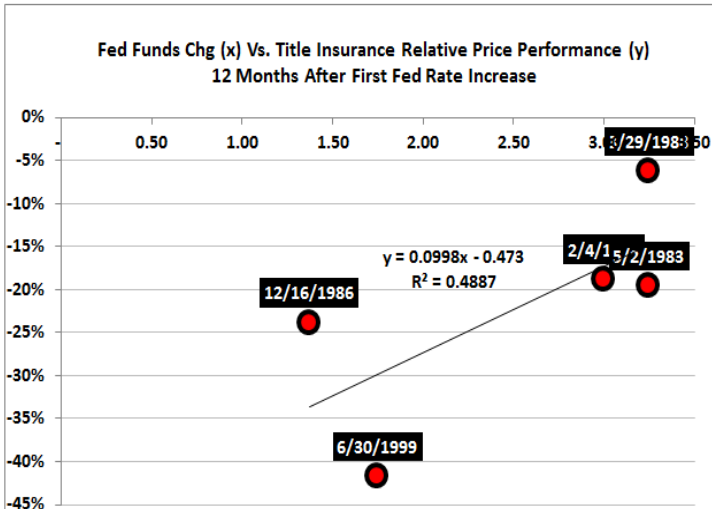
A RATE CASE STUDY: TITLE INSURANCE

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Title Insurance / Absolute Performance								Title Insurance / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	-17%	-16%	-1%	0%	15%	24%	24%	-20%	-16%	-3%	0%	18%	18%	20%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-27%	27%	9%	0%	-24%	-33%	-37%	-39%	21%	3%	0%	-18%	-40%	-42%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	15%	3%	-3%	0%	-2%	-15%	-17%	10%	1%	-3%	0%	2%	-13%	-19%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-10%	16%	10%	0%	0%	1%	6%	11%	11%	11%	0%	-3%	-3%	-6%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-22%	4%	-12%	0%	16%	0%	-25%	-25%	-4%	-14%	0%	1%	-21%	-24%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	82%	58%	37%	0%	6%	0%	-20%	68%	44%	32%	0%	6%	0%	-20%		
Average:		14				2.81			1.38	(1.43)	3%	15%	7%	0%	2%	-4%	-11%	1%	9%	4%	0%	1%	-10%	-15%		
Median:		11				3.13			1.27	(1.21)	-14%	10%	4%	0%	3%	0%	-18%	-5%	6%	0%	0%	1%	-8%	-19%		

Source: Factset



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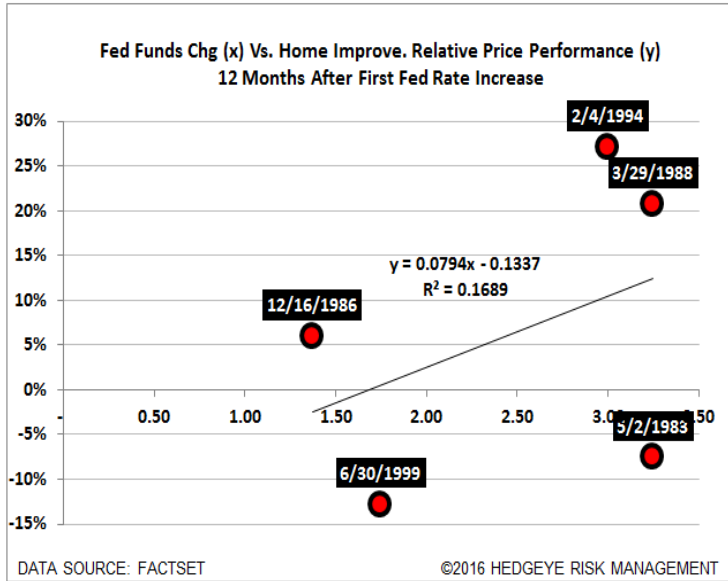
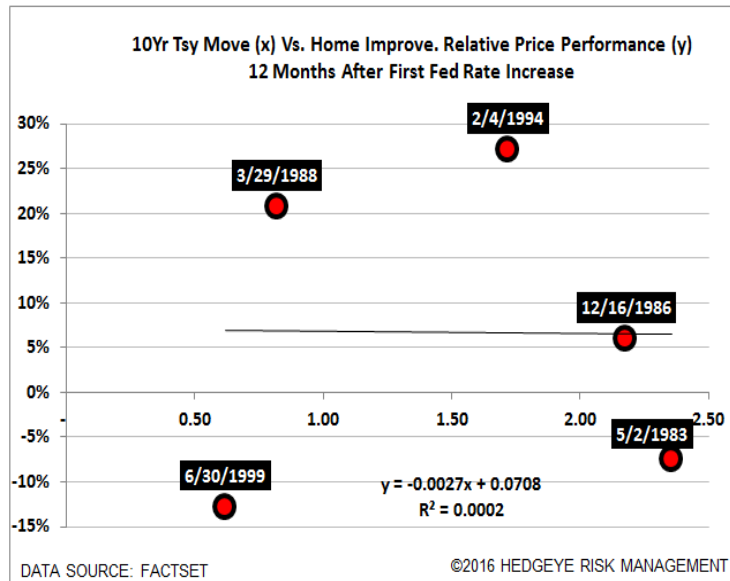
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Title insurers also underperform amid rising rates, but like building products companies they do so in a non-linear, low-RSQ way.

A RATE CASE STUDY: HOME CENTERS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Home Improvement / Absolute Performance								Home Improvement / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	-1%	-5%	-2%	0%	6%	14%	11%	-4%	-6%	-4%	0%	9%	8%	6%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	8%	-1%	12%	0%	-8%	28%	-8%	-4%	-8%	6%	0%	-1%	22%	-13%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	21%	9%	0%	0%	19%	16%	29%	16%	7%	-1%	0%	23%	18%	27%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-10%	21%	5%	0%	12%	9%	33%	11%	16%	5%	0%	9%	5%	21%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-13%	12%	4%	0%	22%	42%	5%	-16%	4%	2%	0%	7%	21%	6%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	75%	26%	13%	0%	30%	3%	-8%	61%	13%	7%	0%	30%	2%	-8%		
Average:		14	2.81			1.38			(1.43)		13%	10%	5%	0%	14%	19%	10%	11%	4%	3%	0%	13%	13%	7%		
Median:		11	3.13			1.27			(1.21)		4%	11%	4%	0%	15%	15%	8%	3%	6%	4%	0%	9%	13%	6%		

Source: Factset



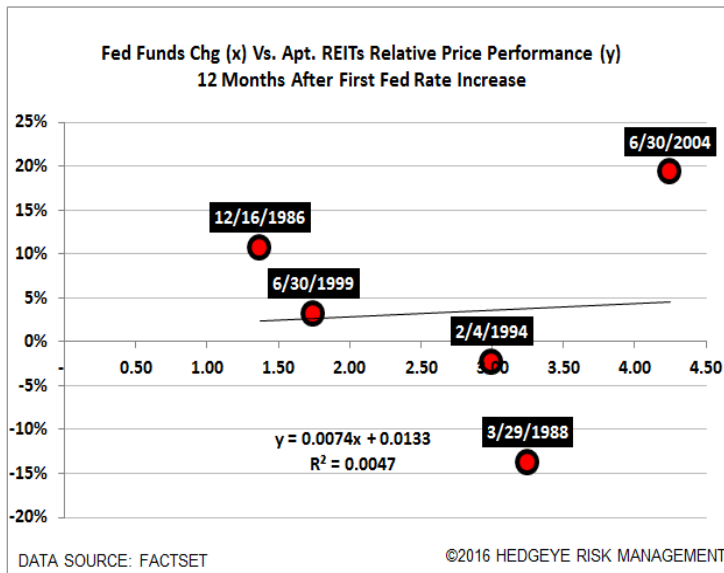
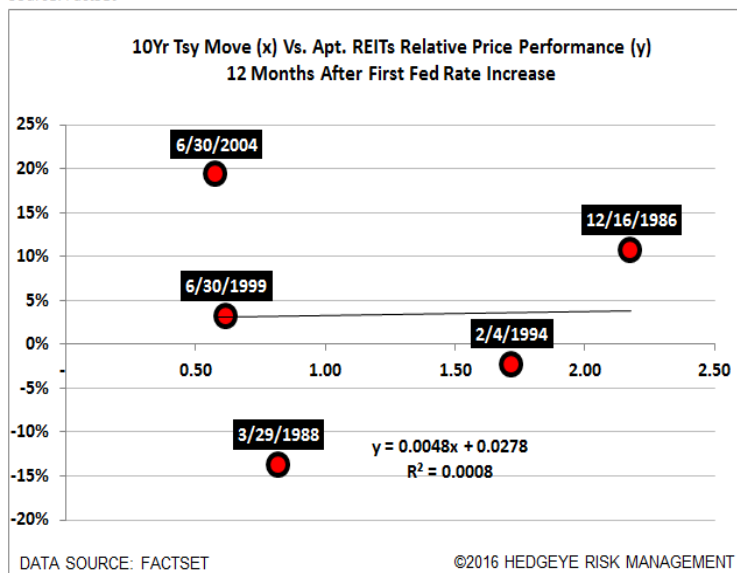
Home improvement chains also tend to perform respectably during higher rate periods.

A RATE CASE STUDY: APARTMENT REITS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Apartment REITs / Absolute Performance							Apartment REITs / Relative Performance						
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	4%	1%	2%	0%	3%	19%	24%	1%	0%	0%	0%	6%	13%	19%
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	10%	16%	3%	0%	-7%	-9%	8%	-2%	10%	-3%	0%	0%	-15%	3%
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	2%	-9%	-1%	0%	6%	1%	0%	-3%	-11%	-2%	0%	10%	2%	-2%
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-3%	4%	0%	0%	-4%	1%	-1%	18%	-1%	1%	0%	-8%	-3%	-14%
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	9%	0%	-2%	0%	20%	16%	10%	6%	-8%	-4%	0%	4%	-4%	11%
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Average:		14				2.81				1.38	4%	2%	0%	0%	3%	6%	8%	4%	-2%	-1%	0%	2%	-1%	3%
Median:		11				3.13				(1.21)	4%	1%	0%	0%	3%	1%	8%	1%	-1%	-2%	0%	4%	-3%	3%

Source: Factset

Apartment REITs tend to be much better relative performers when rates rise. What's more, these tables and charts don't reflect total return so the dividend would be in addition to this performance.



MORTGAGE RATES IMPACT AFFORDABILITY

Affordability Dynamics

Assumptions:

\$56,516	Median Household Income, 2015	2014 Average 30 Year FRM	4.21%
\$4,710	Median Household Monthly Income	2015 Average 30 Year FRM	3.90%
\$1,319	Monthly Mortgage PMT @ 28% DTI	Current 30 Year FRM, 1/11/17	3.99%

30-Year Fixed Rate	Purchasing Power: PV of Mo. Payment	\$ Chg in Affordability	% Chg in Affordability	Relevance
1.50%	\$382,102	\$85,540	28.8%	
1.75%	\$369,135	\$72,573	24.5%	
2.00%	\$356,775	\$60,214	20.3%	
2.25%	\$344,990	\$48,428	16.3%	
2.50%	\$333,748	\$37,187	12.5%	
2.75%	\$323,022	\$26,461	8.9%	
3.00%	\$312,784	\$16,223	5.5%	
3.25%	\$303,008	\$6,447	2.2%	
3.42%	\$296,561	\$0	0.0%	July- August 2016 30 Year FRM Average: 3.42%
3.50%	\$293,670	(\$2,891)	-1.0%	
3.53%	\$292,578	(\$3,984)	-1.3%	Election Day Average 30 Year FRM: 3.53%
3.75%	\$284,747	(\$11,814)	-4.0%	
3.99%	\$276,552	(\$20,009)	-6.7%	Current 30 Year FRM, 1/11/17: 3.99%
4.00%	\$276,219	(\$20,343)	-6.9%	
4.25%	\$268,063	(\$28,498)	-9.6%	
4.50%	\$260,262	(\$36,299)	-12.2%	
4.75%	\$252,797	(\$43,764)	-14.8%	
5.00%	\$245,651	(\$50,910)	-17.2%	
5.25%	\$238,809	(\$57,753)	-19.5%	

Source: Bloomberg, Census, NAR, Bankrate

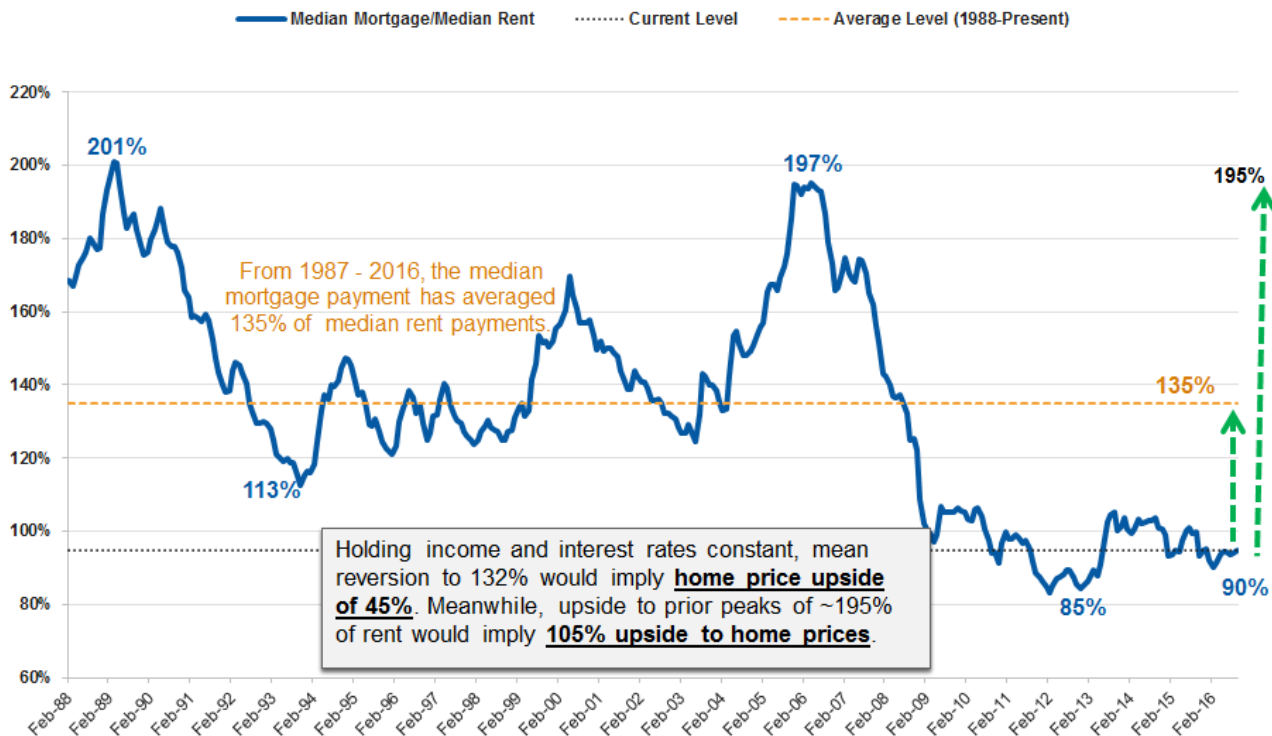
* Represents monthly mortgage payment at 28% DTI of Median Household Income

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Mortgage rates have increased ~60 bps since mid-2016, shaving ~7% off affordability. Taken together with 6% HPI outpacing 3% income growth, affordability has effectively declined ~10% in the last year.

AFFORDABILITY DYNAMICS: 1

RATIO OF MEDIAN MORTGAGE PAYMENT TO MEDIAN RENT



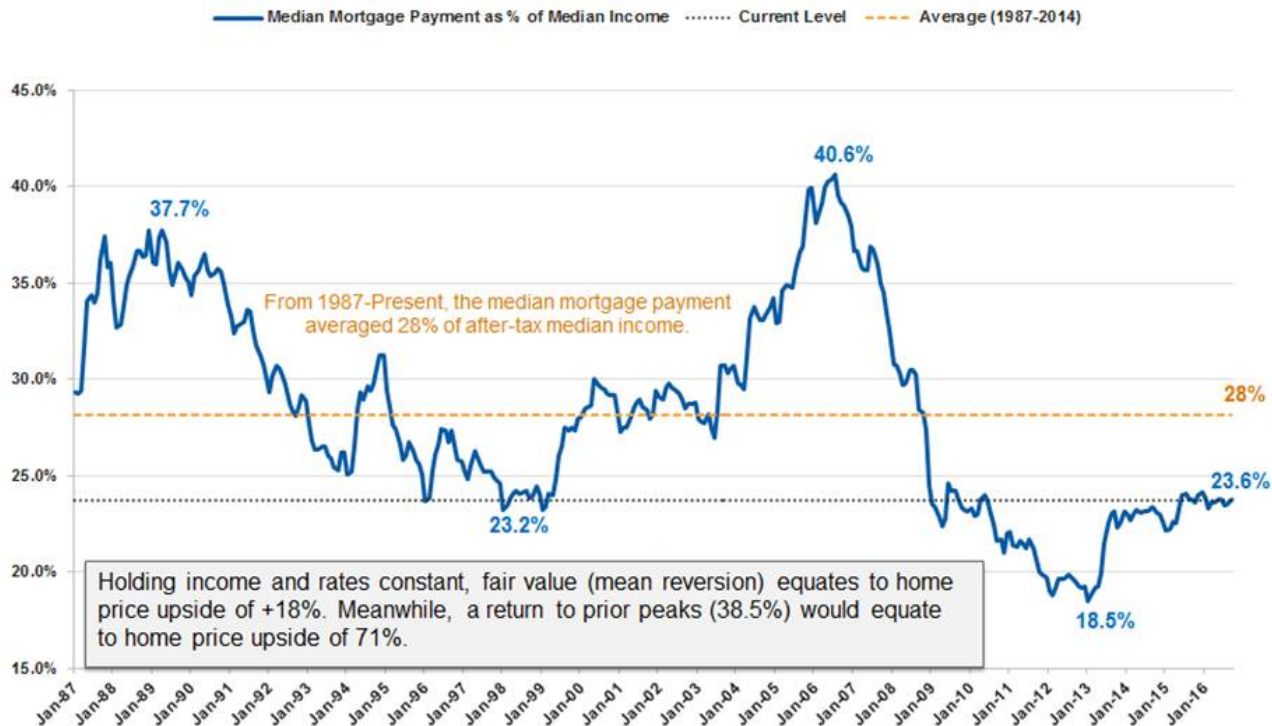
The average ratio of median mortgage payment to median rental payment has been 135% from 1988-Present. The current level of 90% implies home price upside of 45% from a mean reversion standpoint.

Data Source: Census Bureau, Case-Shiller, Freddie Mac

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AFFORDABILITY DYNAMICS: 2

MEDIAN MORTGAGE PAYMENT AS A % OF MEDIAN INCOME



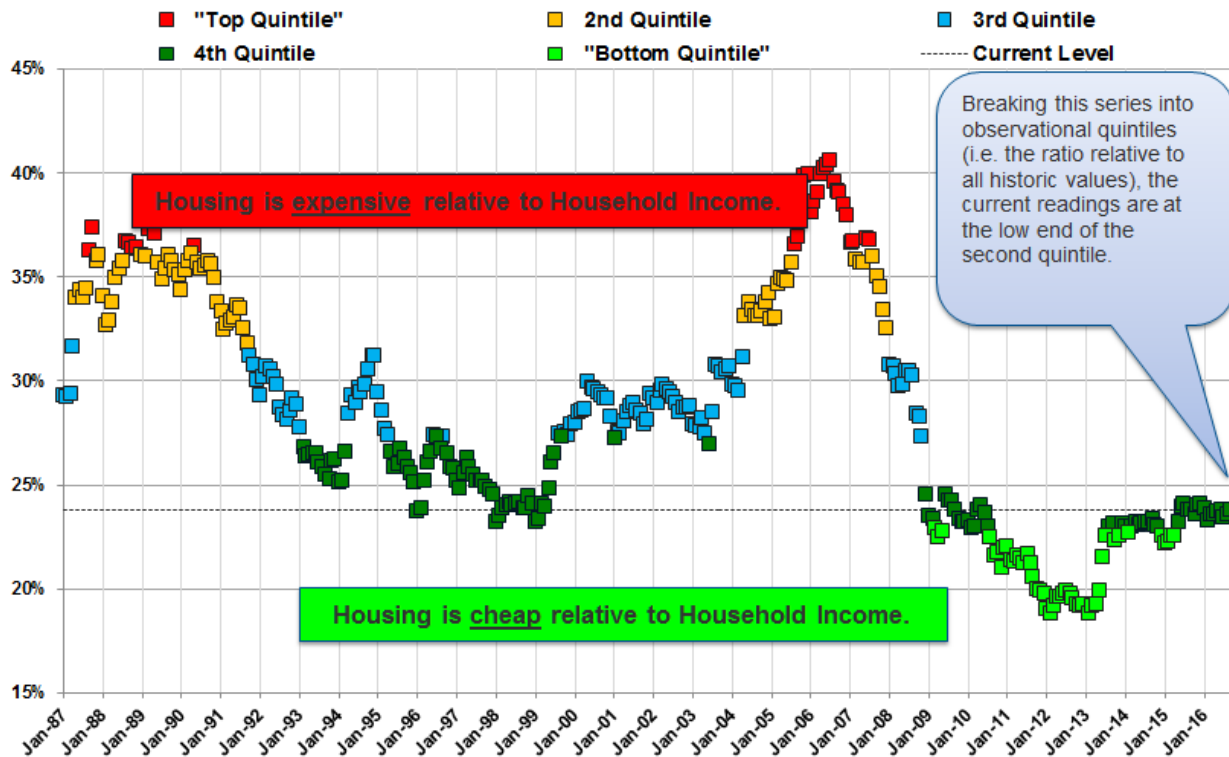
The median mortgage payment to median monthly income ratio has averaged 28% from 1988-present. The current level of 23.6% implies home price upside of +18% to the mean and +71% to the prior peaks.

Data Source: Census Bureau, Case-Shiller, Freddie Mac

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AFFORDABILITY DYNAMICS: 2 CON'T

Median Mortgage Payment as % of Median Income



DATA SOURCE: CENSUS BUREAU, CASE SHILLER, FREDDIE MAC

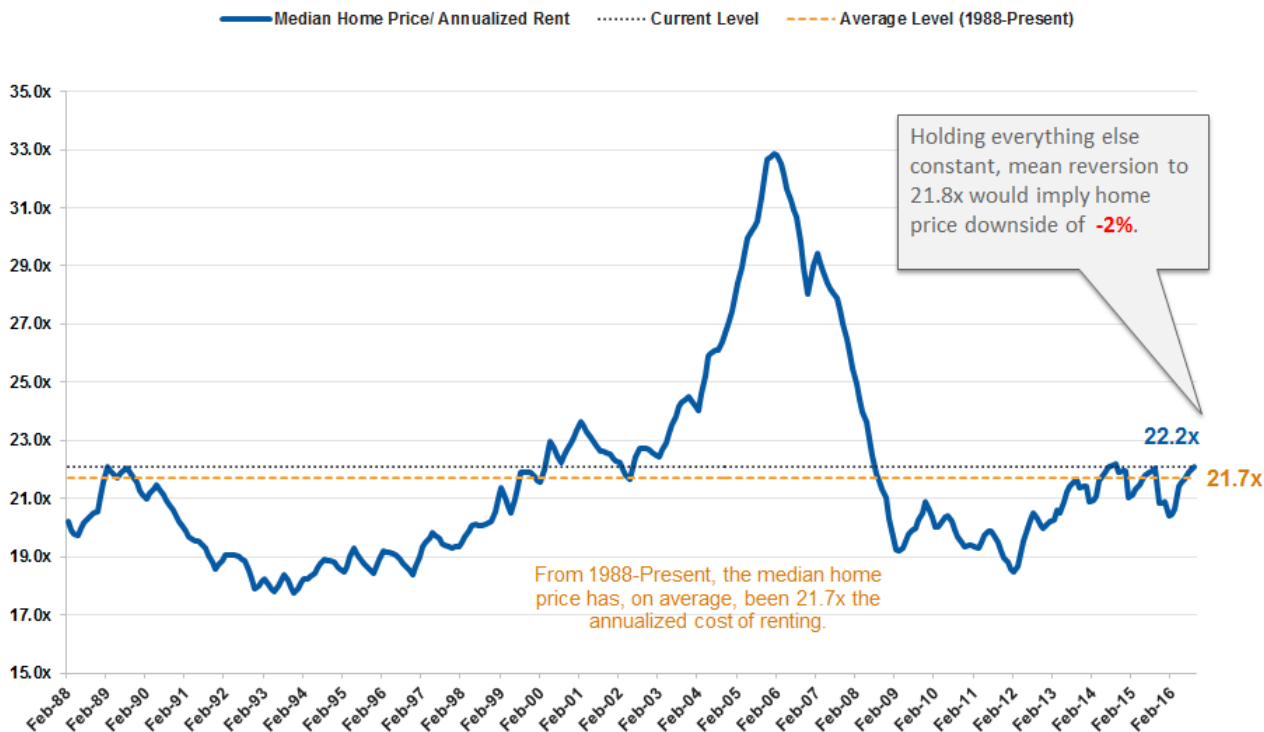
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Based on the last 3 decades of data, Housing is still cheap vs incomes nationally.

The green quintile bands indicate early cycle & a go-forward tailwind for Housing, while the red/orange bands signal coming late cycle & a coming correction/crash.

AFFORDABILITY DYNAMICS: 3

RATIO OF MEDIAN HOME PRICE TO ANNUALIZED COST OF RENTING



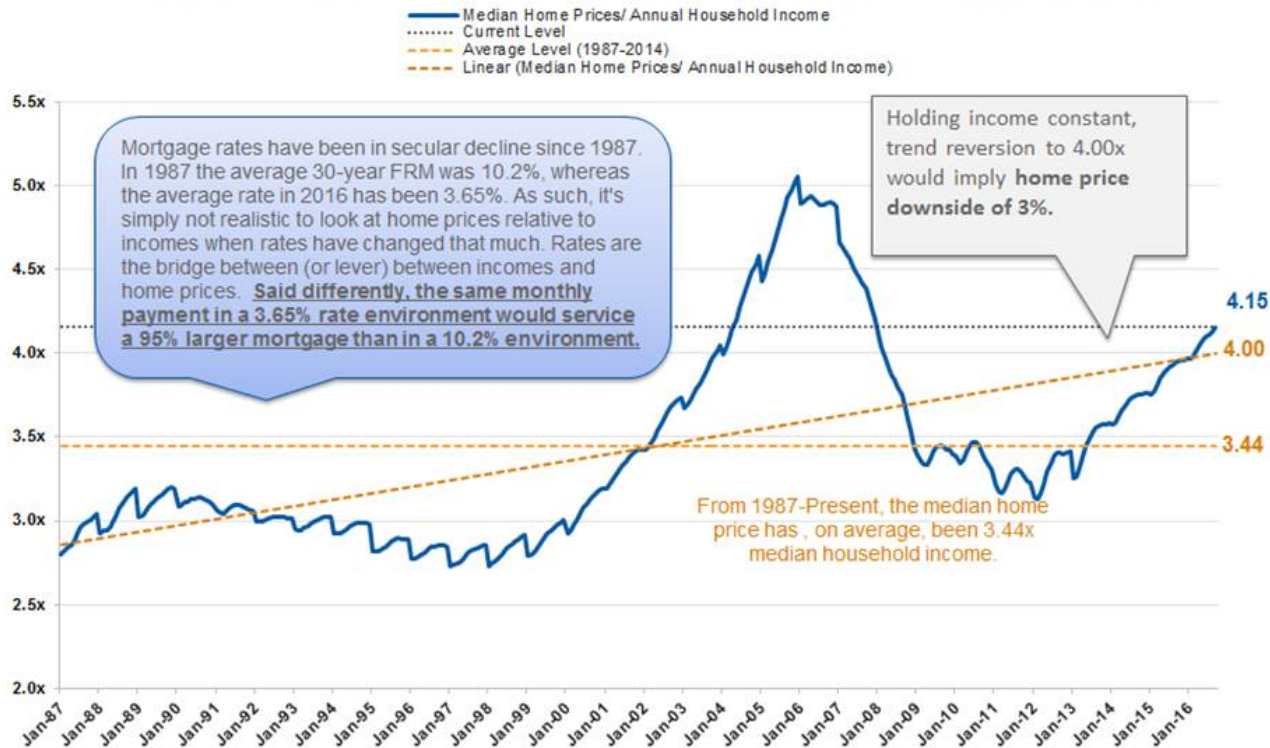
Median home prices relative to annual median rental cost has averaged 21.7x from 1988-Present. The current level of 22.2x implies home price downside of -2% from a mean reversion standpoint.

Data Source: Census Bureau, Case-Shiller, BankRate

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AFFORDABILITY DYNAMICS: 4

RATIO OF MEDIAN HOME PRICES TO ANNUAL HOUSEHOLD INCOME



Data Source: Census Bureau, Case-Shiller, BankRate

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Median home prices relative to household income would be a useful measure if rates remained static over time, but one must account for the change in the cost of money over the long-term.



Rich HEDGEYE

EQUITY PERFORMANCE IN ELECTION YEARS



S&P 500 HISTORICAL PERFORMANCE AROUND ELECTIONS

Election to Inauguration Performance

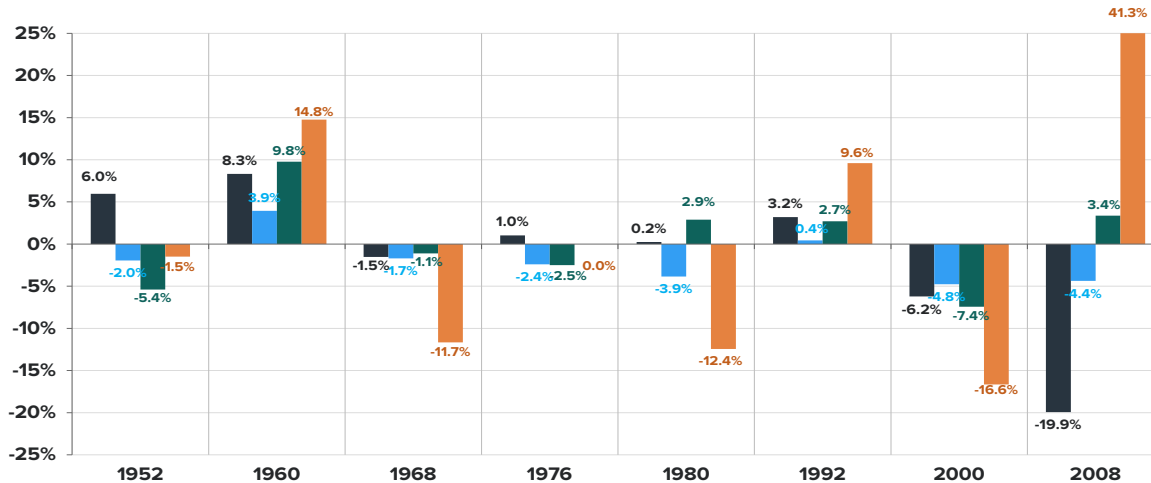
Index Performance	1952	1960	1968	1976	1980	1992	2000	2008	2016*	'52-'08 Avg	'52-'08 Med	'52-'08 Sigma
Election to Inauguration	6.0%	8.3%	-1.5%	1.0%	0.2%	3.2%	-6.2%	-19.9%	6.4%	-1.1%	0.6%	8.8%
1 Month After Inauguration	-2.0%	3.9%	-1.7%	-2.4%	-3.9%	0.4%	-4.8%	-4.4%		-1.8%	-2.2%	2.9%
3 Months After Inauguration	-5.4%	9.8%	-1.1%	-2.5%	2.9%	2.7%	-7.4%	3.4%		0.3%	0.8%	5.5%
6 Months After Inauguration	-7.3%	7.9%	-8.0%	0.7%	-2.2%	3.2%	-9.8%	18.1%		0.3%	-0.7%	9.4%
12 Months After Inauguration	-1.5%	14.8%	-11.7%	0.0%	-12.4%	9.6%	-16.6%	41.3%		2.9%	-0.7%	19.0%

* 2016 Performance through 1/10/17.

Source: Bloomberg

S&P 500 Post Election Performance

■ Election to Inauguration ■ 1 Month After Inauguration ■ 3 Months After Inauguration ■ 12 Months After Inauguration



Source: Bloomberg, Hedgeye

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We analyzed performance patterns in the market for periods when the party in power changed. The results were inconsistent. From election day to inauguration day, 5 of the last 8 periods saw positive performance, but the average return was -1.1% and median return was +0.6%. More notably, there was high variance in those returns with two periods posting conspicuously negative returns, two periods posting solid positive returns the other four periods posting middling returns not meaningfully different from zero. The subsequent, i.e. post-inauguration, performance was similarly mixed.

10YR TREASURY YIELD HISTORICAL PERFORMANCE IN ELECTION YEARS

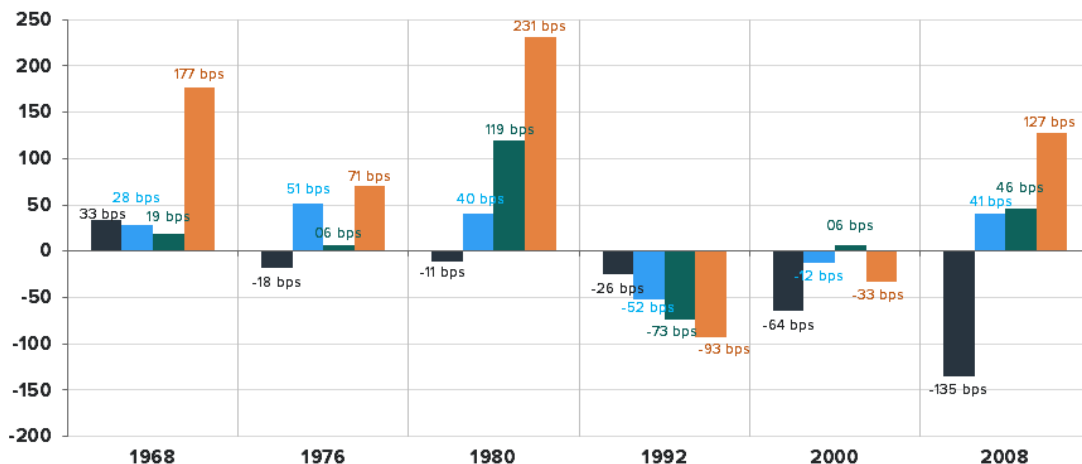
Election to Inauguration Performance										
Index Performance	1968	1976	1980	1992	2000	2008	2016*	'68-'08 Avg	'68-'08 Med	'68-'08 Sigma
Election to Inauguration	33 bps	-18 bps	-11 bps	-26 bps	-64 bps	-135 bps	53 bps	-37 bps	-22 bps	57 bps
1 Month After Inauguration	28 bps	51 bps	40 bps	-52 bps	-12 bps	41 bps		16 bps	34 bps	40 bps
3 Months After Inauguration	19 bps	6 bps	119 bps	-73 bps	6 bps	46 bps		20 bps	13 bps	63 bps
6 Months After Inauguration	71 bps	6 bps	209 bps	-86 bps	-10 bps	123 bps		52 bps	39 bps	105 bps
12 Months After Inauguration	177 bps	71 bps	231 bps	-93 bps	-33 bps	127 bps		80 bps	99 bps	124 bps

* 2016 Performance through 1/10/17.

Source: Bloomberg

10 Year Treasury Yield Post Election Performance

■ Election to Inauguration ■ 1 Month After Inauguration ■ 3 Months After Inauguration ■ 12 Months After Inauguration



Source: Bloomberg, Hedgeye

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Unlike equity performance, rates seem to have a more consistent trend following the inauguration. In 4 of the 6 periods for which we have data, rates rose notably in the 1Mo, 3Mo, 6Mo and 12Mo periods following the inauguration. The exceptions were 1992 and 2000 – both periods of economic slowdown marked by easing.

We think this is an important takeaway for investors considering the path over the coming year.

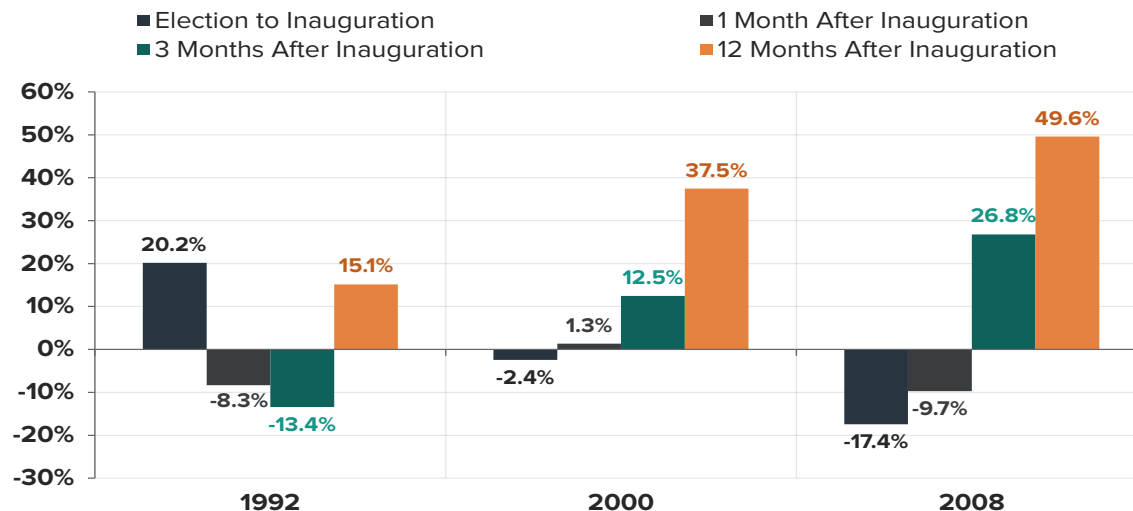
S5HOME INDEX HISTORICAL PERFORMANCE IN ELECTION YEARS

Election to Inauguration Performance							
Index Performance	1992	2000	2008	2016*	'92-'08 Avg	'92-'08 Med	'92-'08 Sigma
Election to Inauguration	20.2%	-2.4%	-17.4%	3.6%	0.1%	-2.4%	18.9%
1 Month After Inauguration	-8.3%	1.3%	-9.7%		-5.6%	-8.3%	6.0%
3 Months After Inauguration	-13.4%	12.5%	26.8%		8.6%	12.5%	20.4%
6 Months After Inauguration	-9.7%	27.8%	19.1%		12.4%	19.1%	19.6%
12 Months After Inauguration	15.1%	37.5%	49.6%		34.1%	37.5%	17.5%

* 2016 Performance through 1/10/17.

Source: Bloomberg

S5 Home Post Election Performance



Source: Bloomberg, Hedgeye

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Like equities more broadly, the track record of Housing equities has been mixed and the “n” is very small. It’s also worth noting that all three periods of historical observation coincided with the onset or immediate aftermath of major housing market cycles.

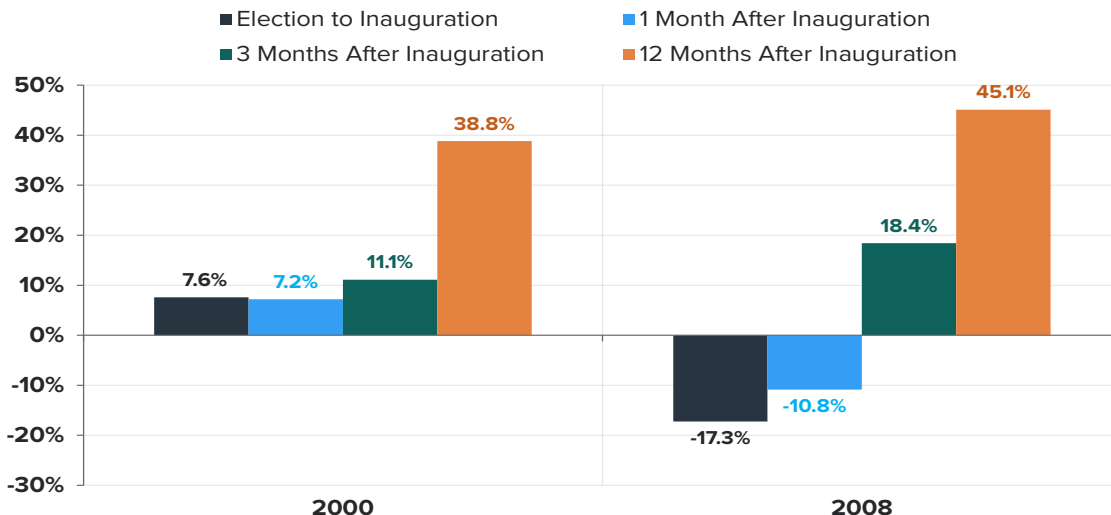
S15HOME INDEX HISTORICAL PERFORMANCE IN ELECTION YEARS

Election to Inauguration Performance						
Index Performance	2000	2008	2016*	'00-'08 Avg	'00-'08 Med	'00-'08 Sigma
Election to Inauguration	7.6%	-17.3%	5.5%	-4.8%	-4.8%	17.6%
1 Month After Inauguration	7.2%	-10.8%		-1.8%	-1.8%	12.8%
3 Months After Inauguration	11.1%	18.4%		14.8%	14.8%	5.2%
6 Months After Inauguration	33.5%	18.7%		26.1%	26.1%	10.5%
12 Months After Inauguration	38.8%	45.1%		41.9%	41.9%	4.4%

* 2016 Performance through 1/10/17.

Source: Bloomberg

S15 Home Post Election Performance



Source: Bloomberg, Hedgeye

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The slightly broader measure shown here, the S15, looks similar to the S5 index.

ELECTION CYCLE SIMPLICITY

THE ELECTION CYCLE:

A POLITICO-BEHAVIORAL PHENOMENON

PROMISE THE WORLD

Year 4 (Election Year)



HONEYMOON/DO NO HARM

Year 1



UNLEASH HELL

Year 2



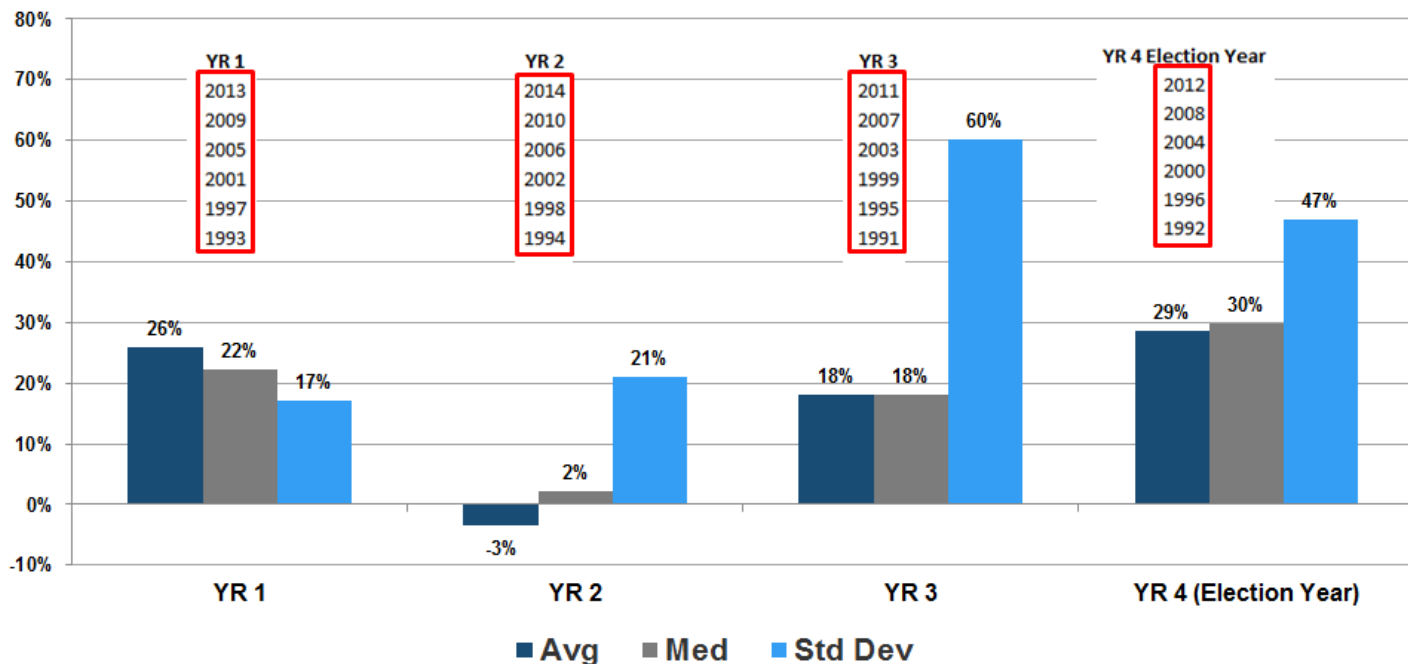
COMPING THE COMP

Year 3



FREQUENTIST HOUSING: ELECTION YR 4 + YEAR 1 = ↑

HOUSING: LAST 6 ELECTION CYCLES PERFORMANCE ANALYSIS AVERAGE ABSOLUTE RETURNS (1991-2014)



DATA SOURCE: FACTSET

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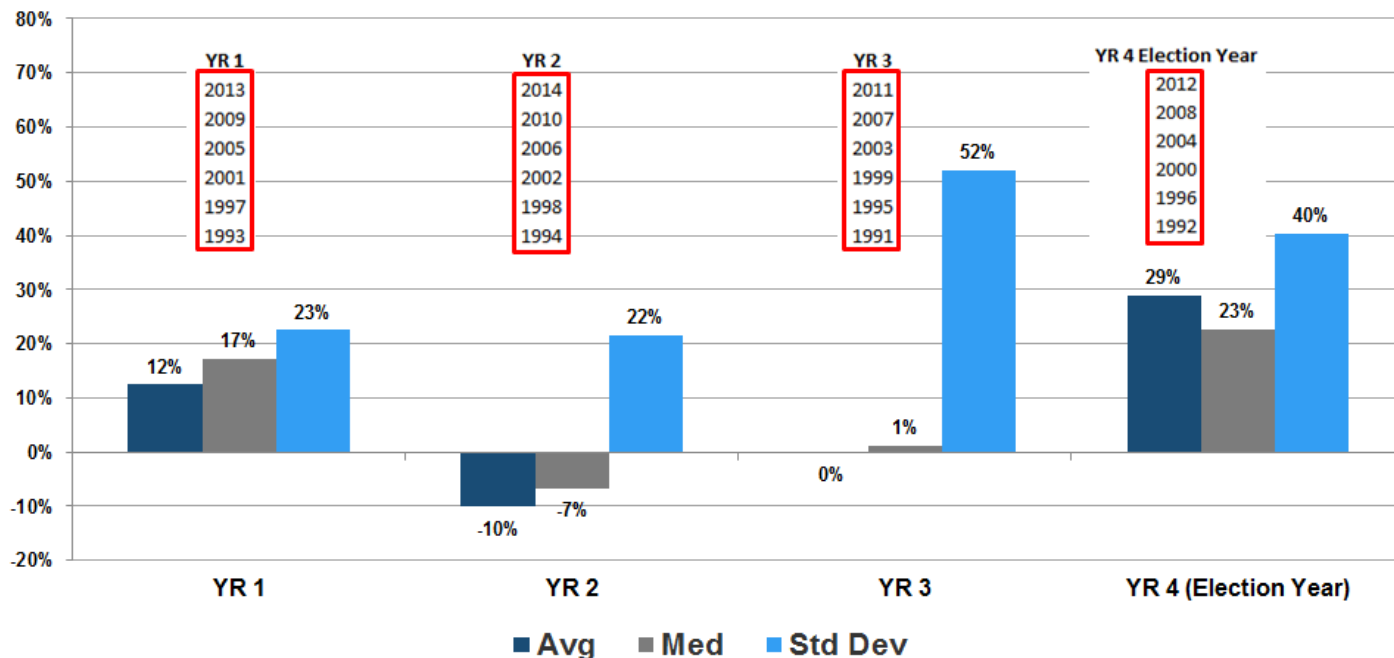
Historically, housing equity price performance has followed a distinct, recurrent pattern over the last 6 election cycles.

Absolute performance is consistently (very) strong in Election Years and Year 1.

This has to do with the nature of previous electoral cycles. Candidates promise much on the campaign trail and often entice voters with housing-related tax giveaways. In the past, this has stoked equities higher in the election year and the following year.

FREQUENTIST HOUSING: **RELATIVE** PERFORMANCE

HOUSING: LAST 6 ELECTION CYCLES PERFORMANCE ANALYSIS AVERAGE RELATIVE RETURNS VS S&P 500 (1991-2014)



DATA SOURCE: FACTSET

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It's not just beta – historically, Housing equities have outperformed the broader market meaningfully on a relative basis in years 4 (election year) and 1 (year after election) as well.

FREQUENTIST HOUSING: THE DATA

Here's a look at Housing stock performance by year since 1990. Election years are bordered with the averages at the bottom of the table.

Takeaways: Housing stocks have not performed well this past election year (2016, -5%) in comparison with their election year track record since 1992 (+30%). For now, there does not appear to be an investable post-election pattern.

The key takeaway for us is that yields have tended to rise in non-recessionary post-election periods.

		Price				Y/Y Change in Price (%) - Absolute				Relative Performance vs S&P 500		
		S&P 500	XHB	ITB	Builder Index	S&P 500	XHB	ITB	Builder Index	XHB	ITB	Builder Index
12/31/1990	+2	330.22	na	na	61.15							
12/31/1991	+3	417.09	na	na	102.70	26.3%			67.9%			41.6%
12/31/1992	Election Year	435.71	na	na	130.73	4.5%			27.3%			22.8%
12/31/1993	+1	466.45	na	na	155.10	7.1%			18.6%			11.6%
12/31/1994	+2	459.27	na	na	100.00	-1.5%			-35.5%			-34.0%
12/31/1995	+3	615.93	na	na	137.19	34.1%			37.2%			3.1%
12/31/1996	Election Year	740.74	na	na	138.49	20.3%			0.9%			-19.3%
12/31/1997	+1	970.43	na	na	218.93	31.0%			58.1%			27.1%
12/31/1998	+2	1,229.23	na	na	264.71	26.7%			20.9%			-5.8%
12/31/1999	+3	1,469.25	na	na	176.72	19.5%			-33.2%			-52.8%
12/31/2000	Election Year	1,320.28	na	na	274.75	-10.1%			55.5%			65.6%
12/31/2001	+1	1,148.08	na	na	348.96	-13.0%			27.0%			40.1%
12/31/2002	+2	879.82	na	na	345.46	-23.4%			-1.0%			22.4%
12/31/2003	+3	1,111.92	na	na	681.10	26.4%			97.2%			70.8%
12/31/2004	Election Year	1,211.92	na	na	905.03	9.0%			32.9%			23.9%
12/31/2005	+1	1,248.29	na	na	1,138.92	3.0%			25.8%			22.8%
12/31/2006	+2	1,418.30	37.39	42.37	900.98	13.6%			-20.9%			-34.5%
12/31/2007	+3	1,468.36	19.35	17.63	363.61	3.5%	-48.2%	-58.4%	-59.6%	-51.8%	-61.9%	-63.2%
12/31/2008	Election Year	903.25	11.98	9.81	217.14	-38.5%	-38.1%	-44.4%	-40.3%	0.4%	-5.9%	-1.8%
12/31/2009	+1	1,115.10	15.11	12.01	254.48	23.5%	26.1%	22.4%	17.2%	2.7%	-1.0%	-6.3%
12/31/2010	+2	1,257.64	17.39	13.18	267.89	12.8%	15.1%	9.7%	5.3%	2.3%	-3.0%	-7.5%
12/31/2011	+3	1,257.60	17.10	11.88	265.74	0.0%	-1.7%	-9.9%	-0.8%	-1.7%	-9.9%	-0.8%
12/31/2012	Election Year	1,426.19	26.60	21.16	539.02	13.4%	55.6%	78.1%	102.8%	42.1%	64.7%	89.4%
12/31/2013	+1	1,848.36	33.30	24.82	587.06	29.6%	25.2%	17.3%	8.9%	-4.4%	-12.3%	-20.7%
12/31/2014	+2	2,058.90	34.12	25.88	648.92	11.4%	2.5%	4.3%	10.5%	-8.9%	-7.1%	-0.9%
Averages:	Election Year					-0.2%	8.7%	16.9%	29.9%	21.3%	29.4%	30.1%
	+1					13.5%	25.7%	19.9%	25.9%	-0.9%	-6.7%	12.4%
	+2					6.6%	8.8%	7.0%	-3.5%	-3.3%	-5.1%	-10.0%
	+3					13.9%	-13.7%	-17.1%	11.8%	-10.7%	-14.1%	-2.1%
Averages:	All Years					9.5%	4.6%	2.4%	17.6%	-2.4%	-4.6%	8.1%

Source: Factset

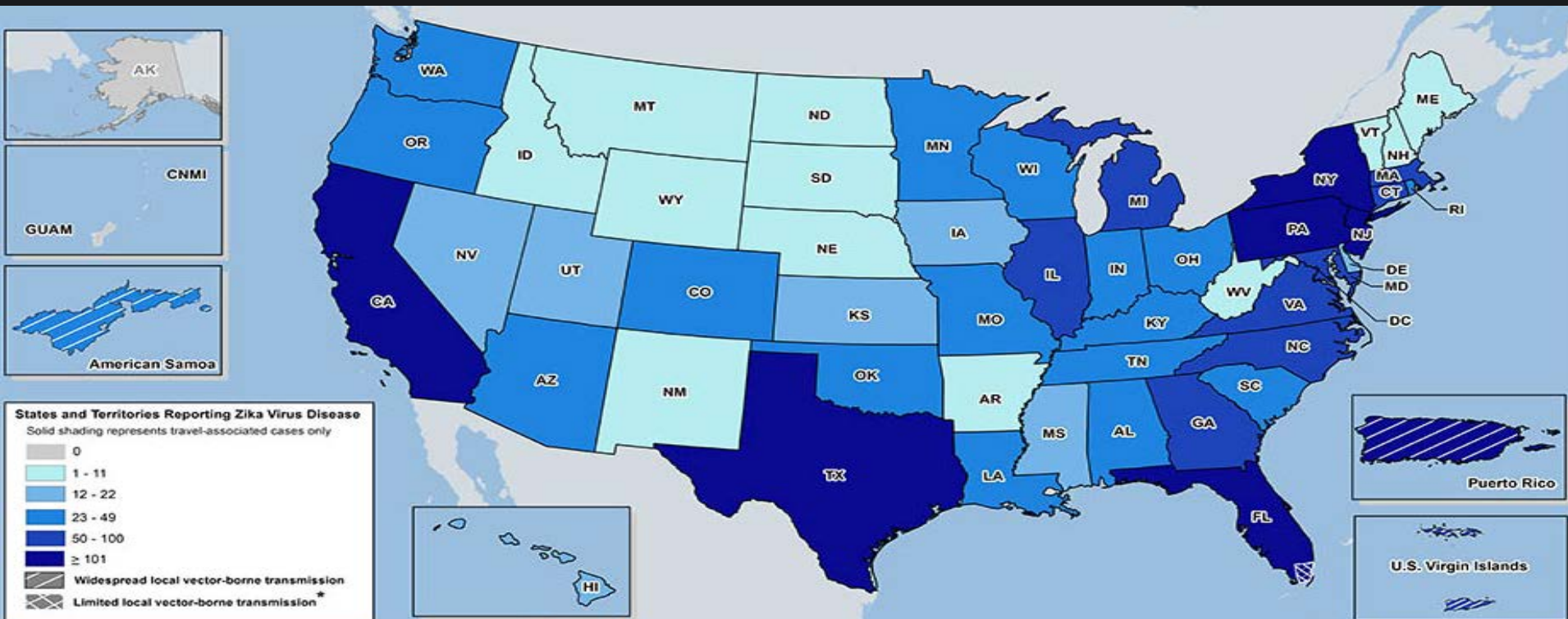


THE ZIKA VIRUS

WHAT IS THE ZIKA VIRUS?

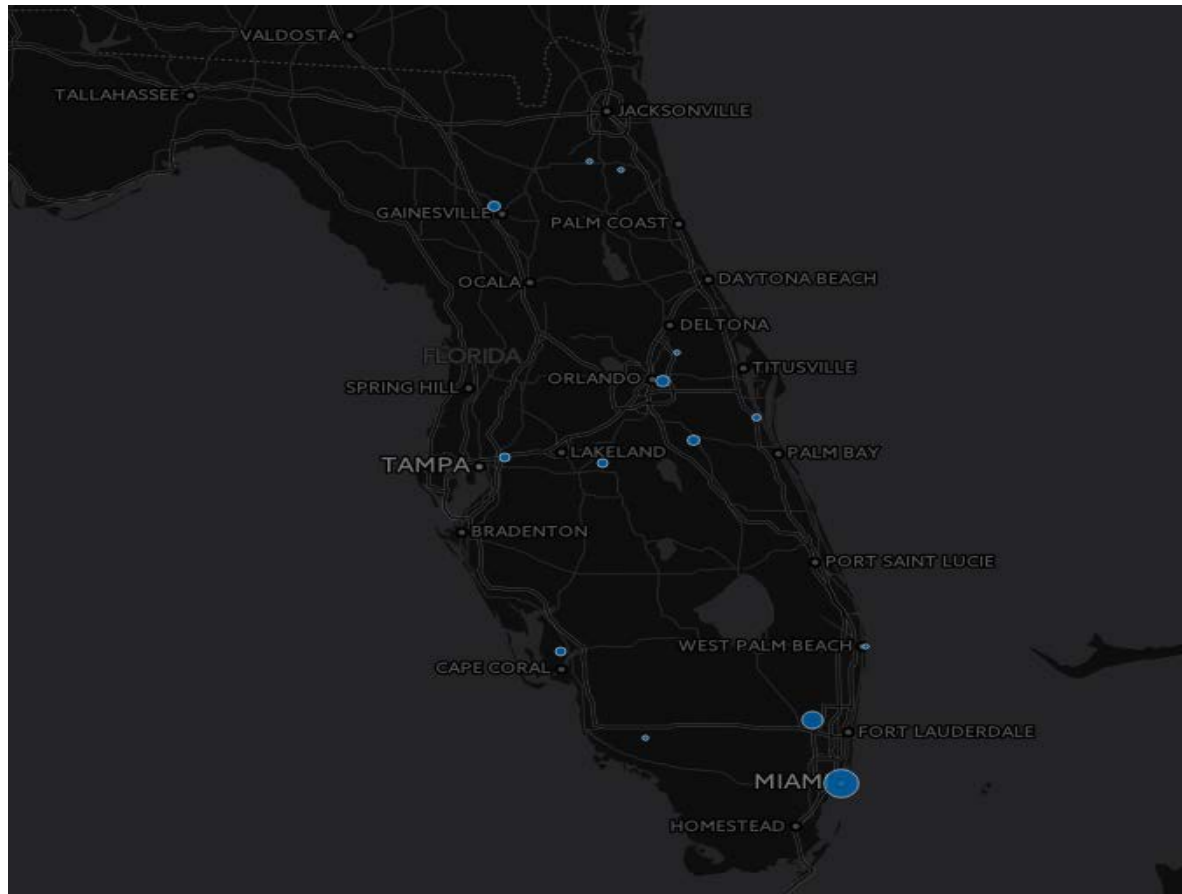
- The Zika virus is primarily spread to people who have been bit by an infected mosquito. Infected individuals do not always show symptoms, but the most common symptoms include: fever, rashes, joint pain, and red eyes.
- The virus can be transmitted sexually, and can cause serious birth defects in babies born to mothers who were infected with the Zika virus during their pregnancy.
- Links between the Zika Virus and Guillain-Barré syndrome (GBS) have also been proven. GBS is a rare disorder that can cause muscle weakness and sometimes paralysis.
- **A vaccine or treatment for Zika does not currently exist.** Therefore, people who live in or are traveling to areas with Zika should take steps to prevent infection.

ZIKA IN THE UNITED STATES- JANUARY, 2017



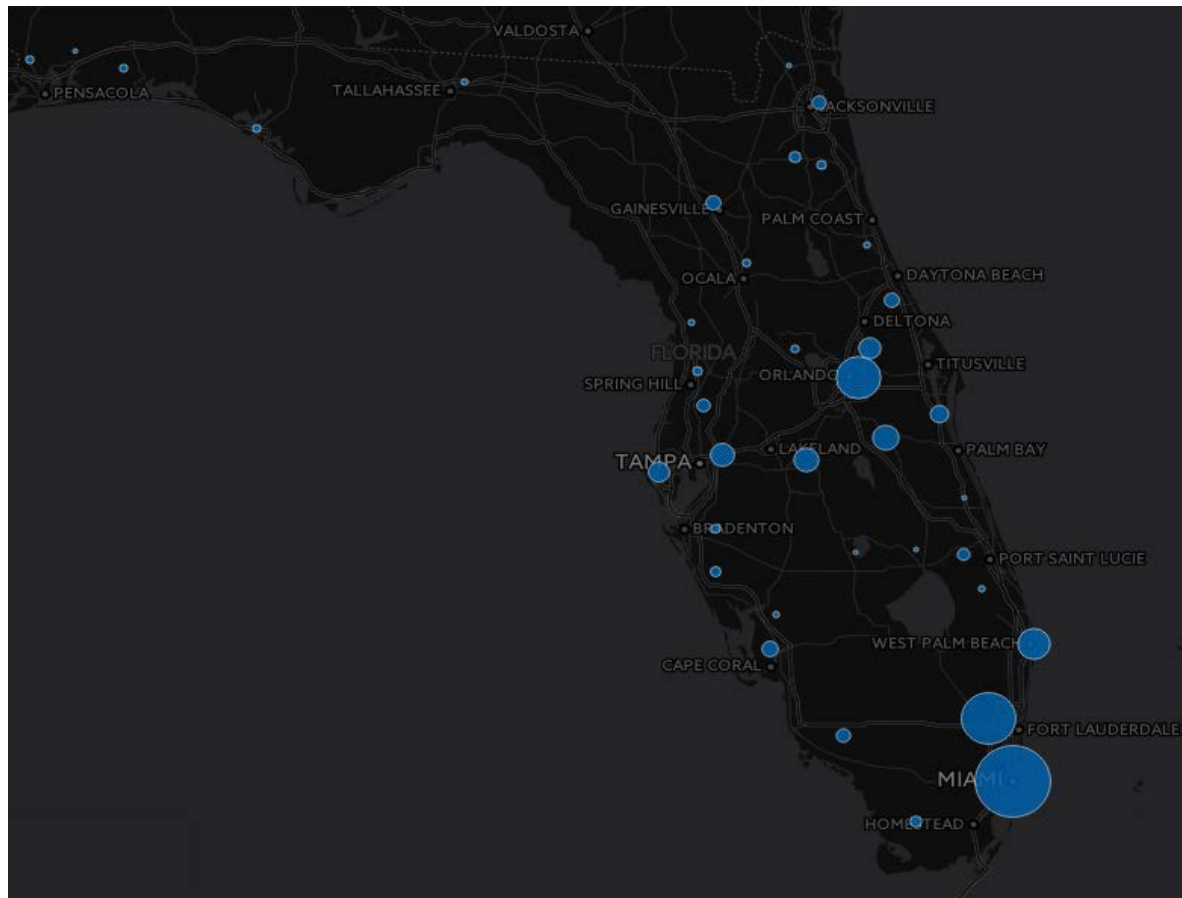
As of January 4th, **there are currently 216 cases of the Zika virus that were locally acquired and 4,619 cases of the Zika virus** that were associated with travel to infected areas. This is up from 105 and 3,713, respectively, as of October 13th. While that increase may not sound like much, it's important to note that the October-January period is a period of dormancy for mosquitoes, even in the Southern US. For reference, **there are currently 34,045 cases in Puerto Rico and 862 cases in the US Virgin Islands.**

ZIKA IN FLORIDA – MID APRIL



The Zika Virus continues to Spread in Florida, and Miami is currently the epicenter for locally acquired cases.

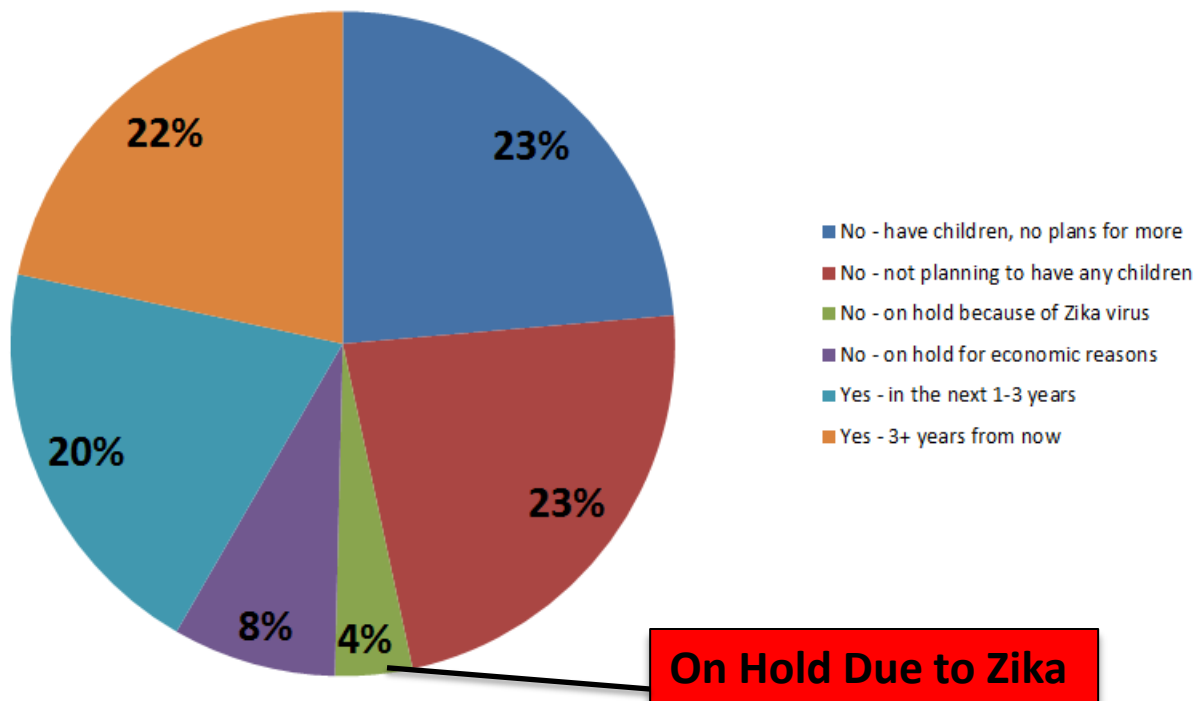
ZIKA IN FLORIDA – MID DECEMBER



The Zika Virus continues to Spread in Florida, and Miami is currently the epicenter for locally acquired cases.

BIRTHS: ON HOLD DUE TO ZIKA?

Hedgeye Maternity Survey Results: Nationally



According to our survey results 4% of respondents indicated they have delayed pregnancy due to concerns over Zika

ZIKA: QUANTIFYING THE IMPACT

Hedgeye Survey Questions & Responses	Total	No - have children, no plans for more	No - not planning to have any children	No - on hold because of Zika virus	No - on hold for economic reasons	Yes - in the next 1-3 years	Yes - 3+ years from now
National	4,976	1,176	1,144	187	396	996	1,077

Deterred by Zika	187
Planning on having children soon	996
Total	1183

Numerator - Zika's Deterrant Effect	187
Denominator - (Planning to have children soon + Zika's Deterrant Effect)	1183

Zika's potential impact on maternity rates (Numerator / Denominator)	15.8%
----------------------------------------------------------------------	-------

Number of births (2014), CDC	3,988,076
Zika's potential impact	(630,406)

Source: Hedgeye, CDC

The potential impact to births stemming from Zika concerns is not inconsequential at almost 16%.

ZIKA IN THE NEWS

November
28, 2016

Texas Officials Announce First Locally Transmitted Zika Case

Woman in southern part of state tested positive for disease last week

WSJ

December
14, 2016

Study Offers Clues To Risk Of Zika Birth Defects In The U.S. npr

January 5,
2017

In the Fight Against Zika, Insecticides Hit a 'Dead End' WSJ

Because of high costs and low rewards of Zika-elimination business, the world is running out of insecticides that work

ZIKA CONTROL METHODS ARE ENTERING A BEAR MARKET

In the Fight Against Zika, Insecticides Hit a 'Dead End'

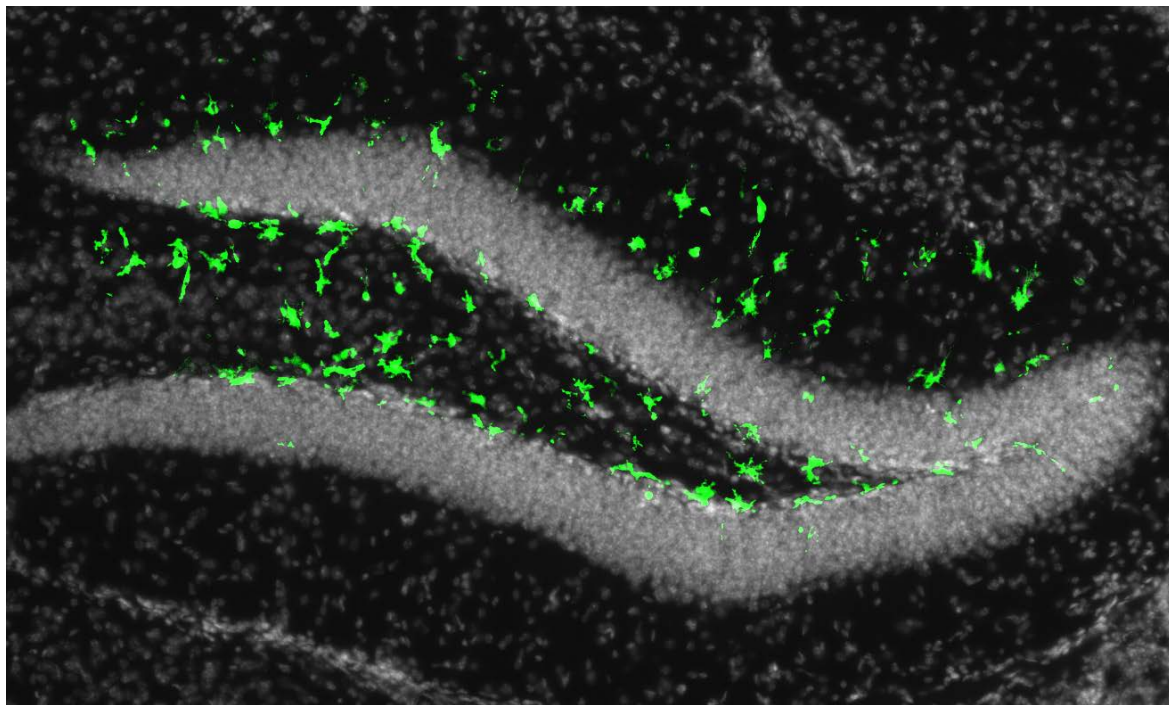
Because of high costs and low rewards of Zika-elimination business, the world is running out of insecticides that work

Health workers have a thinning arsenal of insecticides capable of killing mosquitoes that carry Zika and similar viruses as the southern hemisphere's summer begins and as outbreaks persist in other areas. One reason: Eliminating disease-carrying mosquitoes is a niche business with costly barriers to entry. "We may be hitting a dead end," said Doug Carlson, director of the Indian River Mosquito Control District in Vero Beach, Fla. "In the not-too-distant future, we may very well not have chemicals that are effective." Health officials said Zika was [recently detected](#) in several people in Brownsville, Texas, prompting the U.S. Centers for Disease Control and Prevention to [warn pregnant women](#) to avoid the area. New cases are still being identified in Miami after a Zika outbreak simmered for months, though officials say the virus is no longer being transmitted locally by mosquitoes. The U.S. market for insecticides targeted at mosquitoes is estimated at about \$100 million in annual sales, a tiny slice of a \$57 billion global pesticide industry that is dominated by products for agricultural use. [Developing a new chemical insecticide and securing regulatory approvals can cost more than \\$250 million and take nearly a decade, according to research by Phillips McDougall Ltd.](#) That is part of the reason the world has come to rely on just a handful of insecticides to kill disease-carrying mosquitoes, the best way to cut off viruses like Zika. Just two classes of insecticides—known as pyrethroids and organophosphates—have been used against adult mosquitoes for about 60 years, said Janet McAllister, research entomologist in the CDC's division of vector-borne diseases. Pyrethroids are especially valuable because they can kill mosquitoes quickly in low doses and are cheap to produce and buy, according to Daniel Strickman, senior program officer for vector control with the Bill & Melinda Gates Foundation, which is funding the development of new insecticides. Yet *Aedes aegypti*, the species of mosquito that spreads Zika, has developed "really rock-solid resistance" to pyrethroid insecticides in large areas of the world, Dr. Strickman said. [Though the CDC and EPA have vouched for naled's safety, some residents and elected officials voiced concerns about the health effects of chemicals created when naled degrades. "It's carpet bombing when you need a precision missile,"](#) said Barry Wray, executive director of the Florida Keys Environmental Coalition, which opposed last summer's spraying. [American Vanguard Corp.](#), which sells \$10 million to \$12 million of naled in the U.S. annually, says the cost of keeping it registered in the U.S. has increased over time as the EPA requires more studies on its impacts. Naled is currently undergoing a routine EPA review, and the agency says it will release a draft human health risk assessment for public comment in 2017. Eric Wintemute, the company's chief executive, said naled will be needed as other insecticides fail. "It's cost us a ton of money, but it's important," he said.

ZIKA: NEW RISKS TO ADULTS ??

Zika infection may affect adult brain cells

August 18, 2016



Early research suggest Zika may act on progenitor cells responsible for maintaining neuroplasticity in adults.

The loss of these cells could increase risk of diseases like dementia and Alzheimers

ZIKA: NEW RISKS TO BABIES/CHILDREN ??

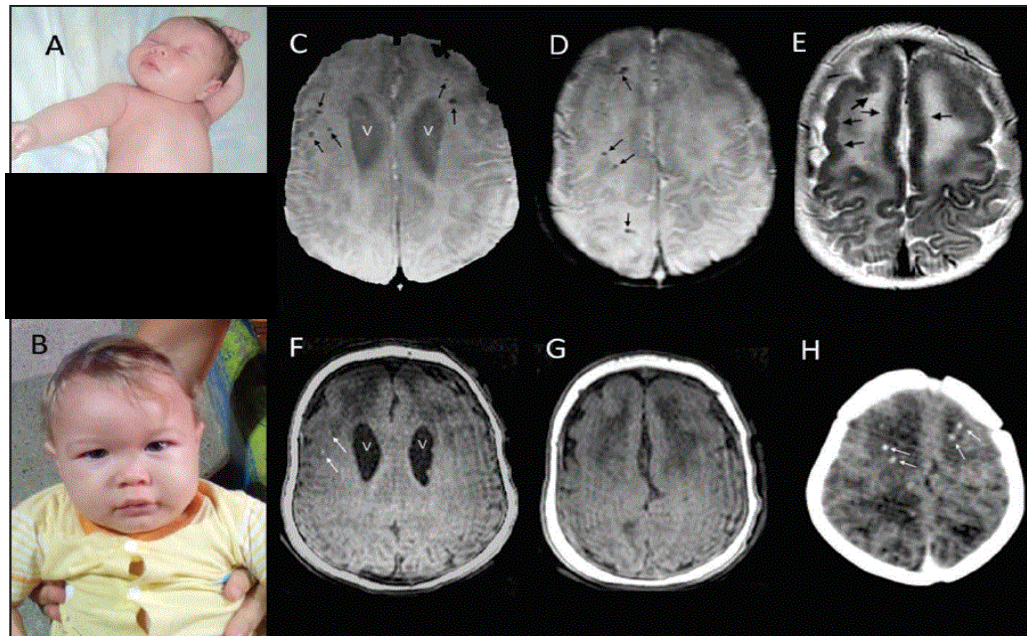


Figure A: Newborn patient with no discernable anomalies (craniofacial disproportion)

Figure B: Same infant at age 11 months with head circumference of almost 3 standard deviations below the mean, but no apparent craniofacial anomalies.

What is added by this report?

Although infants with congenital Zika virus infection who have a normal head size have been described in large series, sufficient description of the features of congenital Zika syndrome in these infants has

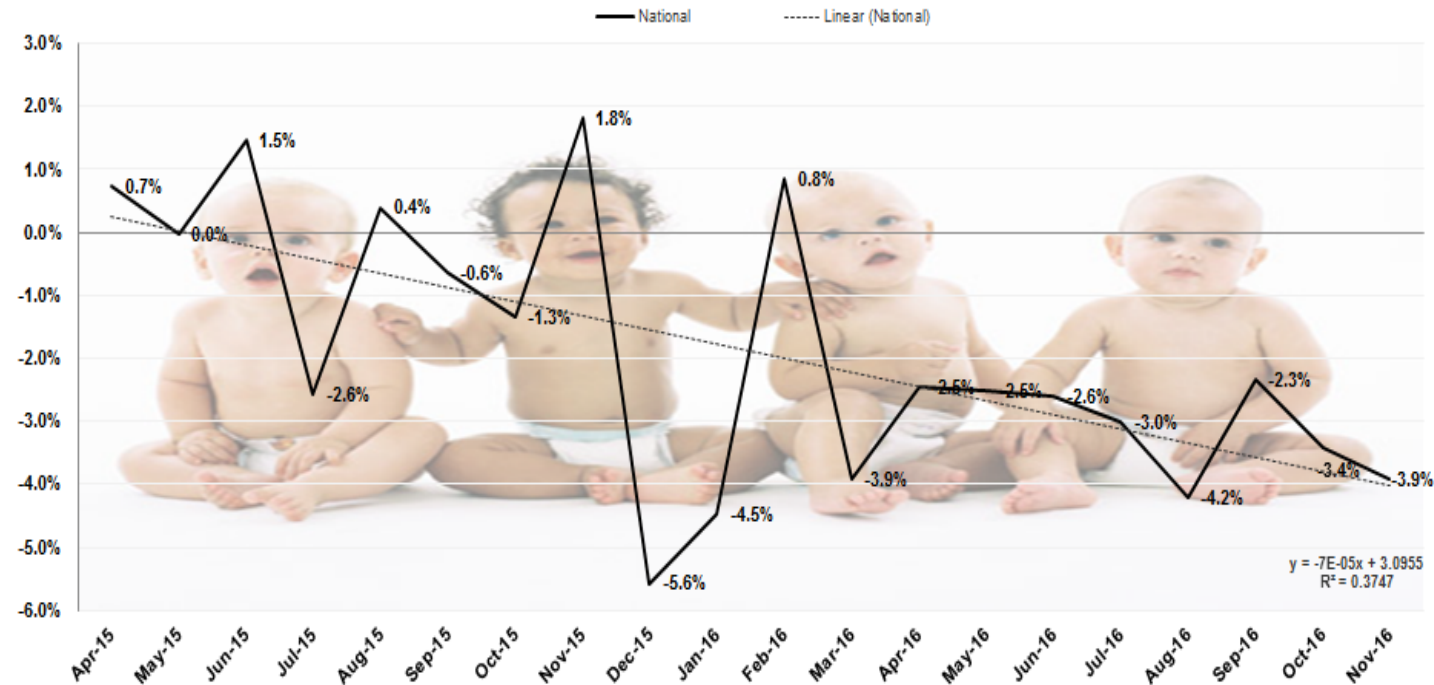
not been available. This report of a series of 13 infants with laboratory evidence of congenital Zika virus infection with normal head size at birth includes the findings from extensive imaging, neurologic, ophthalmologic, auditory, and orthopedic examinations. Follow-up of these infants has shown that for most, head growth deceleration occurs to the point of microcephaly after birth and significant neurologic sequelae are evident.

Recent research suggests that Zika may cause a wider range of congenital problems than previously suspected, with some that may not manifest until well after a child is born.

These findings provide evidence that among infants with prenatal exposure to Zika virus, the absence of microcephaly at birth does not exclude congenital Zika virus infection or the presence of Zika-related brain and other abnormalities.

NATIONAL BIRTH TRENDS = ↓

BIRTH TRACKER: NATIONAL AVERAGE- Y/Y RATE OF CHANGE



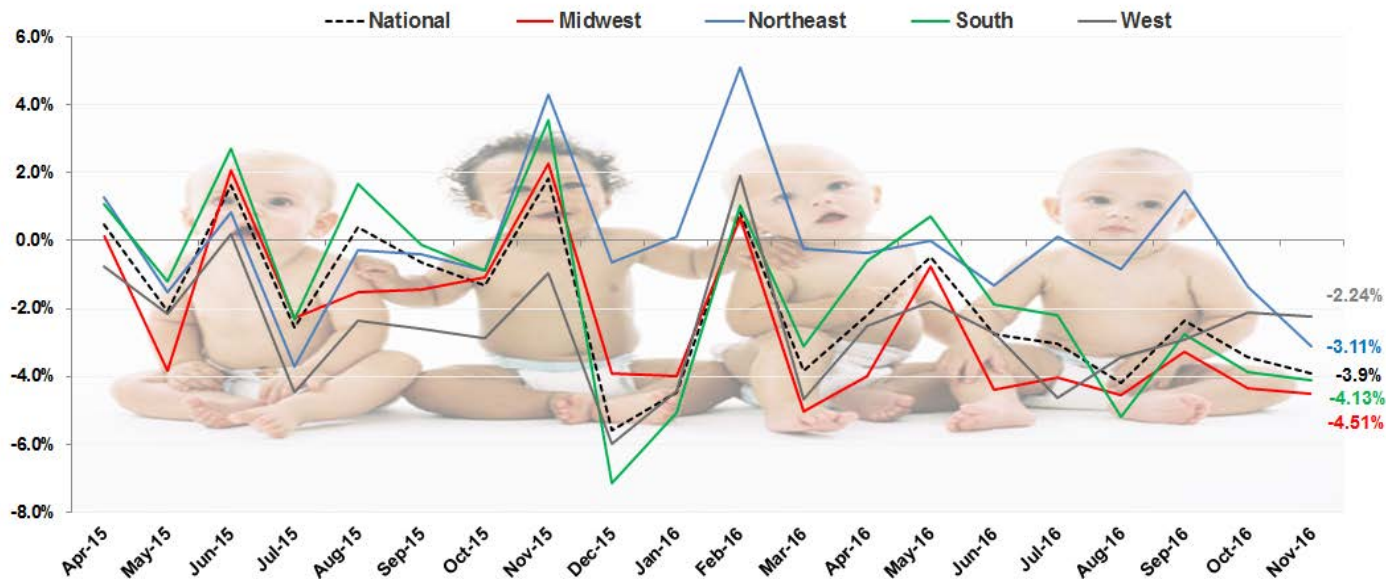
DATA SOURCE: HEDGEYE MATERNITY TRACKER

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Birth Rates declined -4% year-over-year in November, continuing the negative trend in place since mid-2015.

BIRTH TRENDS BY REGION

BIRTH TRACKER: UNITED STATES BY CENSUS REGION- Y/Y RATE OF CHANGE



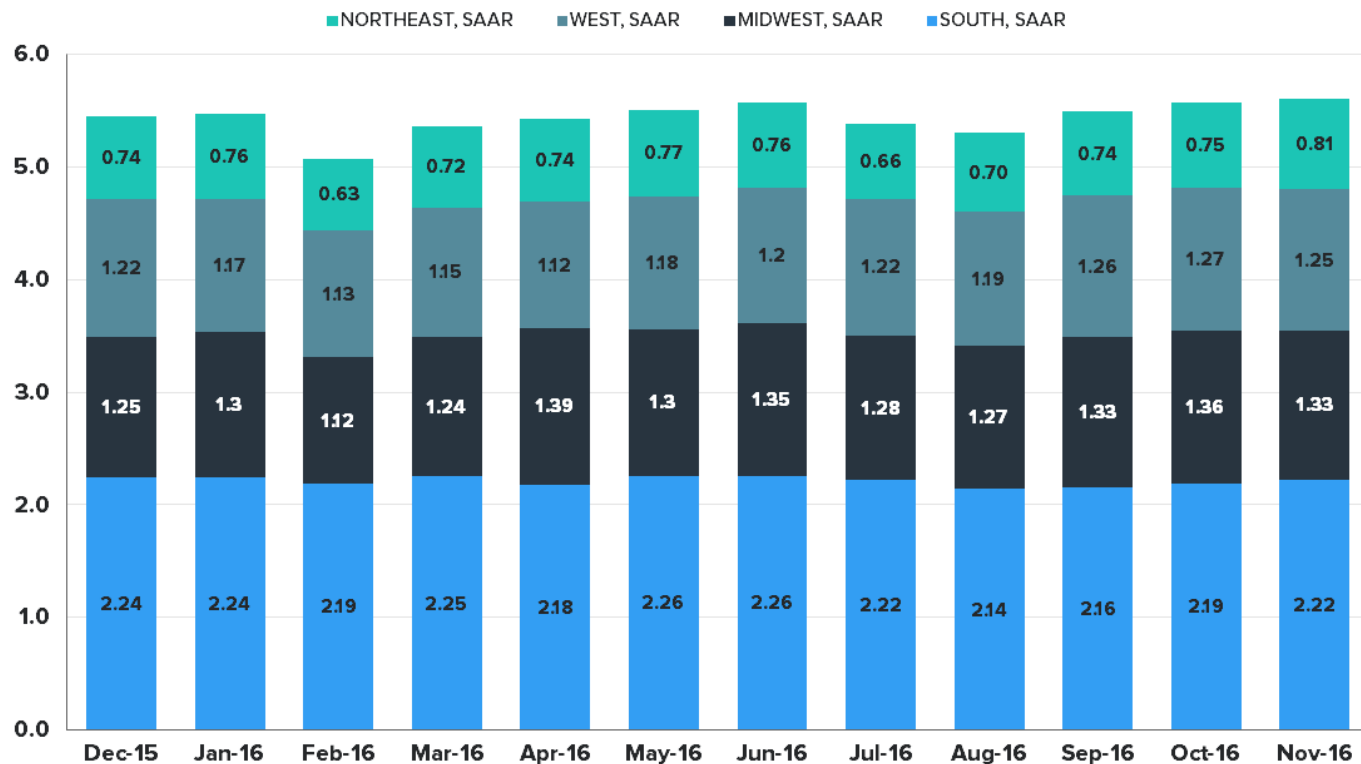
DATA SOURCE: HEDGEYE MATERNITY TRACKER

©2016 HEDGEYE RISK MANAGEMENT

In the Southern and Midwestern census regions, maternity rates declined faster Y/Y than the national average in November. The Northeastern and Western regions also performed negatively Y/Y, but fared better than the national average.

EXISTING HOME SALES IN THE SOUTHWEST REGION

Existing Home Sales By Region (In Millions of Units)



Source: Bloomberg, NAR, Hedgeye

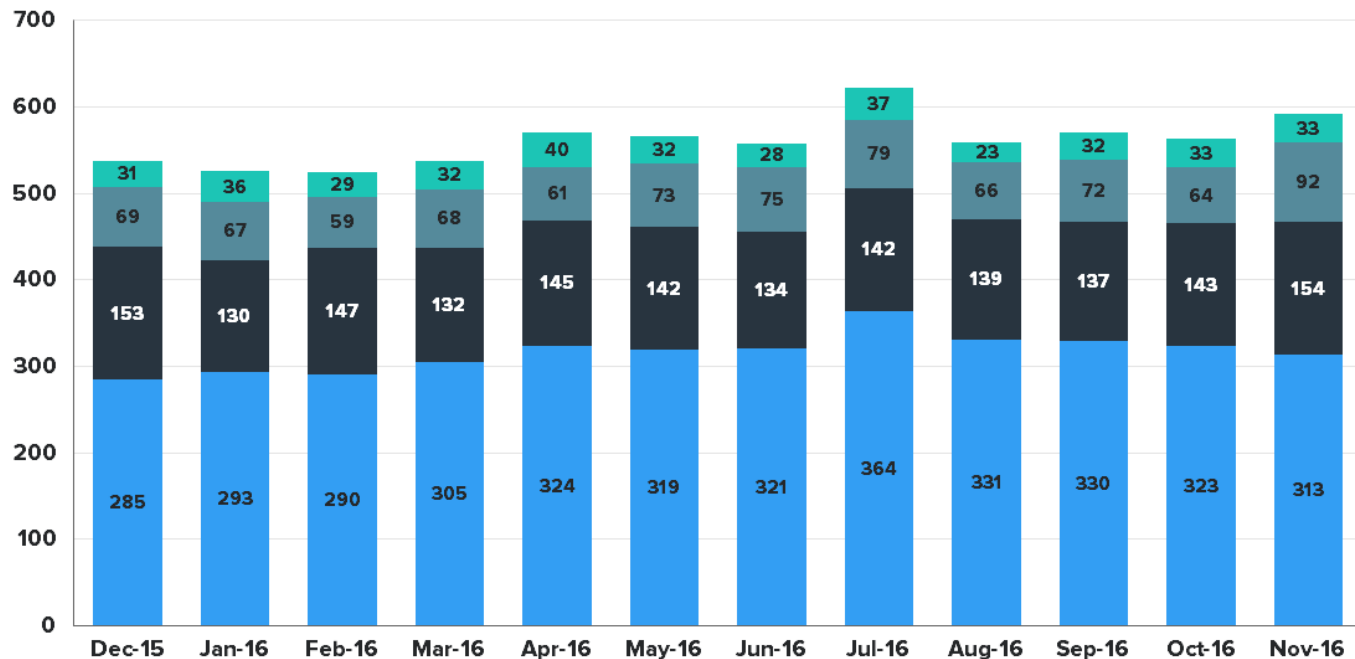
© Hedgeye Risk Management

The bulk of existing homes sold in the US is concentrated in the South, which also happens to be the region most vulnerable to mosquito-borne illnesses like Zika.

NEW HOME SALES IN THE SOUTHWEST REGION

New Home Sales By Region (In Thousands of Units)

■ NORTHEAST, SAAR ■ MIDWEST, SAAR ■ WEST, SAAR ■ SOUTH, SAAR



Source: Bloomberg, Census Bureau, Hedgeye

© Hedgeye Risk Management

New Home Sales are even more acutely sensitive to the South, where that one region accounts for roughly half of all new homes sold.

WHICH BUILDERS COULD BE IMPACTED BY ZIKA?

BUILDER EXPOSURE: FLORIDA

Company	Florida
WCIC*	93.1%
AVHI	60.4%
LEN	27.8%
TMHC	25.3%
MHO	17.8%
DHI	16.2%
PHM	15.6%
CAA	14.6%
KBH	12.8%
BZH	12.2%
MTH	11.2%
TOL	9.2%
LGIH	8.5%
HOV	8.4%
MDC	7.4%
NVR	3.5%
TPH	0.0%
CCS	0.0%
WLH	0.0%

BUILDER EXPOSURE: TEXAS

Company	Texas
LGIH	54.0%
TMHC	35.0%
MTH	32.1%
KBH	32.0%
HOV	30.3%
DHI	26.8%
BZH	24.9%
LEN	19.2%
PHM	18.9%
CAA	18.9%
MHO	17.7%
CCS	12.6%
TPH	11.5%
TOL	10.1%
NVR	0.0%
MDC	0.0%
WCIC*	0.0%
WLH	0.0%
AVHI	0.0%

*WCIC was Acquired by Lennar (LEN) in September 2016

** Market Exposure is calculated as a percentage of 2015 Home Closings

*WCIC was Acquired by Lennar (LEN) in September 2016

** Market Exposure is calculated as a percentage of 2015 Home Closings



SEASONALITY

ALL BETS ARE OFF

Housing Seasonality <i>Average Performance by Quarter</i>				
<i>Average Absolute Performance, Trailing 6Y</i>				
Security	1Q	2Q	3Q	4Q
ITB	7.3%	0.9%	-4.9%	12.0%
XHB	7.9%	-0.6%	-3.5%	9.9%
S5HOME	8.2%	2.1%	-5.8%	14.6%
2016				
Security	1Q	2Q	3Q	4Q
ITB	-0.1%	2.1%	-0.4%	-0.3%
XHB	-1.0%	-0.9%	1.2%	-0.3%
S5HOME	-1.6%	1.0%	-3.8%	-5.6%

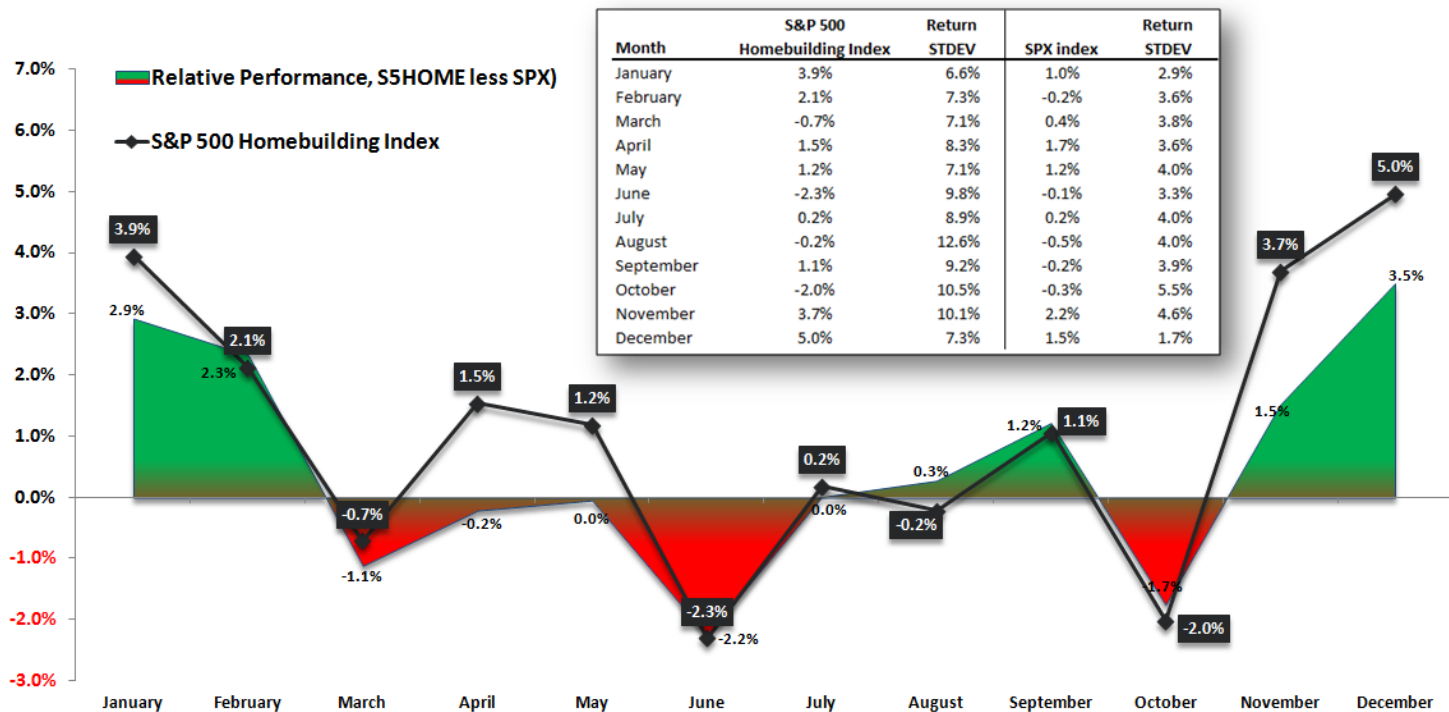
Here's how the seasonality looks on a quarterly basis. It's pretty clear which quarters generate positive P&L and which don't.

However, it hasn't worked of late. Notice the discrepancy in 2016 quarterly performance trends relative to the prior six years.

BUILDER SEASONALITY (20 YEARS)

HOMEBUILDER SEASONALITY

Ave Performance by Month, 1996-2014



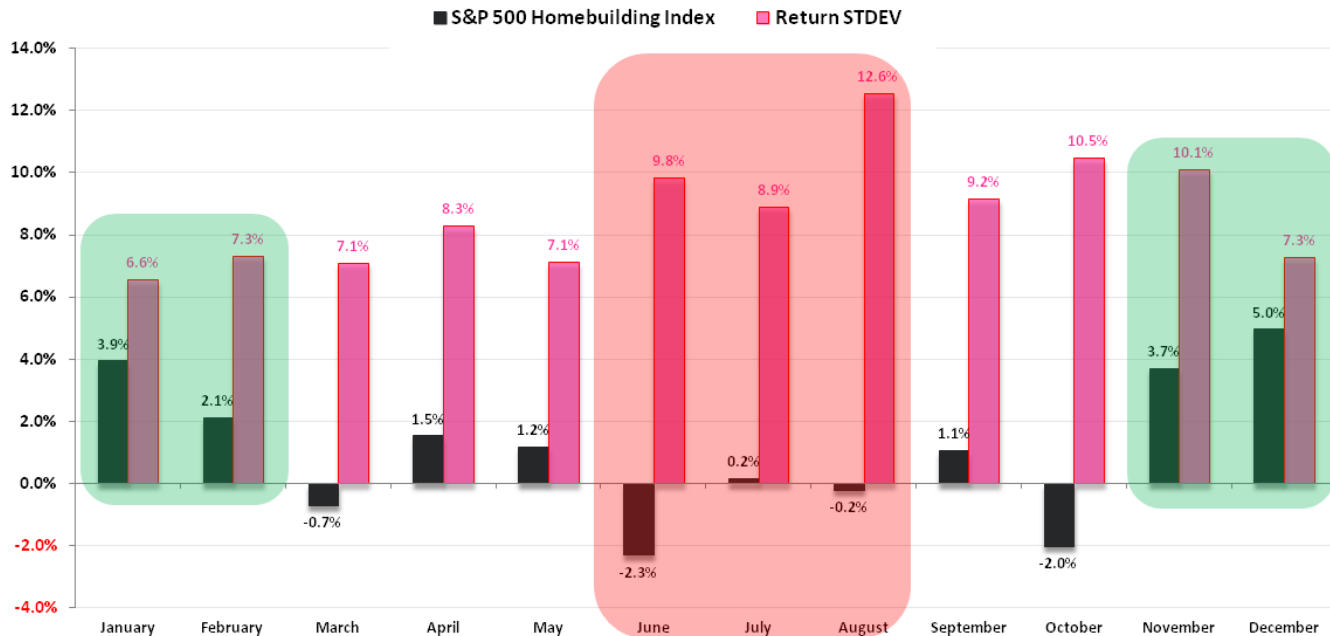
*Performance calculated using average monthly price; sample period = 1996-2014

Incidentally, the last 20 years of housing data show similar seasonal patterns.

VOLATILITY IS SEASONAL AS WELL

HOMEBUILDER SEASONALITY

Ave Performance by Month, 1996-2014



*Performance calculated using average monthly price; sample period = 1996-2014

Seasonality isn't just pronounced in the returns, but also in the volatility of returns.

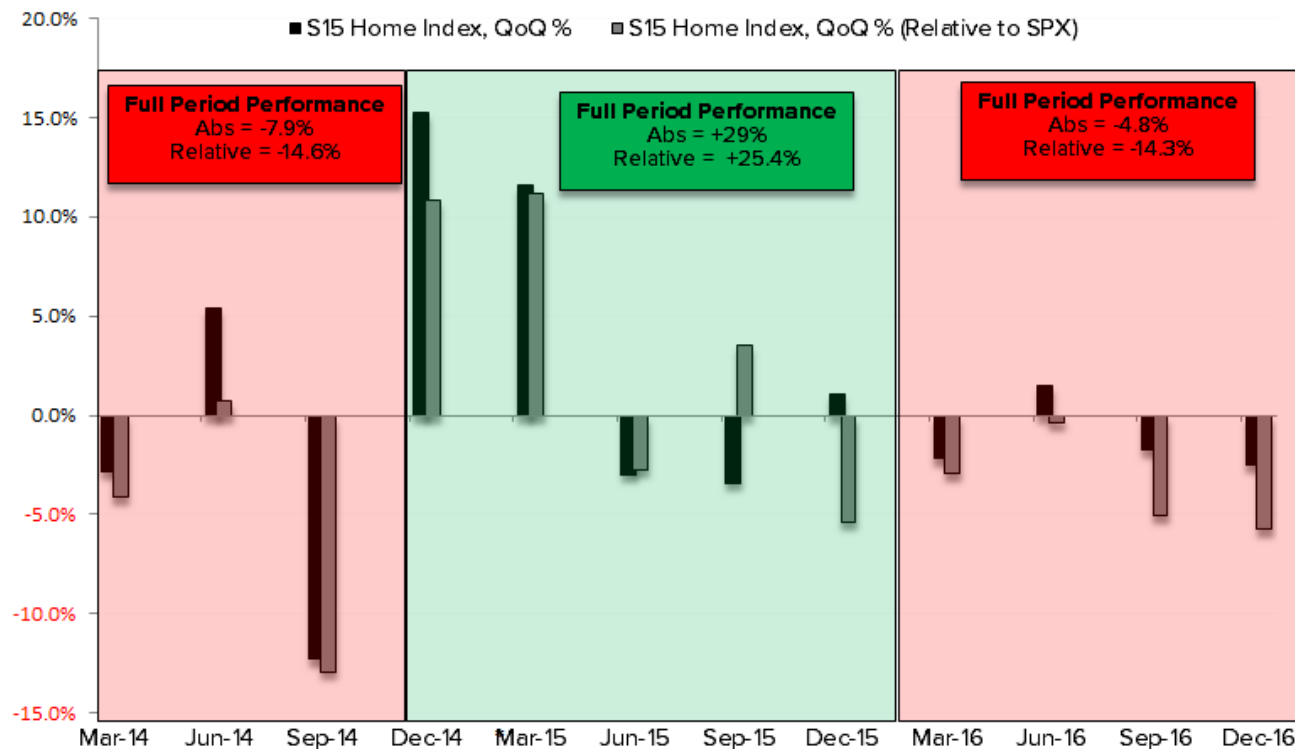


**“I LIKE THINKING BIG.
IF YOU’RE GOING TO BE
THINKING ANYTHING,
YOU MIGHT AS WELL
THINK BIG.”**

THEMATIC INVESTMENT CONCLUSIONS

4 FOR 4 IN 2016

HEDGEYE HOUSING CALL CHRONOLOGY

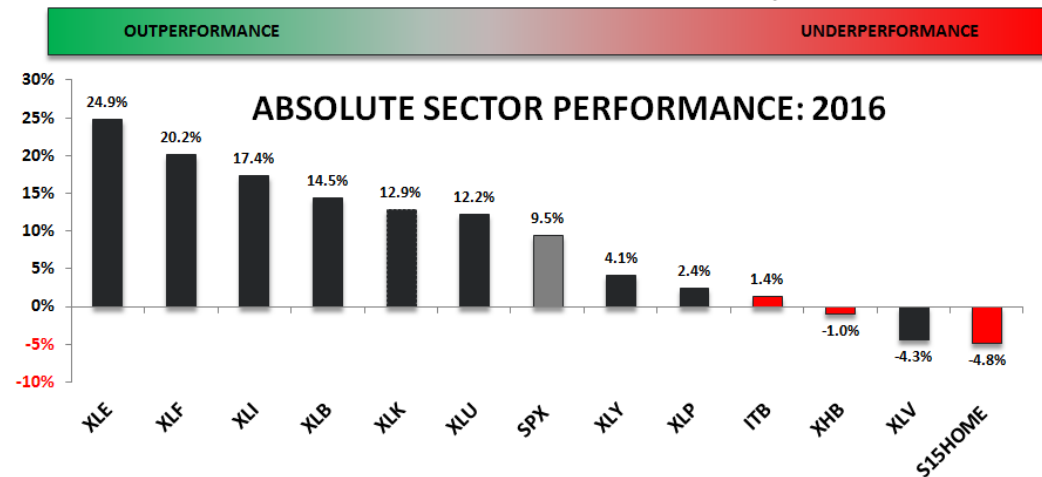
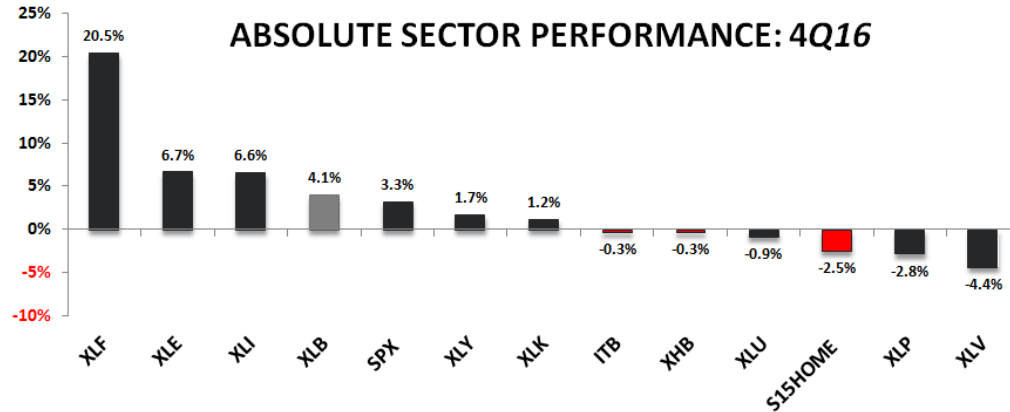


Data Source: Bloomberg, Hedgeye

*Turned bullish in Nov 2014

Period	Hedgeye Position	S15 Home Performance	
		Absolute	Relative
1Q14	Bearish	-2.8%	-4.1%
2Q14	Bearish	5.4%	0.7%
3Q14	Bearish	-12.3%	-12.9%
4Q14	Bullish	15.3%	10.9%
1Q15	Bullish	11.6%	11.2%
2Q15	Bullish	-2.9%	-2.7%
3Q15	Bullish	-3.4%	3.6%
4Q15	Bullish	1.1%	-5.4%
1Q16	Bearish	-2.2%	-2.9%
2Q16	Bearish	1.6%	-0.3%
3Q16	Bearish	-1.7%	-5.0%
4Q16	Bearish	-2.5%	-5.7%

SECTOR PERFORMANCE RANKING → 2016 HOUSING ↓



Negative absolute and relative returns have characterized performance across the primary housing proxies (XHB, ITB, S15 Home Index) in 2016.

4Q16: 3 of 3 Industry proxies have negative returns and all 3 have underperformed.

SUBSECTOR PERFORMANCE: BROAD UNDERPERFORMANCE

HOUSING: SUBSECTOR PERFORMANCE

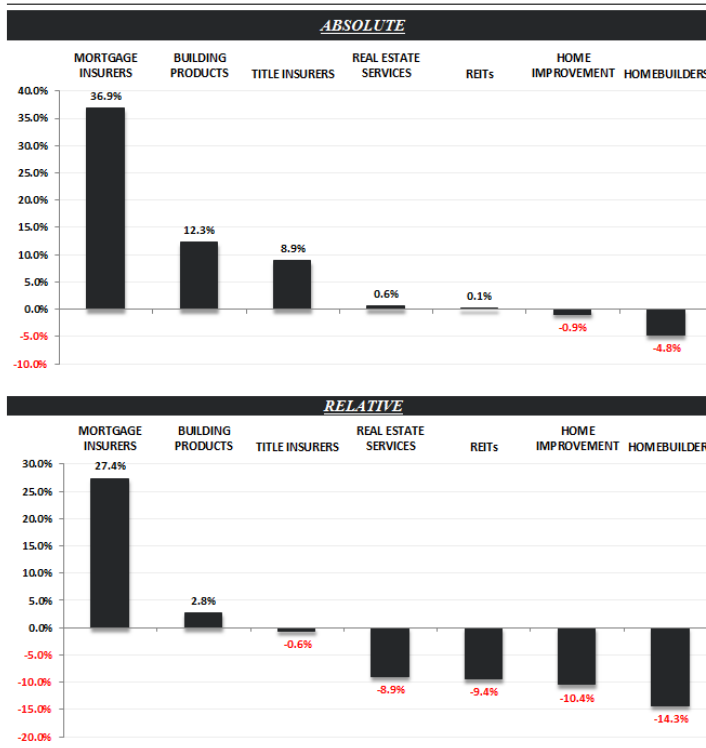
HEDGEYE HOUSING

INDEX	Ticker	1Q16 % Chg	2Q16 % Chg	3Q16 % Chg	4Q16 % Chg	2016 % Chg
S&P 500	SPX	0.8%	1.9%	3.3%	3.3%	9.5%
HOMEBUILDERS						
S&P Homebuilder Index	\$15HOME	-2.2%	1.6%	-1.7%	-2.5%	-4.8%
	Relative	-2.9%	-0.3%	-5.0%	-5.7%	-14.3%
BUILDING PRODUCTS						
S&P Building Products Index	\$15BUILX	4.2%	4.5%	7.1%	-3.6%	12.3%
	Relative	3.4%	2.6%	3.7%	-6.9%	2.8%
HOME IMPROVEMENT						
S&P Home Improvement Index	\$SHOMI	0.5%	-1.7%	-2.2%	2.6%	-0.9%
	Relative	-0.3%	-3.6%	-5.5%	-0.7%	-10.4%
REITs						
Apartment REITs*	REIT U Index	2.4%	-0.6%	-2.4%	0.9%	0.1%
	Relative	1.6%	-2.5%	-5.8%	-2.4%	-9.4%
REAL ESTATE SERVICES						
Real Estate Services*	RESRVCS U Index	0.9%	-8.2%	-3.1%	12.1%	0.6%
	Relative	0.1%	-10.1%	-6.4%	8.9%	-8.9%
MORTGAGE INSURERS						
Mortgage Insurers*	MI U Index	-12.6%	-8.0%	30.9%	30.1%	36.9%
	Relative	-13.4%	-9.9%	27.6%	26.9%	27.4%
TITLE INSURERS						
Title Insurers*	TI U Index	-0.9%	12.3%	2.8%	-4.8%	8.9%
	Relative	-1.7%	10.4%	-0.6%	-8.0%	-0.6%
SUBSECTOR AVE						
	Abs	-1.1%	0.0%	4.5%	5.0%	7.6%
	Relative	-1.9%	-1.9%	1.2%	1.7%	-1.9%

*Equal Weighted Composites: REITs: *AN, AIV, CPT, EQR, ESS, MAA, PPS, UDR*; RE Services: *RLG, RMAX*; MI: *ESNT, MTG, NMIH, RDN*; TI: *FNH, FAF, STC, BKFS*

Source: Bloomberg, HEDGEYE

2016 PERFORMANCE



5 of the 7 primary Housing subsectors underperformed in both 4Q16 and FY16.

Mortgage Insurers were the notable outperformer in 2H alongside the rise in interest rates.

THEMATIC INVESTMENT CONCLUSIONS

1

MORTGAGE INSURERS → LONG IDEA

The mortgage insurers are the most positively exposed to rising rates because it brings about increased persistency in their portfolios. Also, rising rates are positively correlated with good credit performance.

ESNT, RDN, MTG

2

TITLE INSURERS → SHORT IDEA

The title insurers are the worst performing subsector in the entire Financials/Housing complex when rates are rising. Rising rates, in addition to suppressing refi activity, also weigh on affordability, i.e. home prices.

STC, FAF, FNF

3

HOMEBUILDERS → SHORT IDEA

The builders have historically been very negatively correlated to rates from an equity price performance standpoint. We also see little incremental fundamental momentum arising from the new administration. The core businesses, meanwhile, remain under pressure from tight lot supply and skilled labor shortages.

TOL, NVR, BZH, KBH, MTH, CAA, DHI, HOV, PHM, LEN, MDC

10YR TREASURY YIELD HISTORICAL PERFORMANCE IN ELECTION YEARS

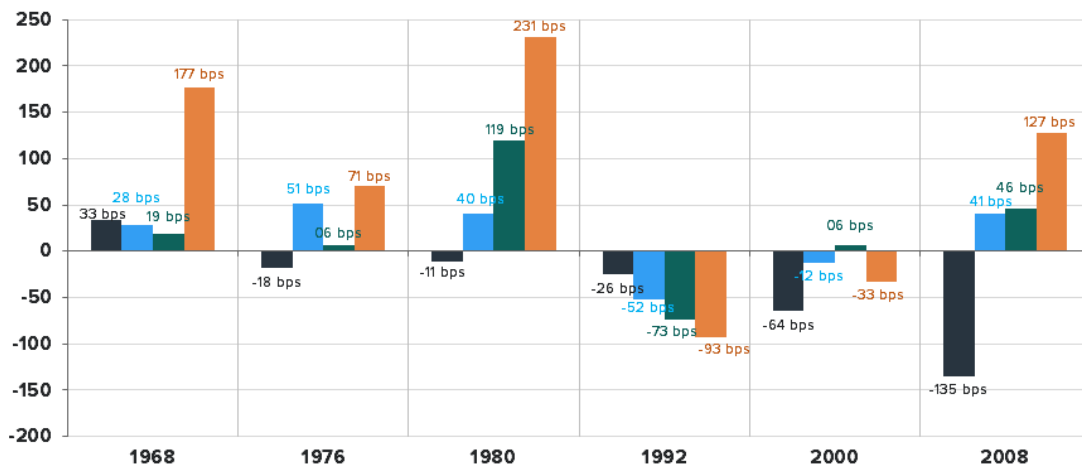
Election to Inauguration Performance										
Index Performance	1968	1976	1980	1992	2000	2008	2016*	'68-'08 Avg	'68-'08 Med	'68-'08 Sigma
Election to Inauguration	33 bps	-18 bps	-11 bps	-26 bps	-64 bps	-135 bps	53 bps	-37 bps	-22 bps	57 bps
1 Month After Inauguration	28 bps	51 bps	40 bps	-52 bps	-12 bps	41 bps		16 bps	34 bps	40 bps
3 Months After Inauguration	19 bps	6 bps	119 bps	-73 bps	6 bps	46 bps		20 bps	13 bps	63 bps
6 Months After Inauguration	71 bps	6 bps	209 bps	-86 bps	-10 bps	123 bps		52 bps	39 bps	105 bps
12 Months After Inauguration	177 bps	71 bps	231 bps	-93 bps	-33 bps	127 bps		80 bps	99 bps	124 bps

* 2016 Performance through 1/10/17.

Source: Bloomberg

10 Year Treasury Yield Post Election Performance

■ Election to Inauguration ■ 1 Month After Inauguration ■ 3 Months After Inauguration ■ 12 Months After Inauguration



Source: Bloomberg, Hedgeye

© Hedgeye Risk Management

Unlike equity performance, rates seem to have a more consistent trend following the inauguration. In 4 of the 6 periods for which we have data, rates rose notably in the 1Mo, 3Mo, 6Mo and 12Mo periods following the inauguration. The exceptions were 1992 and 2000 – both periods of economic slowdown marked by easing.

We think this is an important takeaway for investors considering the path over the coming year.

WHY RATES MATTER TO HOUSING INVESTORS

LTM Correlation to the 10-Year Treasury Yield

	Avg R Value	Std Dev		Median R Value	Std Dev
1 Large Cap Banks	0.73	0.09	Large Cap Banks	0.74	0.09
2 Midcap Banks	0.72	0.08	I-Banks/Boutiques	0.74	0.11
3 I-Banks/Boutiques	0.71	0.11	Midcap Banks	0.71	0.08
4 Small Cap Banks	0.65	0.16	Small Cap Banks	0.70	0.16
5 Mortgage Insurers	0.61	0.12	Financial Guaranty	0.68	0.54
6 Reinsurers	0.56	0.26	E-Brokers	0.61	0.39
7 Life Insurers	0.52	0.29	Reinsurers	0.61	0.26
8 E-Brokers	0.46	0.39	Mortgage Insurers	0.61	0.12
9 Financial Guaranty	0.41	0.54	Life Insurers	0.57	0.29
10 Auto Insurers	0.37	0.19	Mortgage Finance	0.45	0.35
11 P&C Insurers	0.35	0.34	P&C Insurers	0.45	0.34
12 Mortgage Finance	0.33	0.35	Debt Collectors	0.43	0.47
13 Consumer Finance	0.31	0.38	Consumer Finance	0.41	0.38
14 Debt Collectors	0.29	0.47	Auto Insurers	0.40	0.19
15 CRE Brokers	0.23	0.40	Exchanges	0.30	0.30
16 Exchanges	0.21	0.30	CRE Brokers	0.23	0.40
17 RE Services	0.17	0.50	Traditional AMs	0.20	0.35
18 Traditional AMs	0.13	0.35	Alternative AMs	0.17	0.40
19 Cards/Payments	0.13	0.35	RE Services	0.17	0.50
20 Insurance Brokers	0.12	0.24	Cards/Payments	0.06	0.35
21 Alternative AMs	0.09	0.40	Homebuilders	0.03	0.42
22 Homebuilders	0.05	0.42	Insurance Brokers	0.03	0.24
23 Building Products	(0.06)	0.22	Building Products	(0.01)	0.22
24 Fin Tech	(0.07)	0.42	SF REITs	(0.08)	0.06
25 SF REITs	(0.11)	0.06	Fin Services	(0.09)	0.28
26 Fin Services	(0.12)	0.28	Fin Tech	(0.15)	0.42
27 Home Centers	(0.21)	0.29	Home Centers	(0.21)	0.29
28 Apartment REITs	(0.24)	0.19	Apartment REITs	(0.26)	0.19
29 Title Insurers	(0.33)	0.31	Title Insurers	(0.49)	0.31

Mortgage Insurers	
Ticker	R Value
MTG	0.74
RDN	0.64
NMIH	0.57
ESNT	0.47
Average	0.61
Median	0.61
Std Dev	0.12

Title Insurers	
Ticker	R Value
STC	0.02
FAF	(0.49)
FNF	(0.52)
Average	(0.33)
Median	(0.49)
Std Dev	0.31

Home Centers	
Ticker	R Value
HD	(0.01)
LOW	(0.42)
Average	(0.21)
Median	(0.21)
Std Dev	0.29

RE Services	
Ticker	R Value
RMAX	0.52
RLGY	(0.19)
Average	0.17
Median	0.17
Std Dev	0.50

Apartment REITs	
Ticker	R Value
PPS	0.11
ESS	(0.06)
EQR	(0.19)
AIV	(0.20)
UDR	(0.32)
AVB	(0.37)
MAA	(0.41)
CPT	(0.45)
Average	(0.24)
Median	(0.26)
Std Dev	0.19

SF REITs	
Ticker	R Value
AMH	(0.07)
SBY	(0.08)
SWAY	(0.17)
Average	(0.11)
Median	(0.08)
Std Dev	0.06

Homebuilders	
Ticker	R Value
HOV	0.63
BZH	0.60
TOL	0.51
TMHC	0.40
WLH	0.31
MDC	0.27
KBH	0.03
MTH	(0.12)
SPF	(0.32)
LEN	(0.36)
PHM	(0.37)
NVR	(0.38)
DHI	(0.55)
Average	0.05
Median	0.03
Std Dev	0.42

Building Products	
Ticker	R Value
IBP	0.25
PGEM	0.15
AMWD	0.10
USG	0.08
BLD	0.06
AWI	0.03
SWK	(0.05)
OC	(0.07)
MHK	(0.08)
MAS	(0.26)
FBHS	(0.40)
SHW	(0.46)
Average	(0.06)
Median	(0.01)
Std Dev	0.22

These tables show the sensitivity of the various Financials & Housing subsectors to the 10-Year Treasury yield over the past year. We've highlighted the 8 housing sectors. 6 of the 8 are in the bottom quartile for rate sensitivity, meaning that that they are among the most inversely correlated subsectors in the group.

Source: Hedgeye, Factset

POST-ELECTION PERFORMANCE SNAPSHOT

Absolute Price Performance Since the Election

Abs Price Chg Post Election

1	Consumer Finance	28%
2	Midcap Banks	25%
3	Small Cap Banks	25%
4	I-Banks/Boutiques	24%
5	Financial Guaranty	24%
6	Mortgage Insurers	22%
7	E-Brokers	19%
8	Large Cap Banks	19%
9	RE Services	17%
10	Life Insurers	16%
11	Debt Collectors	15%
12	Alternative AMs	15%
13	Traditional AMs	14%
14	Homebuilders	14%
15	Auto Insurers	14%
16	Mortgage Finance	14%
17	P&C Insurers	10%
18	Reinsurers	10%
19	CRE Brokers	9%
20	Cards/Payments	9%
21	Building Products	8%
22	Insurance Brokers	8%
23	Exchanges	7%
24	Home Centers	7%
25	Fin Tech	5%
26	Fin Services	2%
27	Apartment REITs	2%
28	SF REITs	-2%
29	Title Insurers	-2%

Mortgage Insurers	
Ticker	Px Chg
RDN	28%
MTG	22%
NMIH	20%
ESNT	17%
Average	22%
Median	21%
Std Dev	5%

Title Insurers	
Ticker	Px Chg
FNF	1%
STC	-2%
FAF	-4%
Average	-2%
Median	-2%
Std Dev	3%

Home Centers	
Ticker	Px Chg
HD	8%
LOW	6%
Average	7%
Median	7%
Std Dev	1%

RE Services	
Ticker	Px Chg
RMAX	20%
RLGY	14%
Average	17%
Median	17%
Std Dev	4%

Apartment REITs	
Ticker	Px Chg
ESS	4%
EQR	3%
UDR	3%
AVB	2%
MAA	2%
CPT	2%
AIV	0%
PPS	-4%
Average	2%
Median	2%
Std Dev	2%

SF REITs	
Ticker	Px Chg
SBY	1%
SWAY	-2%
AMH	-4%
Average	-2%
Median	-2%
Std Dev	2%

Homebuilders	
Ticker	Px Chg
HOV	69%
BZH	31%
MDC	17%
TOL	13%
MTH	12%
NVR	11%
KBH	10%
TMHC	7%
SPF	6%
LEN	5%
PHM	1%
DHI	1%
WLH	-1%
Average	14%
Median	10%
Std Dev	19%

Benchmarks	
S&P 500	6%
XLF	17%
XHB	7%
ITB	7%

Building Products	
Ticker	Px Chg
PGEM	19%
BLD	18%
IBP	17%
USG	15%
SHW	11%
OC	8%
MAS	6%
MHK	4%
AWI	4%
AMWD	1%
SWK	0%
FBHS	-1%
Average	8%
Median	7%
Std Dev	7%

For the most part, the Housing Complex has performed as one would expect given their respective sensitivities to rates. 5 of the 8 Housing subsectors were among the bottom third of performance.

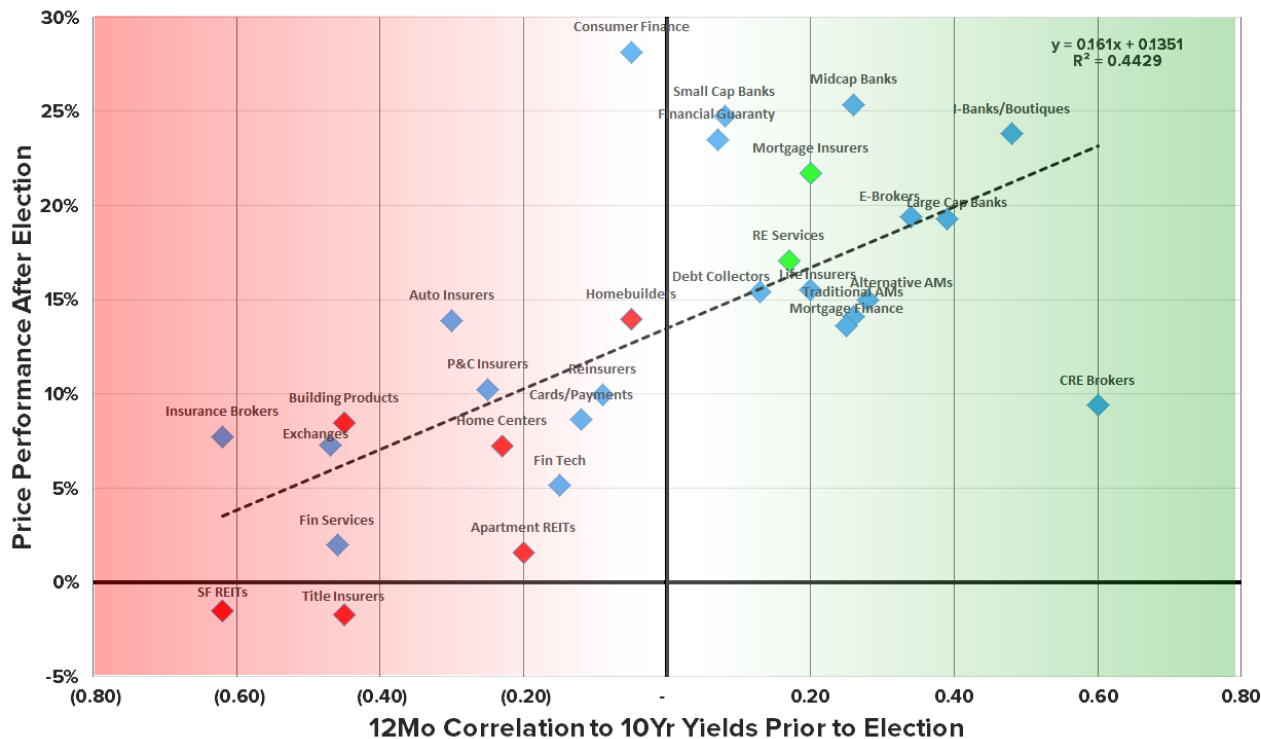
Source: Hedgeye, Factset

TEASING OUT PREDICTED VS ACTUAL PERFORMANCE

Pre-Election Correlation to 10Yr Yld vs Post Election Price Performance

X-Axis: 12Mo Correlation to 10Yr Yields (11/6/15-11/8/16)

Y-Axis: Average Price Performance Since the Election



Source: Hedgeye, Factset

© Hedgeye Risk Management

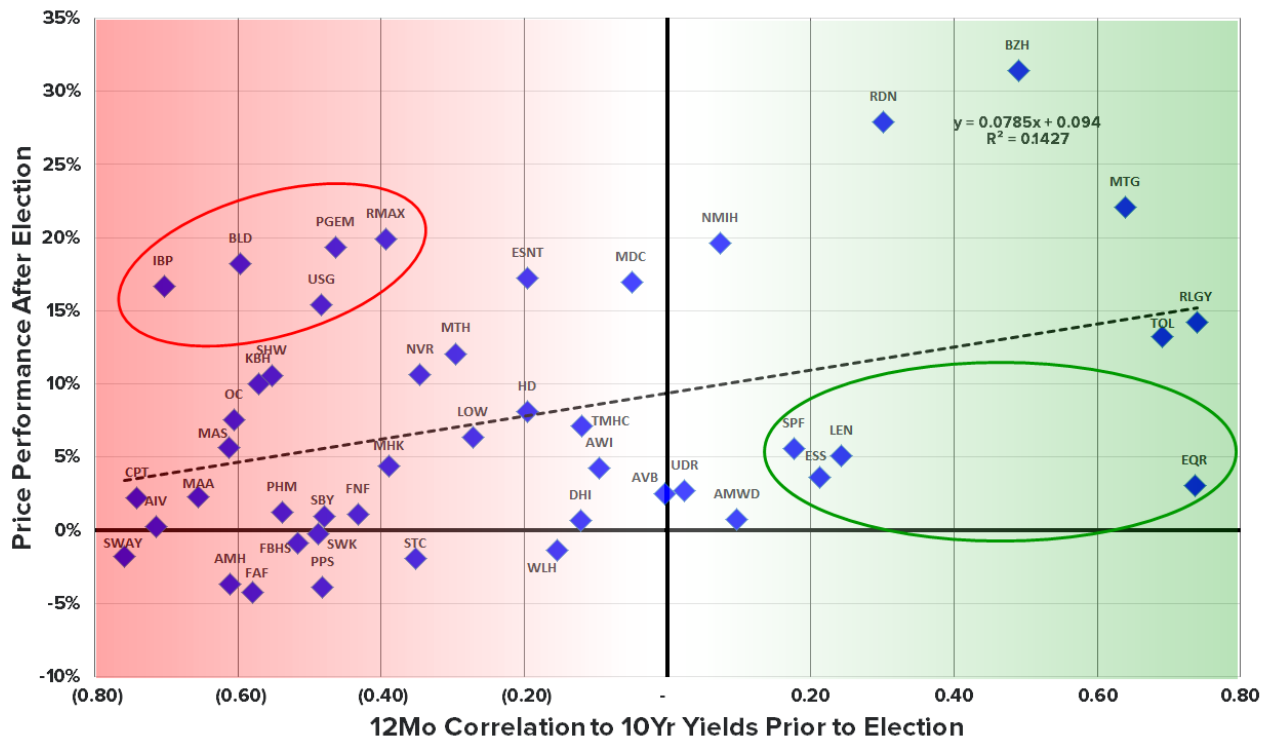
This chart shows the correlation to rates on the x-axis and the post-election price performance on the y-axis. Groups trading to the left of the zero line are those negatively exposed to rates, and vice versa. Groups trading above the regression line are overbought while those below are underbought.

INDIVIDUAL STOCKS ACROSS THE HOUSING COMPLEX

Pre-Election Correlation to 10Yr Yld vs Post Election Price Performance

X-Axis: 12Mo Correlation to 10Yr Yields (11/6/15-11/8/16)

Y-Axis: Average Price Performance Since the Election



In the same vein as the last chart, this chart shows correlation (x-axis) and post-election performance (y-axis) for the 45 housing stocks we track.

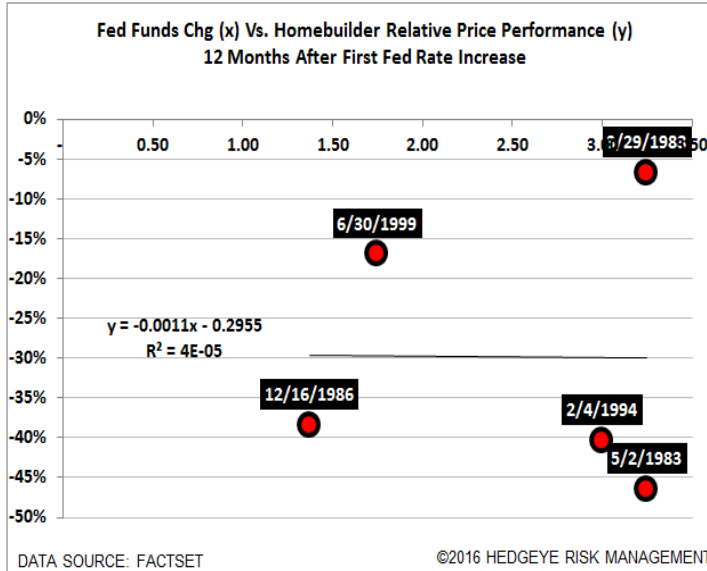
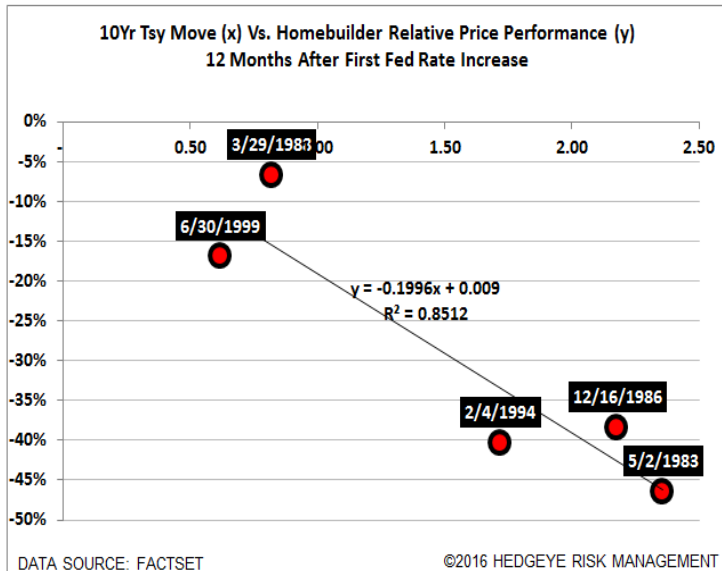
Again, those above the regression line are overvalued and those below undervalued on this 1-factor rate-based model.

A RATE CASE STUDY: HOMEBUILDERS

Not surprisingly, homebuilders hate rate hikes, and the strong negative slope (RSQ 0.85) to increases in the 10Yr Tsy show just how sensitive they are. The good news is that small increases in rates have historically produced small decreases in share prices.

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Homebuilders / Absolute Performance								Homebuilders / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	4%	-11%	0%	0%	14%	38%	86%	1%	-12%	-2%	0%	16%	32%	82%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-7%	13%	2%	0%	-17%	-19%	-12%	-19%	7%	-4%	0%	-10%	-25%	-17%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	22%	17%	3%	0%	-18%	-28%	-39%	17%	15%	3%	0%	-14%	-26%	-40%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-28%	13%	-6%	0%	5%	-6%	6%	-7%	8%	-5%	0%	1%	-10%	-7%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-4%	21%	1%	0%	52%	20%	-39%	-6%	14%	-1%	0%	36%	-1%	-38%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	60%	22%	13%	0%	-13%	-29%	-47%	47%	8%	7%	0%	-13%	-30%	-46%		
Average:	14				2.81			1.38	(1.43)		8%	13%	2%	0%	4%	-4%	-7%	5%	7%	0%	0%	3%	-10%	-11%		
Median:	11				3.13			1.27	(1.21)		0%	15%	1%	0%	-4%	-13%	-25%	-3%	8%	-1%	0%	-4%	-17%	-28%		

Source: Factset

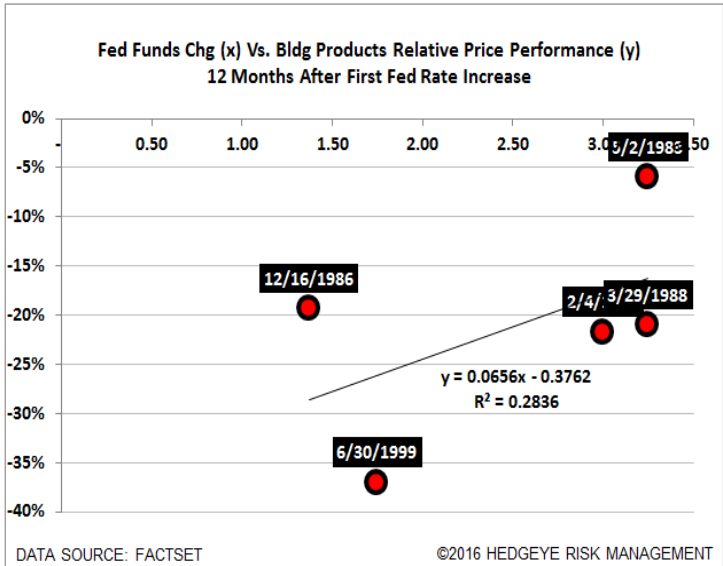
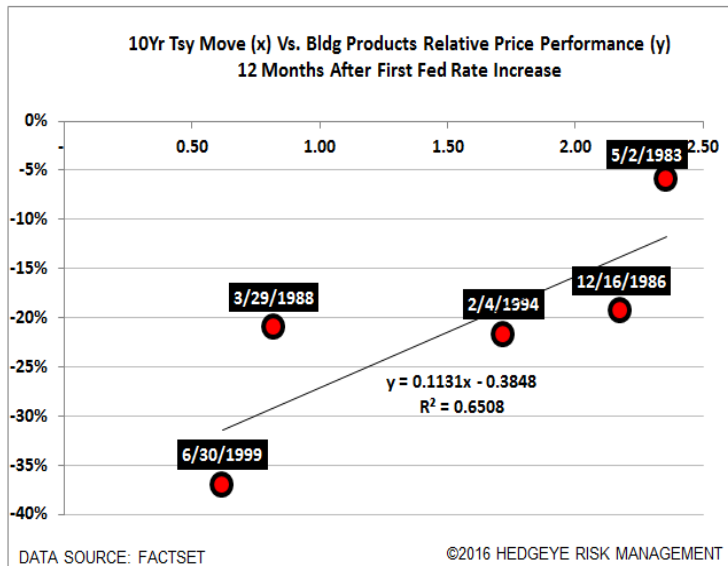


A RATE CASE STUDY: BUILDING PRODUCTS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Building Products / Absolute Performance								Building Products / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12		T-6	T-3	T-1	T-0	T+3	T+6	T+12	
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	12%	-1%	8%	0%	6%	37%	28%		9%	-2%	6%	0%	9%	32%	24%	
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-1%	7%	-2%	0%	-21%	-20%	-32%		-12%	1%	-7%	0%	-14%	-26%	-37%	
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	33%	16%	7%	0%	-9%	-18%	-20%		29%	14%	6%	0%	-6%	-17%	-22%	
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-21%	16%	4%	0%	5%	-16%	-9%		0%	11%	5%	0%	2%	-20%	-21%	
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-3%	12%	1%	0%	20%	13%	-20%		-6%	4%	-1%	0%	5%	-8%	-19%	
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	24%	22%	-3%	0%	-9%	-7%	-6%		11%	9%	-9%	0%	-10%	-8%	-6%	
Average:		14	2.81			1.38			(1.43)		7%	12%	2%	0%	-1%	-2%	-10%		5%	6%	0%	0%	-2%	-8%	-14%	
Median:		11	3.13			1.27			(1.21)		6%	14%	3%	0%	-2%	-12%	-14%		5%	6%	2%	0%	-2%	-12%	-20%	

Source: Factset

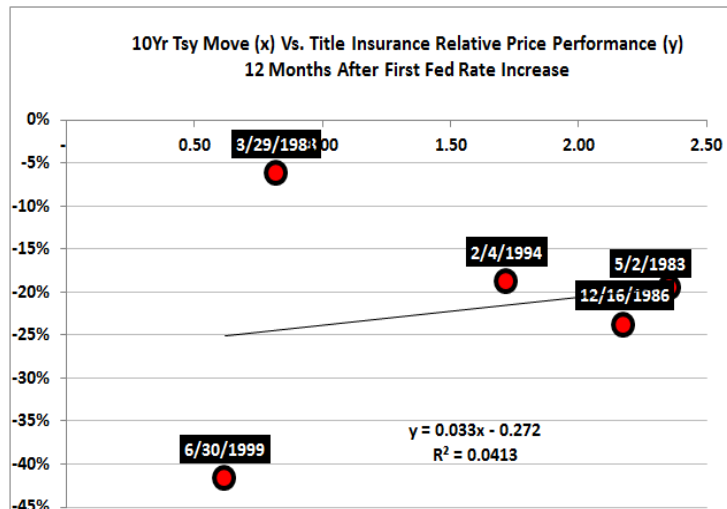
Building products companies consistently underperform when rates rise just like homebuilders. However, the slope is positive, which makes no sense. We take it on face value that there's an adverse relationship here, but that's about it.



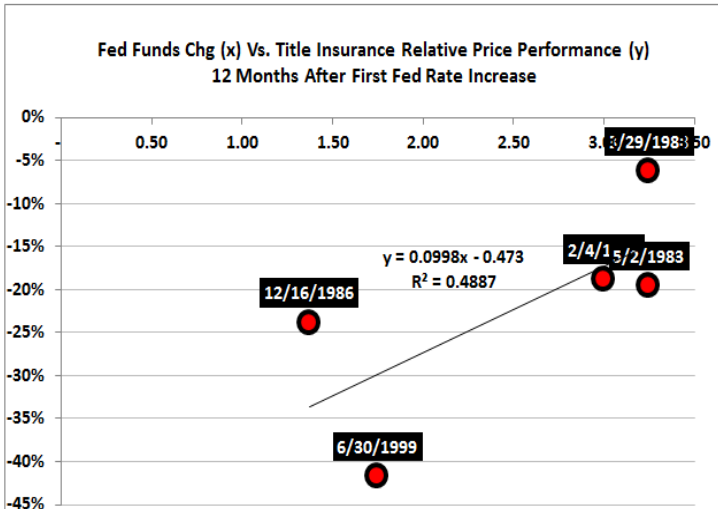
A RATE CASE STUDY: TITLE INSURANCE

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Title Insurance / Absolute Performance								Title Insurance / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	-17%	-16%	-1%	0%	15%	24%	24%	-20%	-16%	-3%	0%	18%	18%	20%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	-27%	27%	9%	0%	-24%	-33%	-37%	-39%	21%	3%	0%	-18%	-40%	-42%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	15%	3%	-3%	0%	-2%	-15%	-17%	10%	1%	-3%	0%	2%	-13%	-19%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-10%	16%	10%	0%	0%	1%	6%	11%	11%	11%	0%	-3%	-3%	-6%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-22%	4%	-12%	0%	16%	0%	-25%	-25%	-4%	-14%	0%	1%	-21%	-24%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	82%	58%	37%	0%	6%	0%	-20%	68%	44%	32%	0%	6%	0%	-20%		
Average:		14	2.81			1.38			(1.43)		3%	15%	7%	0%	2%	-4%	-11%	1%	9%	4%	0%	1%	-10%	-15%		
Median:		11	3.13			1.27			(1.21)		-14%	10%	4%	0%	3%	0%	-18%	-5%	6%	0%	0%	1%	-8%	-19%		

Source: Factset



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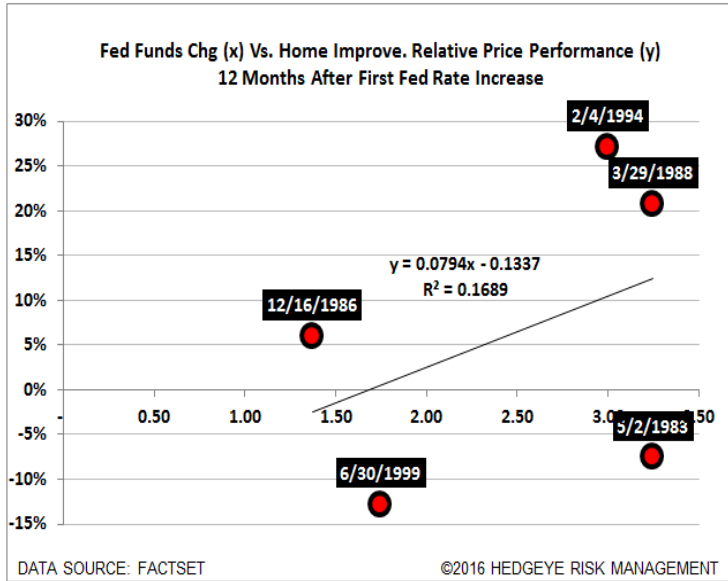
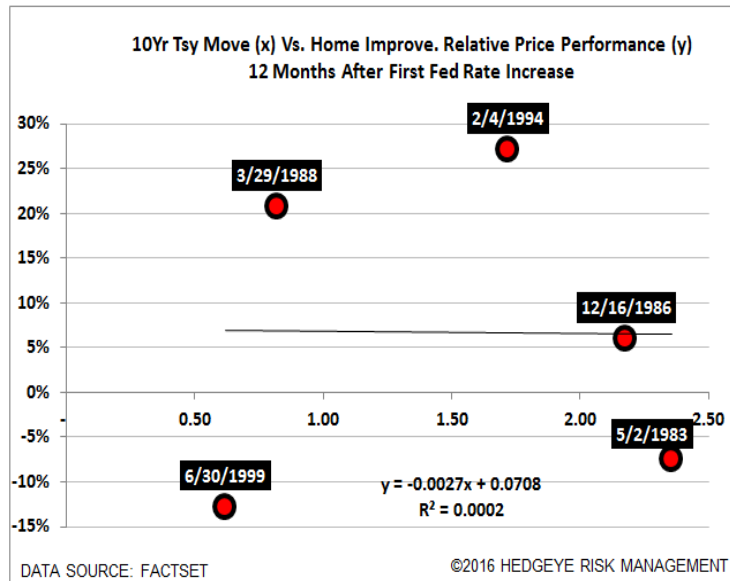
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Title insurers also underperform amid rising rates, but like building products companies they do so in a non-linear, low-RSQ way.

A RATE CASE STUDY: HOME CENTERS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Home Improvement / Absolute Performance								Home Improvement / Relative Performance							
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12		
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	-1%	-5%	-2%	0%	6%	14%	11%	-4%	-6%	-4%	0%	9%	8%	6%		
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	8%	-1%	12%	0%	-8%	28%	-8%	-4%	-8%	6%	0%	-1%	22%	-13%		
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	21%	9%	0%	0%	19%	16%	29%	16%	7%	-1%	0%	23%	18%	27%		
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-10%	21%	5%	0%	12%	9%	33%	11%	16%	5%	0%	9%	5%	21%		
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	-13%	12%	4%	0%	22%	42%	5%	-16%	4%	2%	0%	7%	21%	6%		
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	75%	26%	13%	0%	30%	3%	-8%	61%	13%	7%	0%	30%	2%	-8%		
Average:	14				2.81			1.38	(1.43)		13%	10%	5%	0%	14%	19%	10%	11%	4%	3%	0%	13%	13%	7%		
Median:	11				3.13			1.27	(1.21)		4%	11%	4%	0%	15%	15%	8%	3%	6%	4%	0%	9%	13%	6%		

Source: Factset



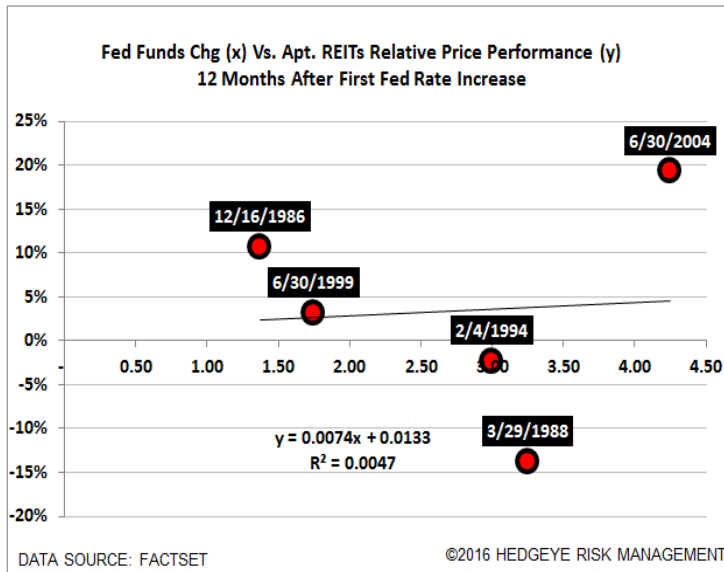
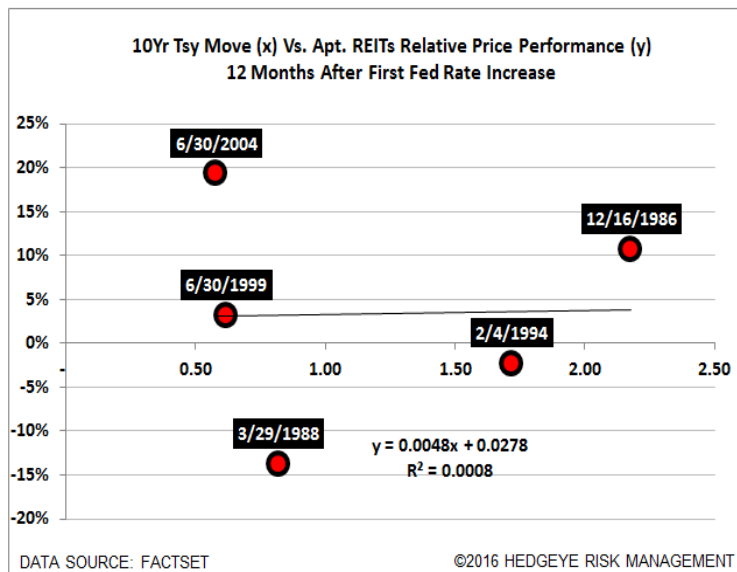
Home improvement chains also tend to perform respectably during higher rate periods.

A RATE CASE STUDY: APARTMENT REITS

Rate Hike Cycle			Fed Funds			10YR Tsy			The Curve?		Apartment REITs / Absolute Performance							Apartment REITs / Relative Performance						
Start	End	Mo	Start	End	Change	Start	End	Change	Delta	Direction	T-6	T-3	T-1	T-0	T+3	T+6	T+12	T-6	T-3	T-1	T-0	T+3	T+6	T+12
6/30/2004	6/29/2006	24	1.00	5.25	4.25	4.62	5.20	0.58	(3.67)	Much Flatter	4%	1%	2%	0%	3%	19%	24%	1%	0%	0%	0%	6%	13%	19%
6/30/1999	5/16/2000	11	4.75	6.50	1.75	5.81	6.43	0.62	(1.13)	Flatter	10%	16%	3%	0%	-7%	-9%	8%	-2%	10%	-3%	0%	0%	-15%	3%
2/4/1994	2/1/1995	12	3.00	6.00	3.00	5.94	7.66	1.72	(1.28)	Flatter	2%	-9%	-1%	0%	6%	1%	0%	-3%	-11%	-2%	0%	10%	2%	-2%
3/29/1988	2/24/1989	11	6.50	9.75	3.25	8.56	9.38	0.82	(2.43)	Much Flatter	-3%	4%	0%	0%	-4%	1%	-1%	18%	-1%	1%	0%	-8%	-3%	-14%
12/16/1986	9/4/1987	9	5.88	7.25	1.37	7.12	9.30	2.18	0.81	Much Steeper	9%	0%	-2%	0%	20%	16%	10%	6%	-8%	-4%	0%	4%	-4%	11%
5/2/1983	8/21/1984	16	8.50	11.75	3.25	10.26	12.62	2.36	(0.89)	Near Parallel	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Average:		14	2.81			1.38			(1.43)		4%	2%	0%	0%	3%	6%	8%	4%	-2%	-1%	0%	2%	-1%	3%
Median:		11	3.13			1.27			(1.21)		4%	1%	0%	0%	3%	1%	8%	1%	-1%	-2%	0%	4%	-3%	3%

Source: Factset

Apartment REITs tend to be much better relative performers when rates rise. What's more, these tables and charts don't reflect total return so the dividend would be in addition to this performance.



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