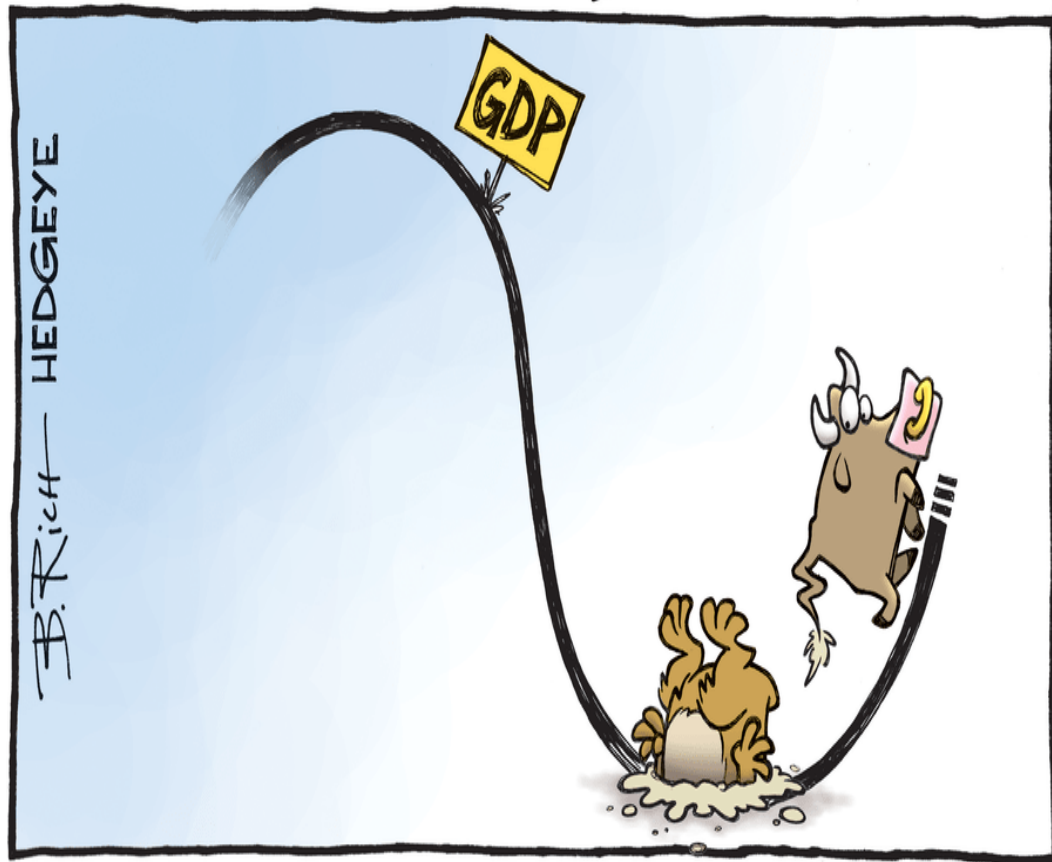




HOUSING: 2Q17 THEMES

WILL SMOOTH
SAILING GIVE WAY
TO CHOP?

May 22, 2017



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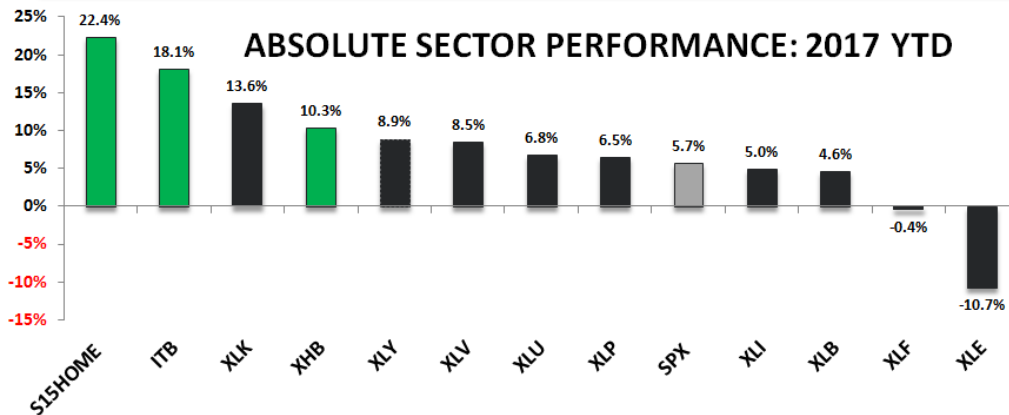
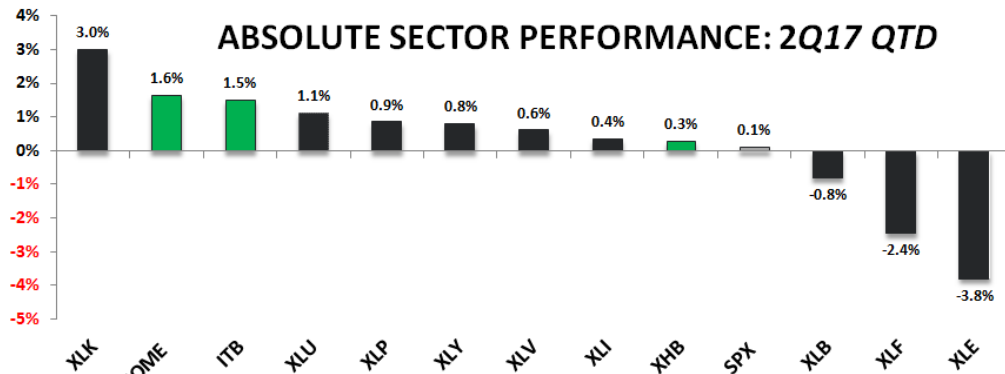
HEDGEYE HOUSING COMPENDIUM

		TRADE/TREND/TAIL						Rate of Change		
		Most Recent Data			Short Term	Intmed Term	Long Term	Short Term	Intmed Term	Long Term
		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	Feb-17	Better	5.9%	5.7%	5.1%	5.3%	0.2%	0.7%	0.6%
	Case-Shiller 20 City HPI MoM SA	Feb-17	Worse	0.7%	0.9%	0.9%	0.5%	-0.2%	-0.2%	0.2%
	Corelogic HPI - NSA YoY % Chg	Feb-17	Better	7.1%	6.3%	5.6%	5.6%	0.8%	1.5%	1.5%
	Corelogic (Ex-Dist.) HPI - NSA YoY % Chg	Feb-17	Better	5.9%	5.2%	4.7%	4.6%	0.7%	1.2%	1.2%
	FHFA HPI - NSA YoY % Chg	Feb-17	Better	6.4%	5.8%	6.0%	6.0%	0.6%	0.4%	0.4%
Supply & Demand: Existing	MBA Purchase Apps Index (Mo. Ave)	May-17	Better	247.0	241.8	226.2	229.7	2.2%	9.2%	7.5%
	NAR: Pending Home Sales (Index)	Mar-17	Worse	111.4	112.3	109.5	110.3	-0.8%	1.7%	1.0%
	NAR: Existing Home Sales (SAAR)	Mar-17	Better	5.71	5.47	5.49	5.51	4.4%	4.0%	3.7%
	NAR: Existing Home Inv. (millions units)	Mar-17	Worse	1.83	1.73	1.65	1.94	5.8%	10.9%	-5.7%
	NAR: Existing Home Inv: Months Supply	Mar-17	Worse	3.85	3.80	3.61	4.23	1.3%	6.6%	-9.2%
Supply & Demand: New Homes	NAHB: HMI	May-17	Better	70	68	65	64	2.0	5.0	0.1
	Census: Total Starts	Apr-17	Worse	1172	1203	1241	1197	-2.6%	-5.6%	-2.1%
	Census: SF Starts	Apr-17	Better	835	832	813	800	0.4%	2.7%	4.4%
	Census: Total Permits	Apr-17	Worse	1229	1260	1293	1203	-2.5%	-4.9%	2.2%
	Census: SF Permits	Apr-17	Worse	789	826	807	772	-4.5%	-2.2%	2.2%
	Resi Construction Spending (in Billions)	Mar-17	Better	510	504	482	473	1.2%	5.8%	7.8%
	Census: New Home Sales	Mar-17	Better	621	587	535	574	5.8%	16.1%	8.1%
	Census: New Home Inventory (000)	Mar-17	Worse	266	260	259	248	2.3%	2.7%	7.1%
Miscellaneous	Interest Rates (30 Year FRM)	Mar-17	Worse	4.39%	4.33%	4.36%	3.96%	0.1%	0.0%	0.4%
	NAR: Affordability Index (Composite)	Mar-17	Worse	158.2	160.6	162.1	163.5	-1.5%	-2.4%	-3.2%
	ITB Price (EOP)	Mar-17	Better	31.70	29.54	28.02	28.03	7.3%	13.1%	13.1%
	XHB Price (EOP)	Mar-17	Better	36.92	35.20	34.60	34.39	4.9%	6.7%	7.4%

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

HEDGEYE

HOUSING VS OTHER SECTORS THIS FAR THIS YEAR



2017 YTD HOUSING CATEGORY RETURNS

HOUSING: SUBSECTOR PERFORMANCE

HEDGEYE HOUSING

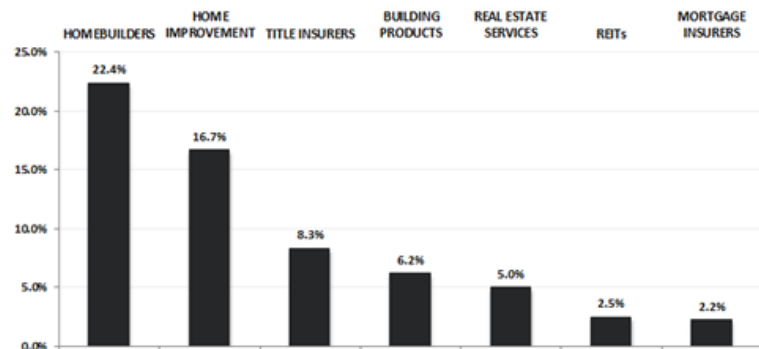
INDEX	Ticker	2Q16 % Chg	3Q16 % Chg	4Q16 % Chg	1Q17 % Chg	2017 TD % Chg
S&P 500	SPX	1.9%	3.3%	3.3%	5.5%	5.8%
HOMEBUILDERS						
S&P Homebuilder Index	S15HOME	1.6%	-1.7%	-2.5%	20.4%	22.4%
	Relative	-0.3%	-5.0%	-5.7%	14.9%	16.6%
BUILDING PRODUCTS						
S&P Building Products Index	S15BUILX	4.5%	7.1%	-3.6%	5.9%	6.2%
	Relative	2.6%	3.7%	-6.9%	0.4%	0.4%
HOME IMPROVEMENT						
S&P Home Improvement Index	S5HOMI	-1.7%	-2.2%	2.6%	11.2%	16.7%
	Relative	-3.6%	-5.5%	-0.7%	5.6%	10.9%
REITs						
Apartment REITs*	REIT U Index	-0.9%	-3.8%	1.2%	-0.6%	2.5%
	Relative	-2.8%	-7.1%	-2.1%	-6.1%	-3.3%
REAL ESTATE SERVICES						
Real Estate Services*	RESRVCS U Index	-6.9%	-2.4%	13.3%	10.5%	5.0%
	Relative	-8.8%	-5.7%	10.0%	5.0%	-0.8%
MORTGAGE INSURERS						
Mortgage Insurers*	MI U Index	-8.5%	31.0%	30.3%	4.3%	2.2%
	Relative	-10.4%	27.7%	27.1%	-1.3%	-3.6%
TITLE INSURERS						
Title Insurers*	TI U Index	12.7%	3.2%	-4.6%	4.1%	8.3%
	Relative	10.8%	-0.1%	-7.8%	-1.4%	2.5%
SUBSECTOR AVE						
	Abs	0.1%	4.5%	5.2%	8.0%	9.1%
	Relative	-1.8%	1.1%	2.0%	2.4%	3.2%

*Equal Weighted Composites: REITs: *AIY, AVB, CPT, EQR, ESS, MAA, UDR*; RE Services: *RLG, RMAX*; MI: *ESNT, MTG, NMH, RDN*; TI: *FNF, FAF, STC, BKFS*

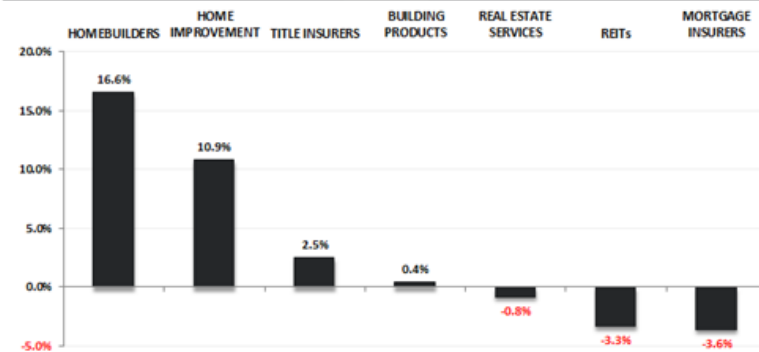
Source: Bloomberg

2017 PERFORMANCE

ABSOLUTE

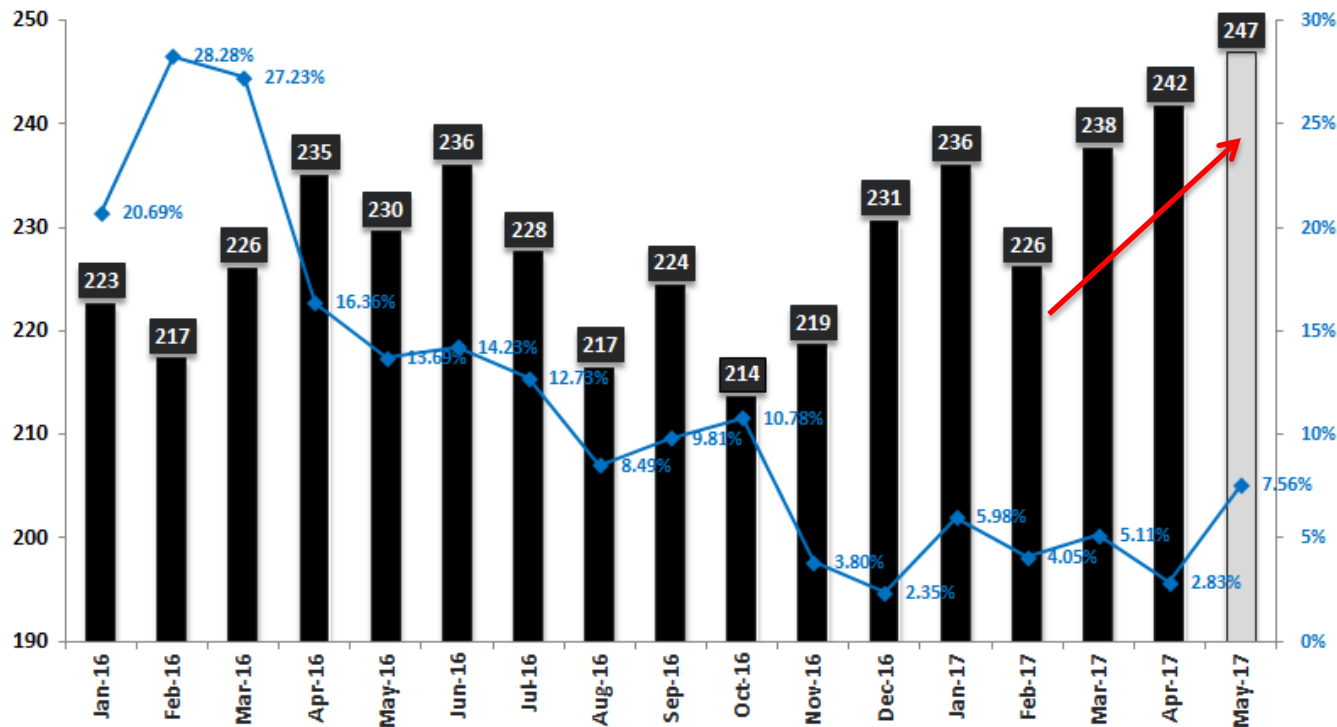


RELATIVE



PURCHASE APPLICATIONS: ACCELERATING

MBA Mortgage Purchase Applications Monthly

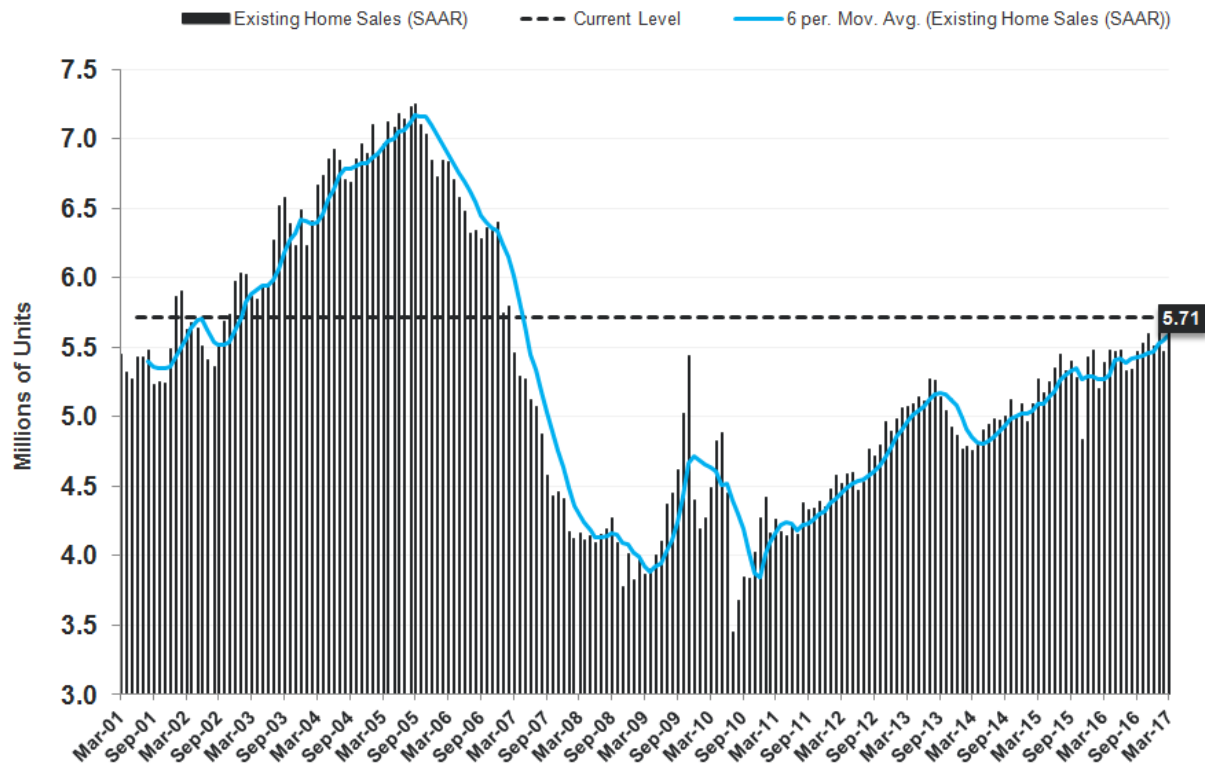


Source: Bloomberg, MBA

May volumes are up 7.5% Y/Y – the fastest rate of growth so far this year.

EXISTING HOME SALES → STILL BELOW PEAK

EXISTING HOME SALES



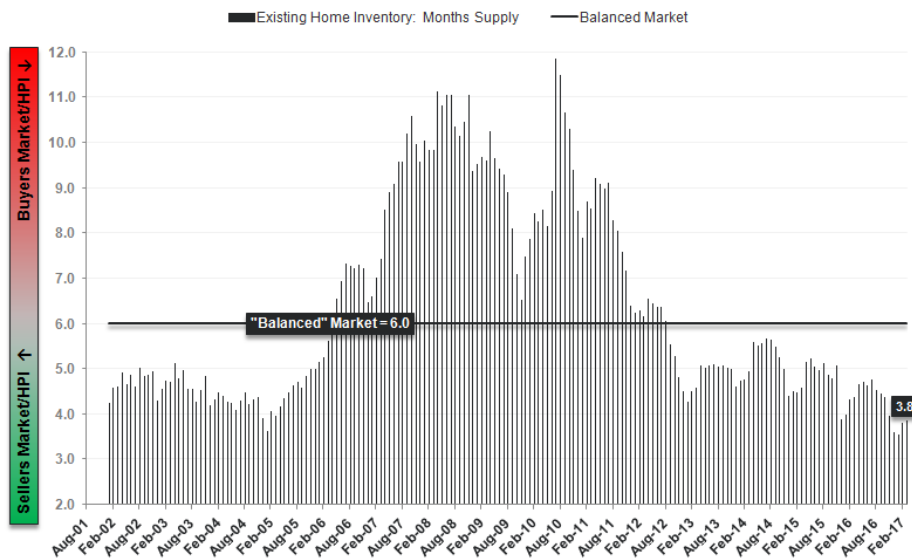
DATA SOURCE: NAR, BLOOMBERG

Existing Home Sales reached a new cycle high in March, coming in at 5.71mn (SAAR) home sales.

Though this represents the highest level in 10 years, we are still roughly 27% below the prior cycle peak, where 7.25mn (SAAR) homes were sold (September 2005).

EXISTING HOME INVENTORY: | TIGHT |

EXISTING HOME INVENTORY: MONTHS SUPPLY

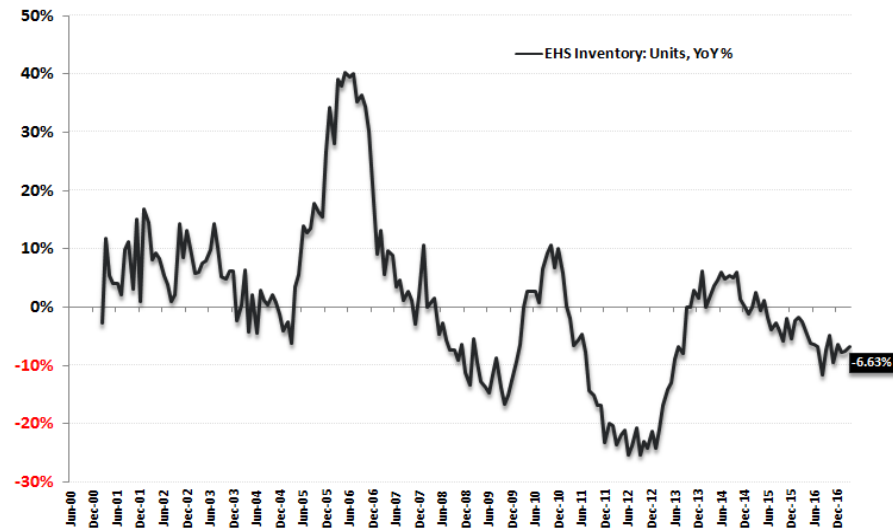


DATA SOURCE: NAR, BLOOMBERG

MONTHS SUPPLY

At 3.85 months, March inventory is currently the tightest on record.

Existing Home Sales: Units of Inventory, YoY %



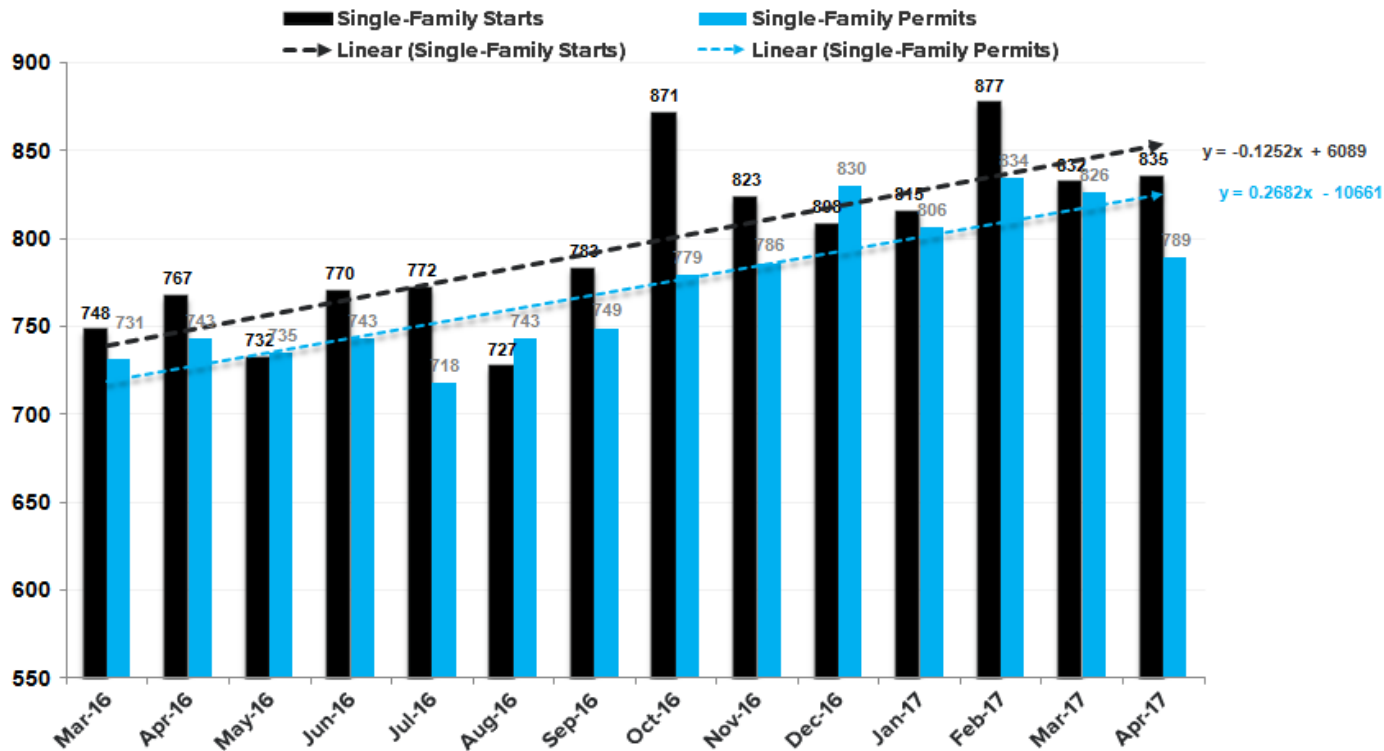
DATA SOURCE: BLOOMBERG, NAR

UNIT SUPPLY

Inventory levels, meanwhile, continue to contract, posting the 24th consecutive month of Y/Y decline.

SF STARTS & PERMITS: SOLDIERING ON

SINGLE FAMILY STARTS & PERMITS



DATA SOURCE: BLOOMBERG, CENSUS BUREAU

Single Family construction activity continued to ramp up through the first quarter.

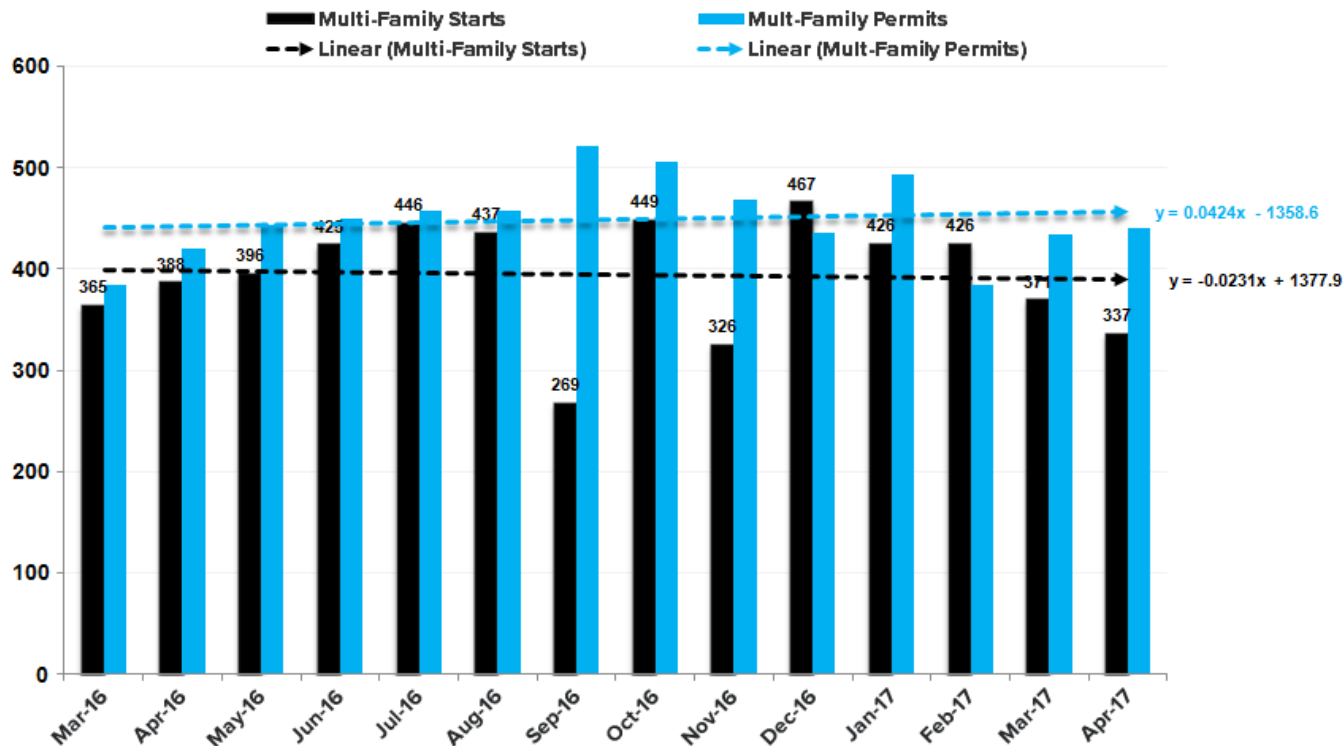
1Q 2017 vs 1Q 2016

SF Starts: +6% Y/Y

SF Permits: +13% Y/Y

MULTI-FAMILY: THE PARTY'S OVER

MULTI-FAMILY HOUSING STARTS

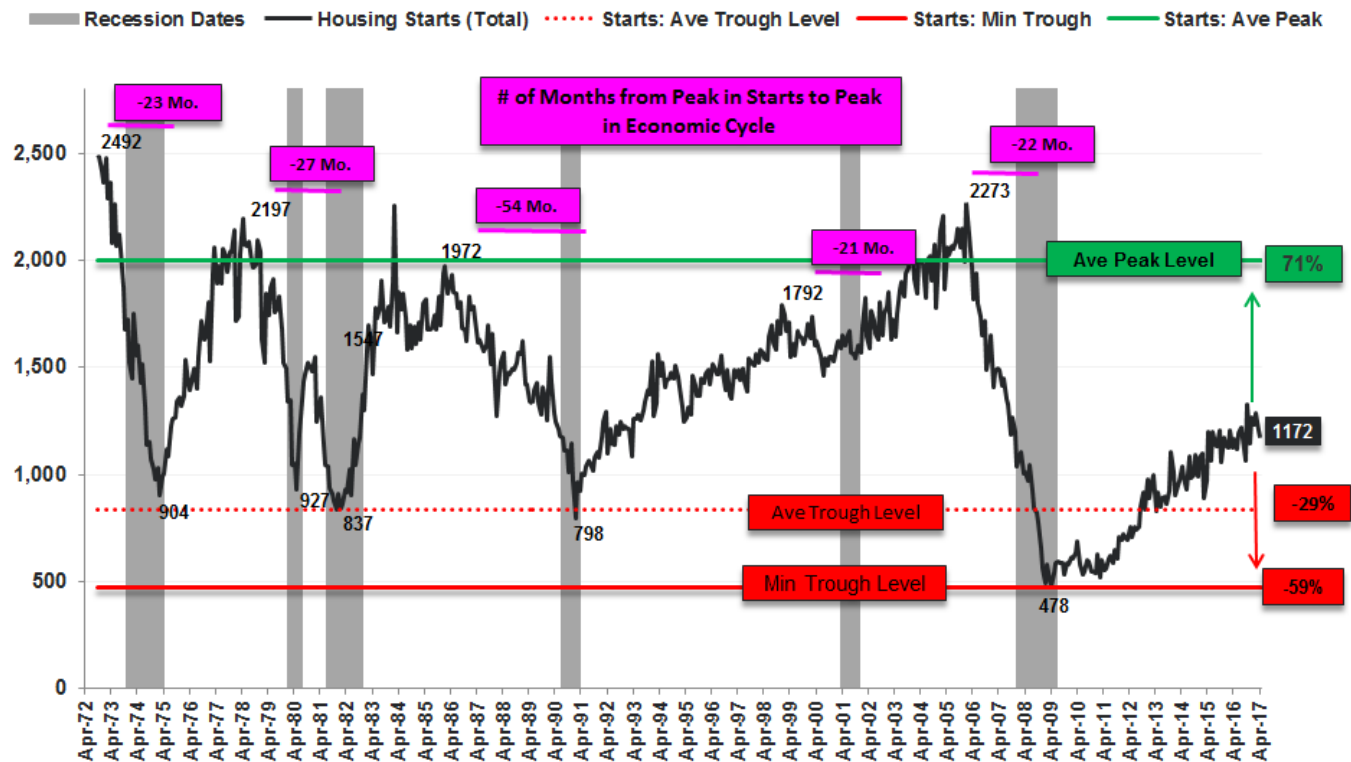


DATA SOURCE: BLOOMBERG, CENSUS BUREAU

The trend in Multi-Family construction activity has been essentially flat over the course of the past year.

HOUSING STARTS STILL HAVE SIGNIFICANT UPSIDE

HOUSING STARTS

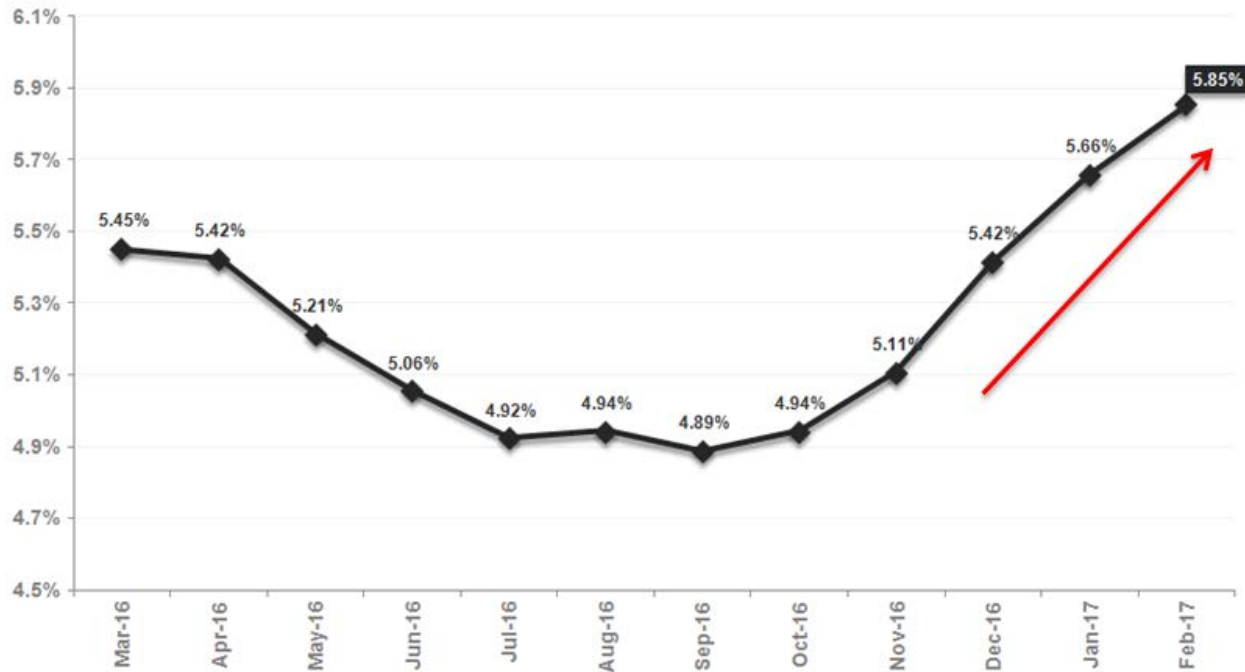


DATA SOURCE: BLOOMBERG, NBER, CENSUS BUREAU, HRM

Looking back across the last ~45 years, the upside/downside ratio for housing starts is currently +71%/-29%.

HOME PRICES ARE ACCELERATING

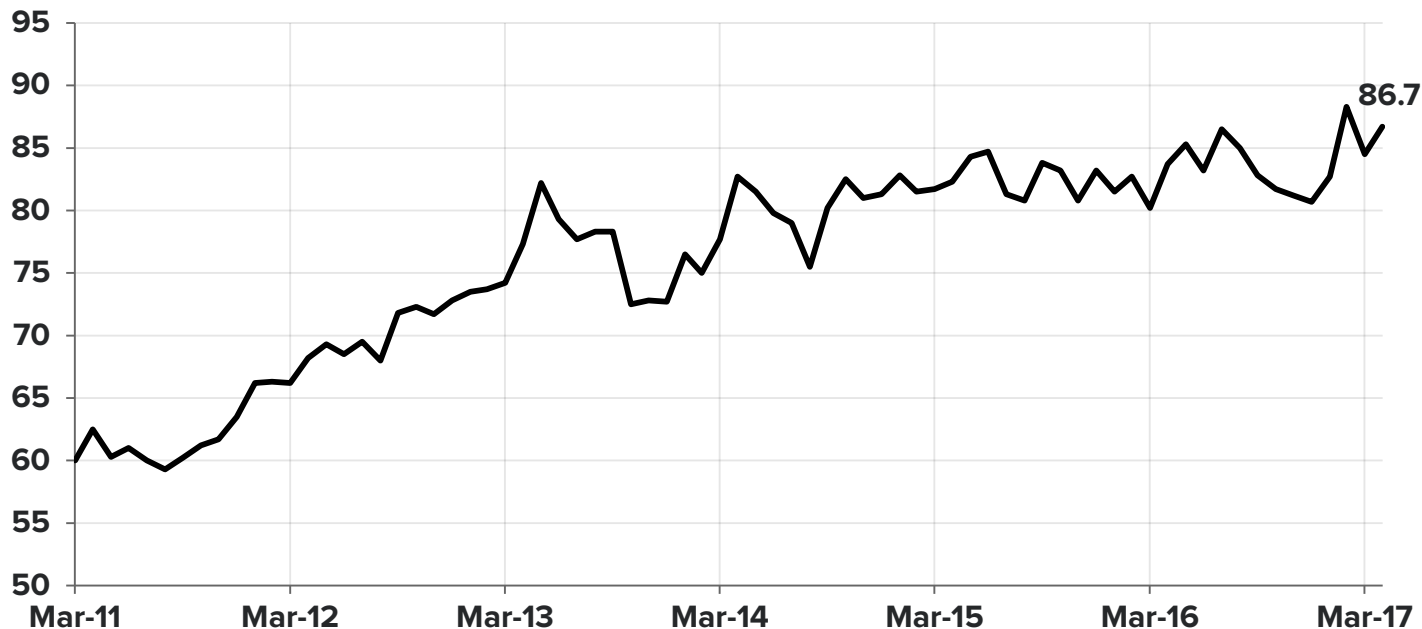
CASE-SHILLER 20 CITY HPI YOY NSA



The heretofore home price tug-of-war between flat demand and tight supply appears to finally be breaking in the direction of tight supply, i.e. home prices are accelerating.

HOUSING CONFIDENCE = ELEVATED

Fannie Mae Home Purchase Sentiment Index

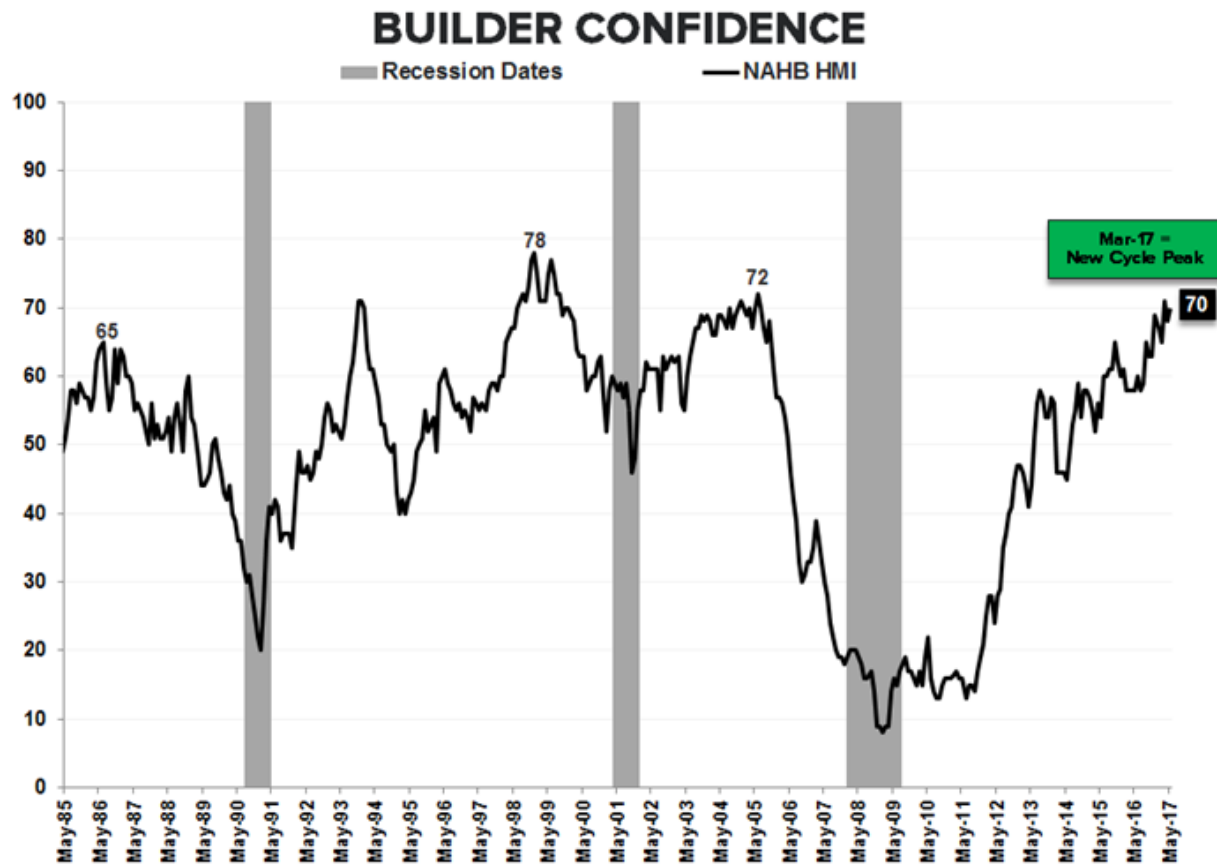


Home Purchase sentiment in the Fannie Mae HPSI rebound in April, after declining -3.8 points in March.

Source: Fannie Mae

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BUILDER CONFIDENCE = 12Y HIGHS

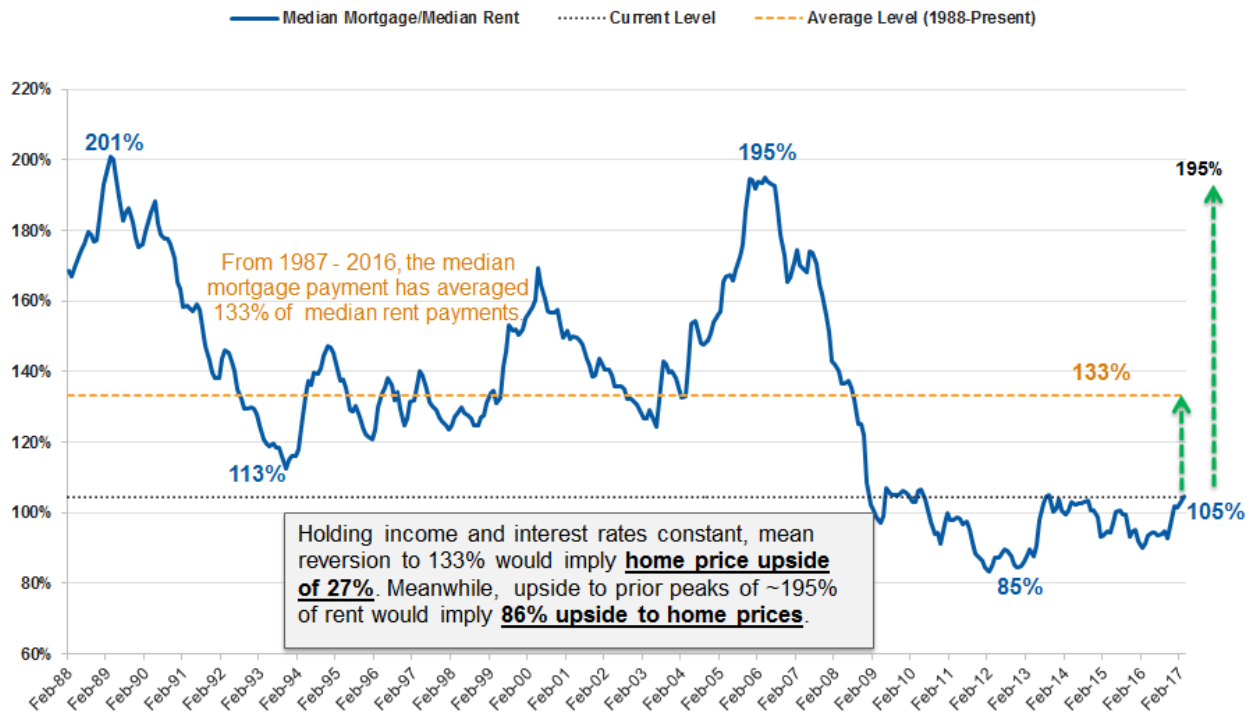


NAHB Builder Confidence Surveys (HMI) increased +2 points sequentially in May.

The latest reading is just 1 point below the new cycle high recorded in March.

AFFORDABILITY DYNAMICS: MORTGAGE VS RENT

RATIO OF MEDIAN MORTGAGE PAYMENT TO MEDIAN RENT



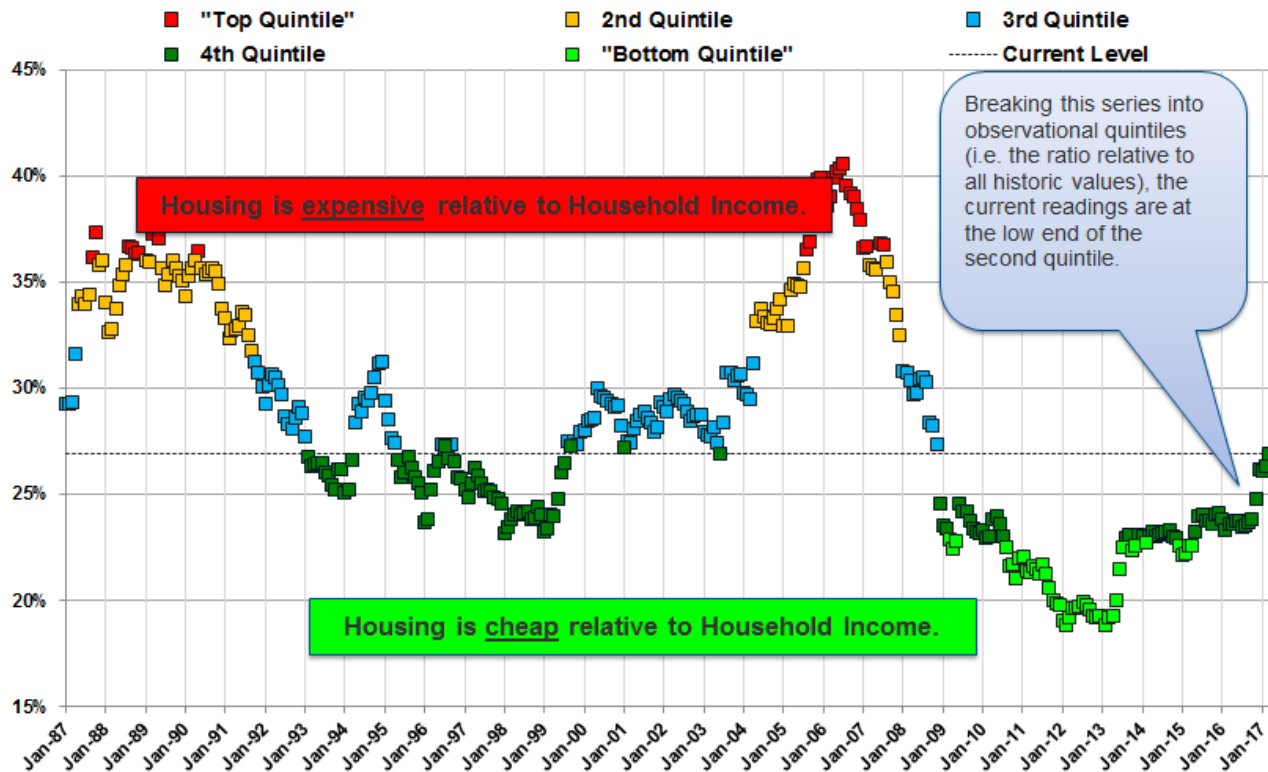
The average ratio of median mortgage payment to median rental payment has been 133% from 1988-Present. The current level of 10% implies home price upside of 27% from a mean reversion standpoint.

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

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AFFORDABILITY DYNAMICS: MORTGAGE VS INCOME

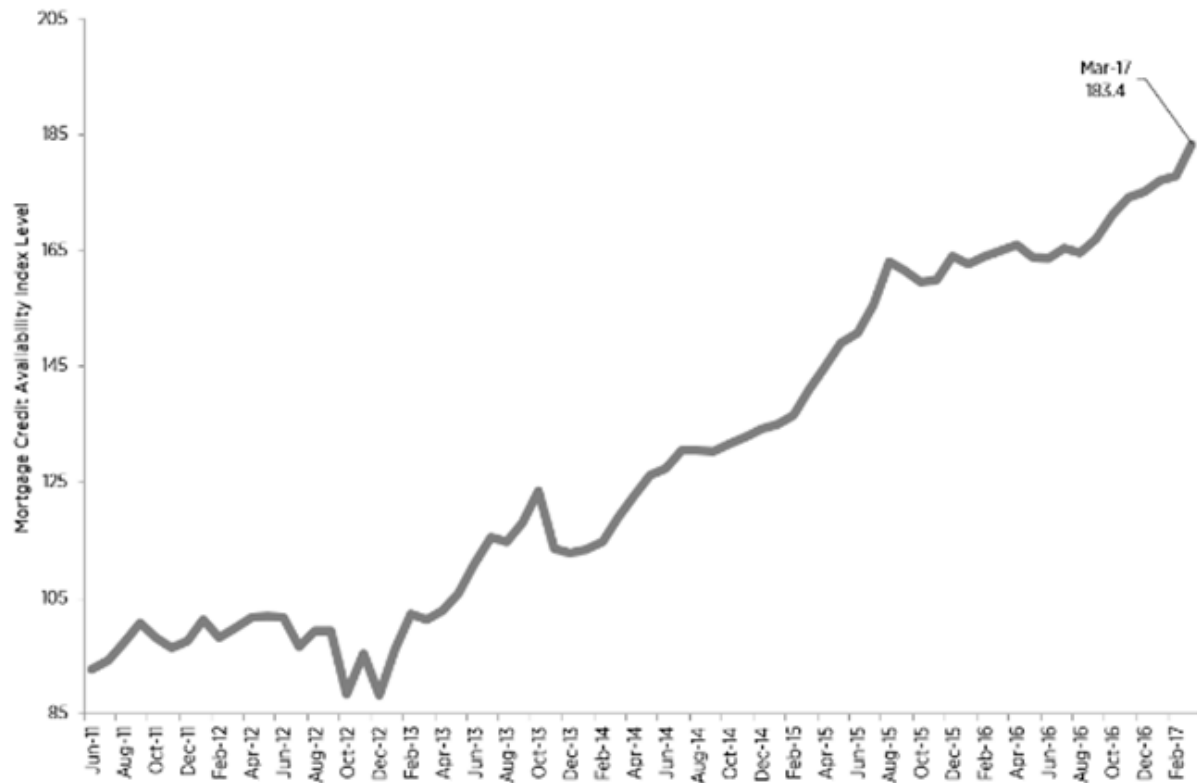
Median Mortgage Payment as % of Median Income



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 band signals very late cycle & a coming correction/crash.

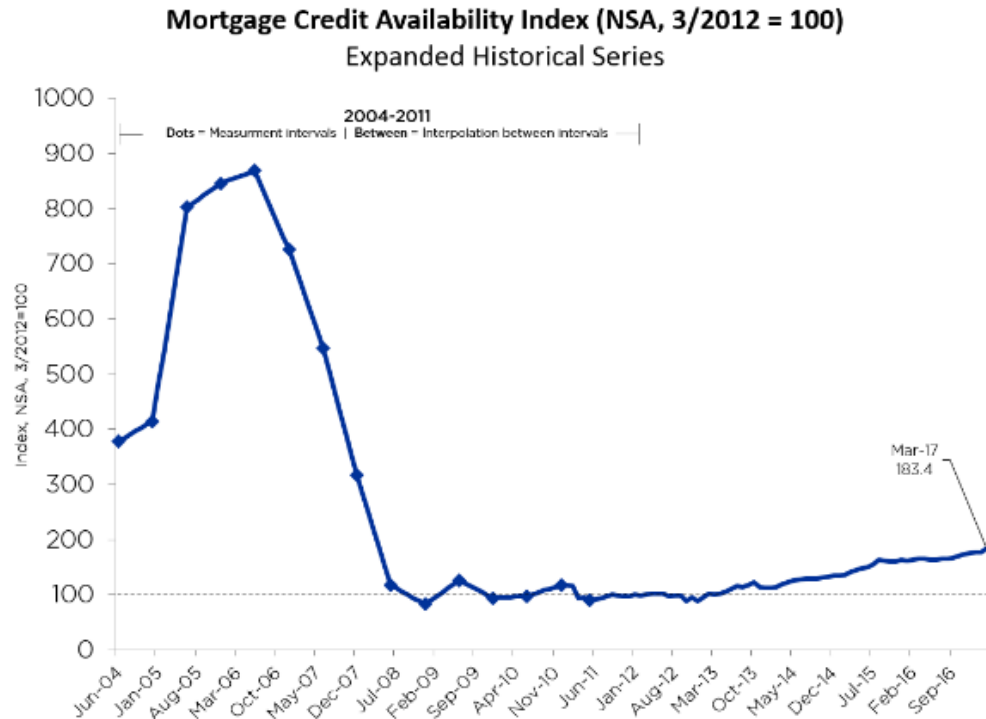
MORTGAGE CREDIT AVAILABILITY: MCAI

Mortgage Credit Availability Index, Index Level by Month
(NSA, 3/2012=100)



The Mortgage Bankers Association MCAI (Mortgage Credit Availability Index) allows for the comparison of mortgage access over time. The series has been trending steadily higher since late-2012.

MORTGAGE CREDIT AVAILABILITY: MCAI



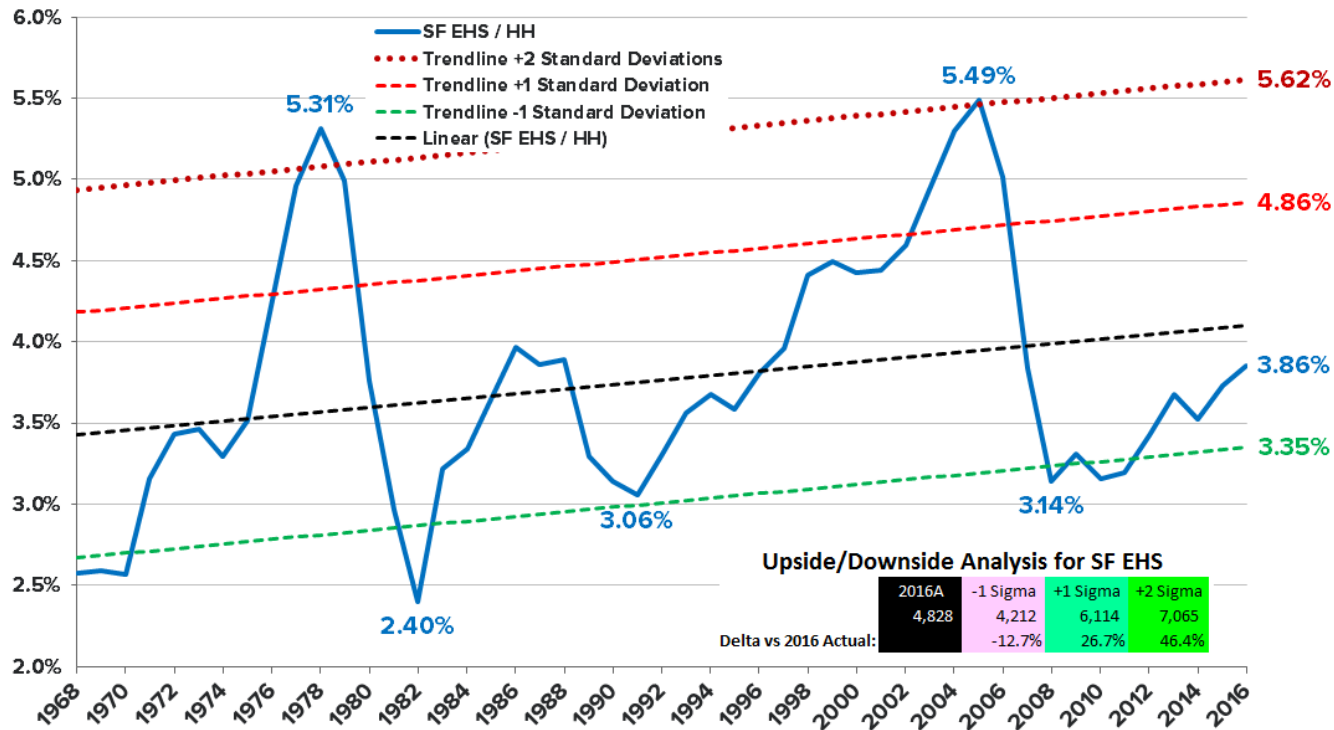
That said, the MCAI still has a LONG way to go before it renormalizes.

Source: Mortgage Bankers Association; Powered by Ellie Mae's AllRegs® Market Clarity®

Data prior to 3/31/2011 was generated using less frequent and less complete data measured at 6-month intervals interpolated in the months between for charting purposes.

HOUSING TURNOVER → QUANTIFYING THE LONG BALL

Housing Turnover (1968-2016) -- SF EHS / HH



Source: Census Bureau, NAR

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Mapping SF EHS as a function of Total Households, we find that the current cycle remains nearer the bottom of the range. Assuming no additional Household growth, an increase to +1 Standard Deviation would produce an increase of 27% in EHS while a +2 Sigma move would yield a 46% increase in unit volume.

12 MILLION CREDIT SCORES SET TO RISE

MARKETS | CREDIT MARKETS

Updated March 12, 2017 6:33 p.m. ET

Credit Reports to Exclude Certain Negative Information, Boosting FICO Scores

Changes could improve credit scores for millions of consumers, may pose risks for lenders

Extending Credit

Credit reports will soon ignore many civil judgments and tax liens lodged against consumers.

Estimates of how much each is worth, on average

Federal tax liens	\$69,000
State tax liens	\$5,000
Civil judgments	\$7,000

Changes coming around July 1 are expected to raise scores

Estimated points score will be raised by	Expected consumers affected
at least 40 points	700,000
less than 20 points	just under 11 million

Note: FICO credit scores range from 300-850. Below 660 is usually considered subprime.

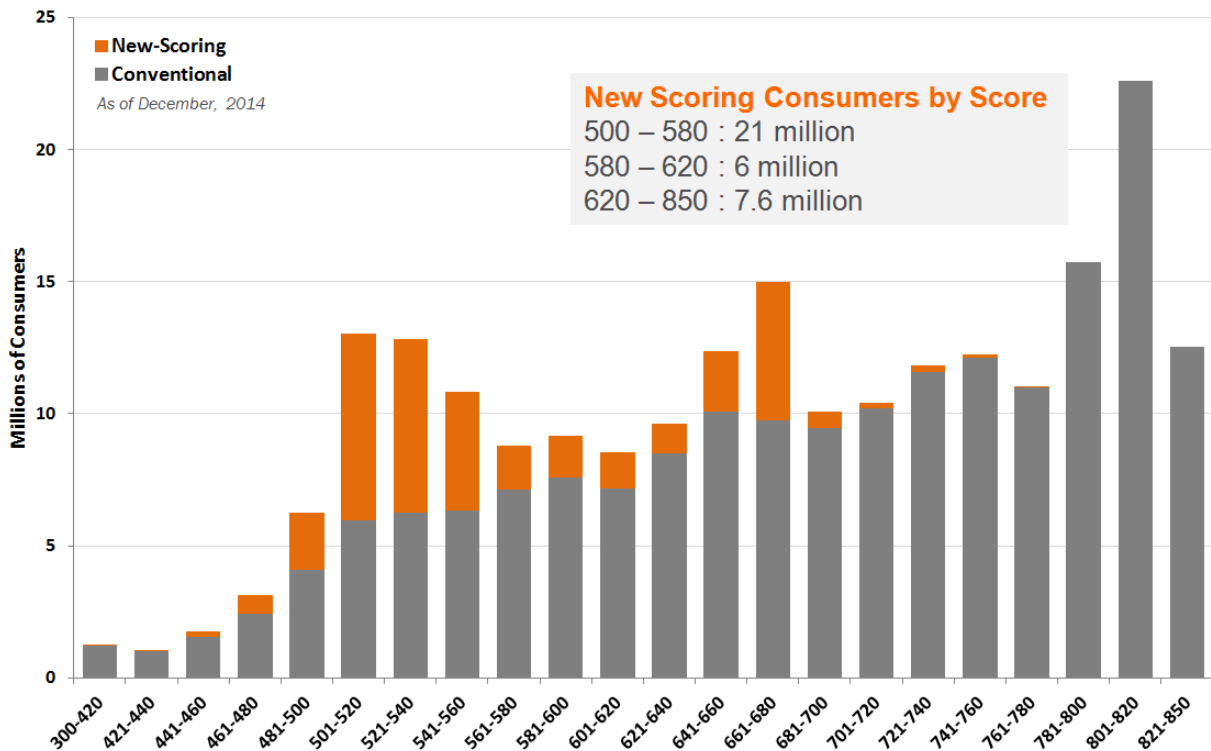
Sources: LexisNexis Risk Solutions (value); FICO (scores) THE WALL STREET JOURNAL.

Equifax, Experian and TransUnion recently decided to remove tax-lien and civil-judgment data starting around July 1, according to the Consumer Data Industry Association, a trade group that represents them. The firms will do so if those data don't include a complete list of at least three data points: a person's name, address and either a social security number or date of birth.

Many liens and most judgments don't include all three or four. This change will apply to new tax-lien and civil-judgment data that are added to credit reports as well as existing data on the reports.

The result will make many people who have these types of credit-report blemishes look more creditworthy.

VANTAGESCORE POTENTIAL

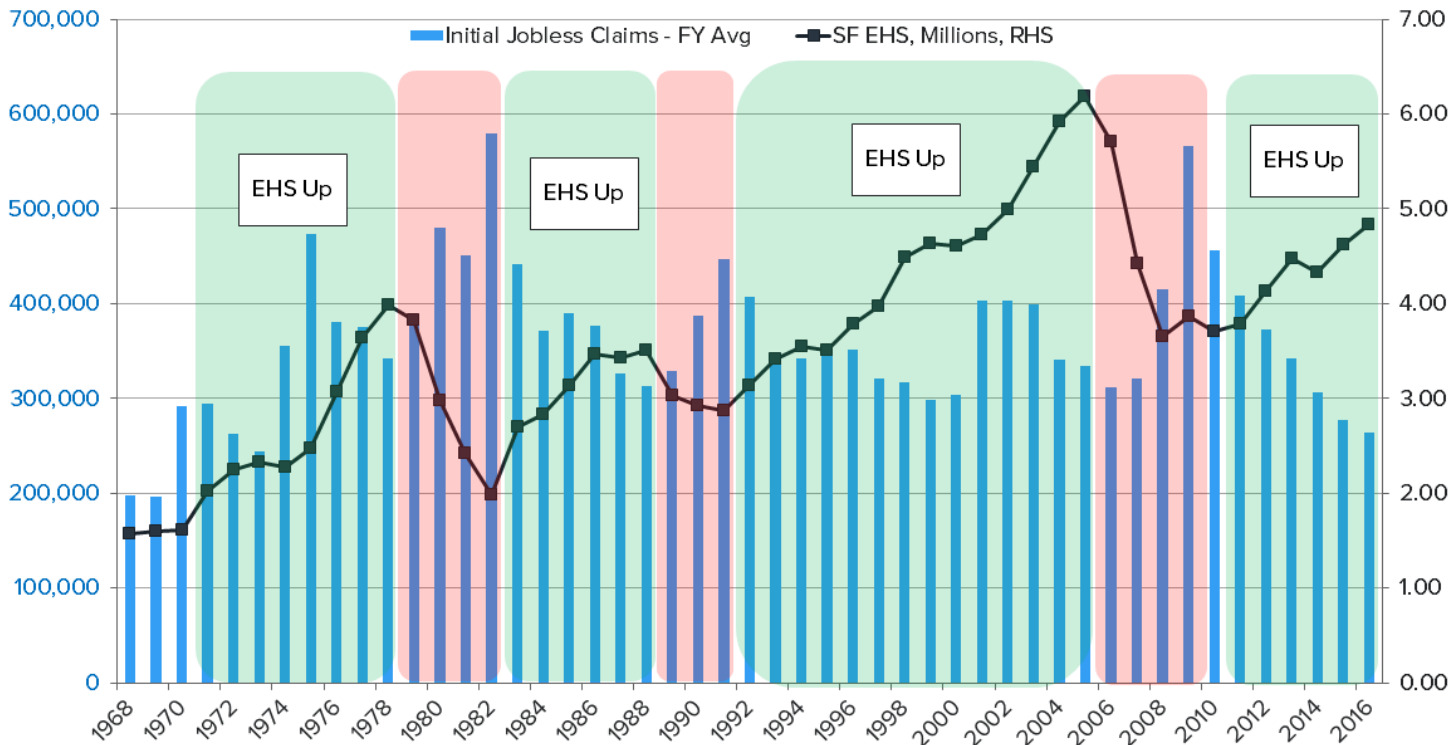


VantageScore Solutions, LLC © 2015 11

VantageScore GSE adoption is another deep threat as it would add ~35mn more potential borrowers to the population of credit-eligible people by using nontraditional scoring methods such as utility bills, cell phone bills and rental payment history.

IN THE LONG RUN, WHAT MATTERS MOST IS LABOR

Labor Market vs Housing Market



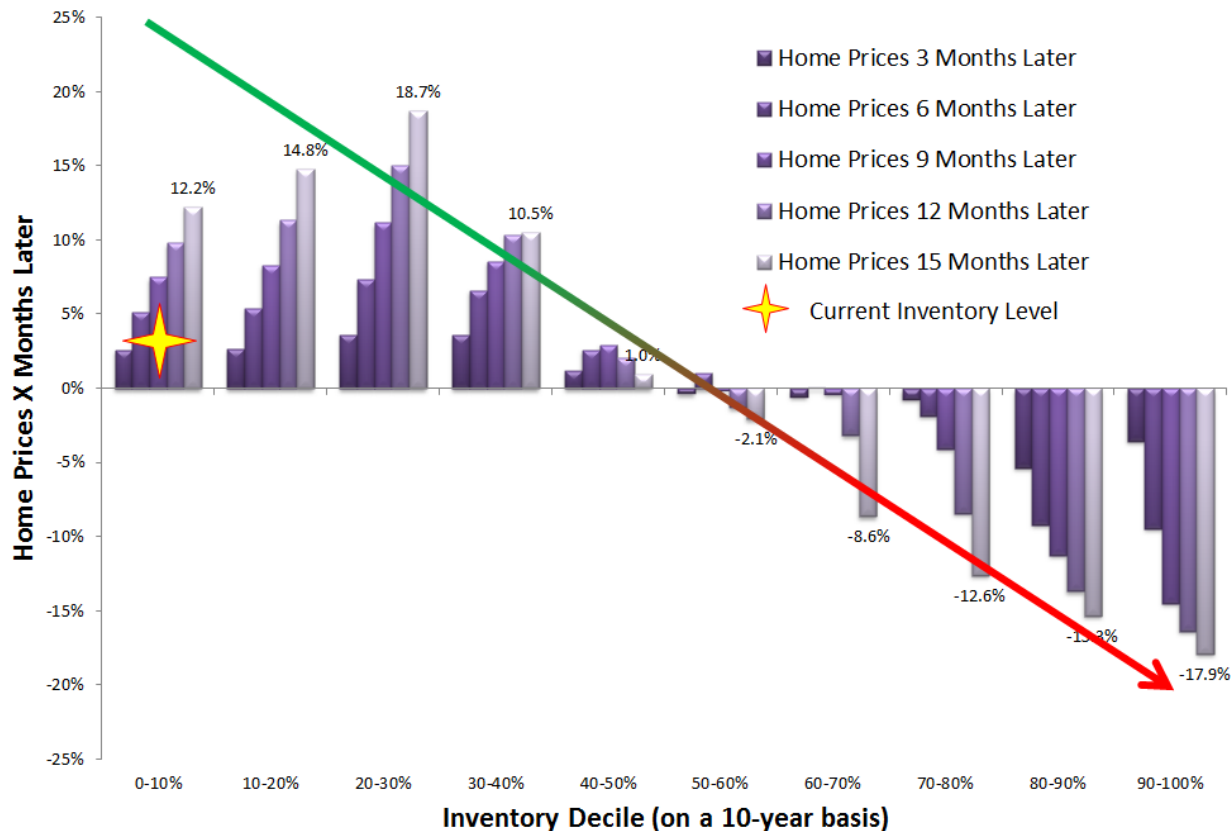
Source: BLS, NAR

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We think this chart demonstrates pretty clearly that EHS fall only in periods of significant labor market deterioration. Interestingly, sometimes the housing market soldiers right through mild recessions, barely skipping a beat (i.e. the 1970s & the early 2000s).

SUPPLY ↓, PRICE ↑

FUTURE HOME PRICE PERFORMANCE BASED ON INVENTORY DECILES

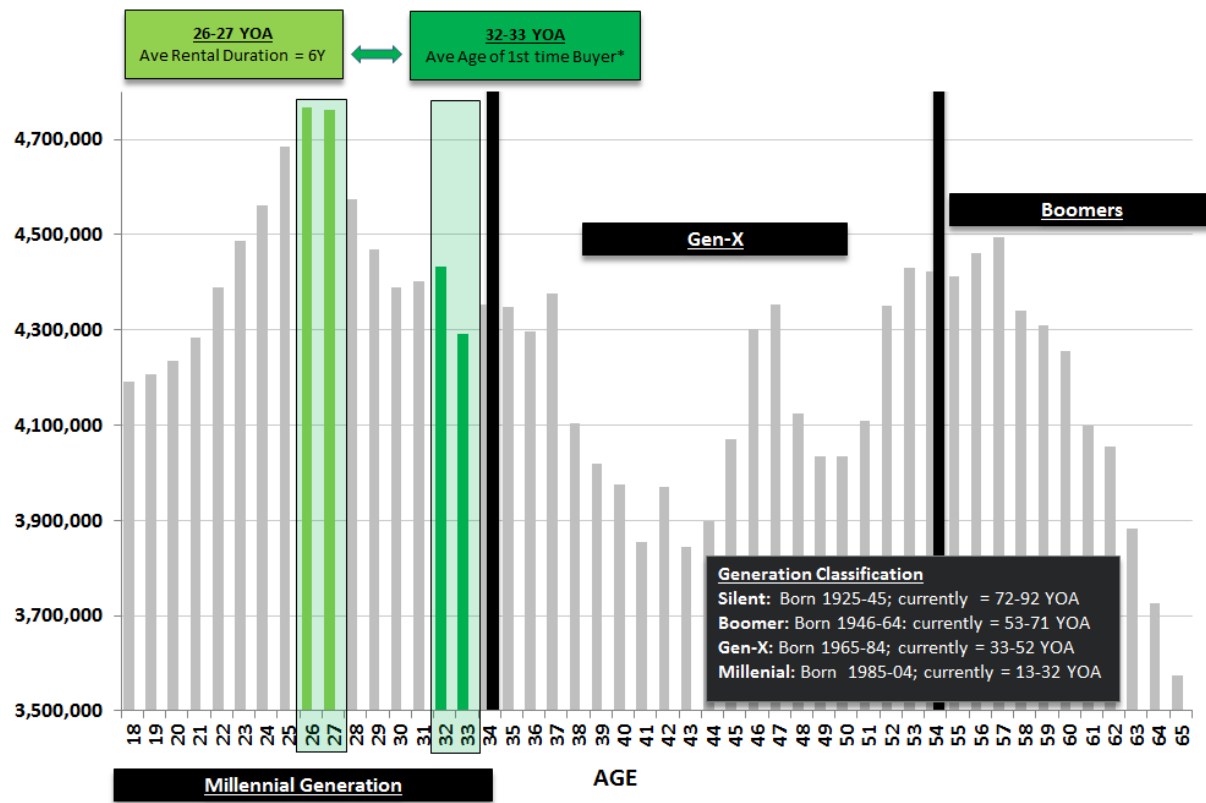


Source: Case-Shiller, NAR

We've previously analyzed the forward predictive power of inventory levels on NTM home prices. When inventory levels fall in the bottom decile of the historical range, as they are now, home prices have tended to rise at double digit rates or roughly double the current 5-6%.

THE DEMAND WAVE

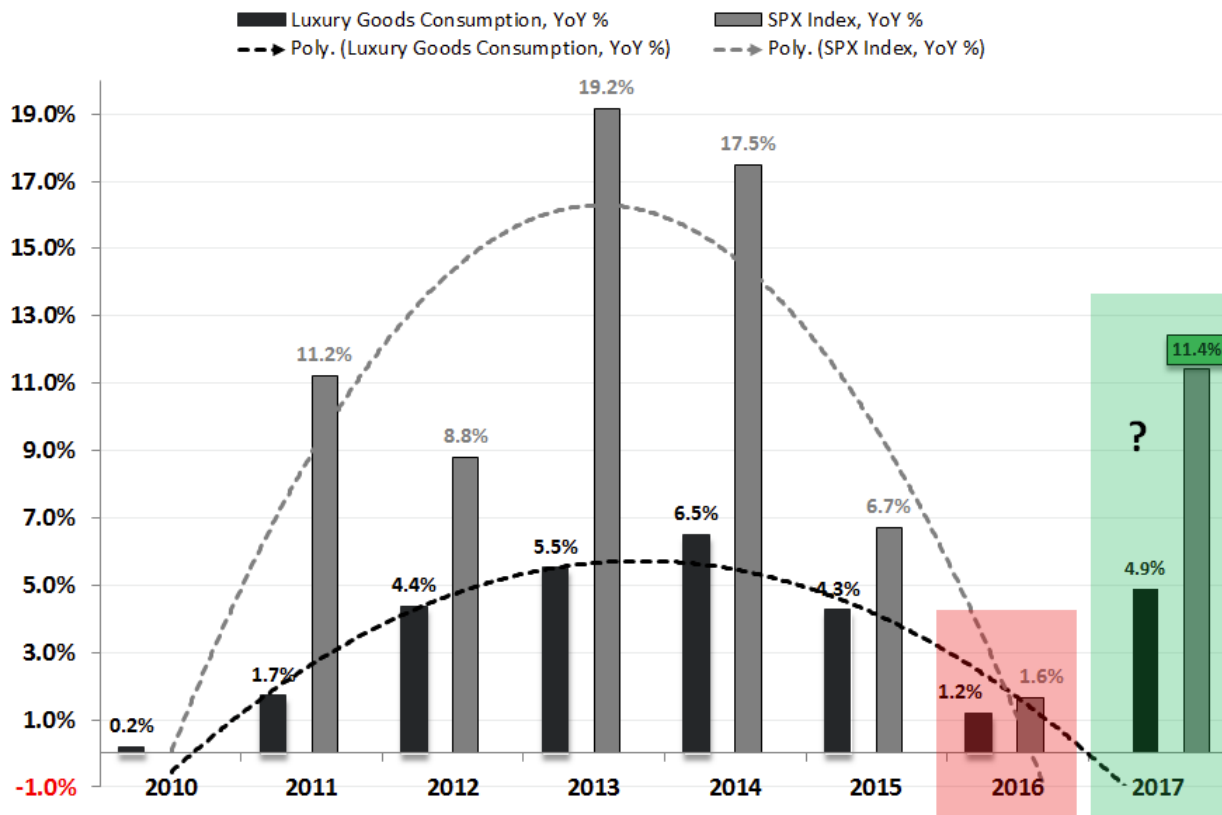
POPULATION DISTRIBUTION & CLASSIFICATION



Knowing that the median first time buyer age is 32/33 is critical because it allows us to look at the coming demographic wave. This chart shows the size of the current 32/33 YOA cohort – roughly 4.3-4.4 million. The 26/27 YOA cohort is 4.8 million by comparison. 2020-2022 will see an extraordinary housing bull market.

LUX SPENDING: THE BIG BOUNCE

Asset Price Inflation vs Luxury Goods Consumption*



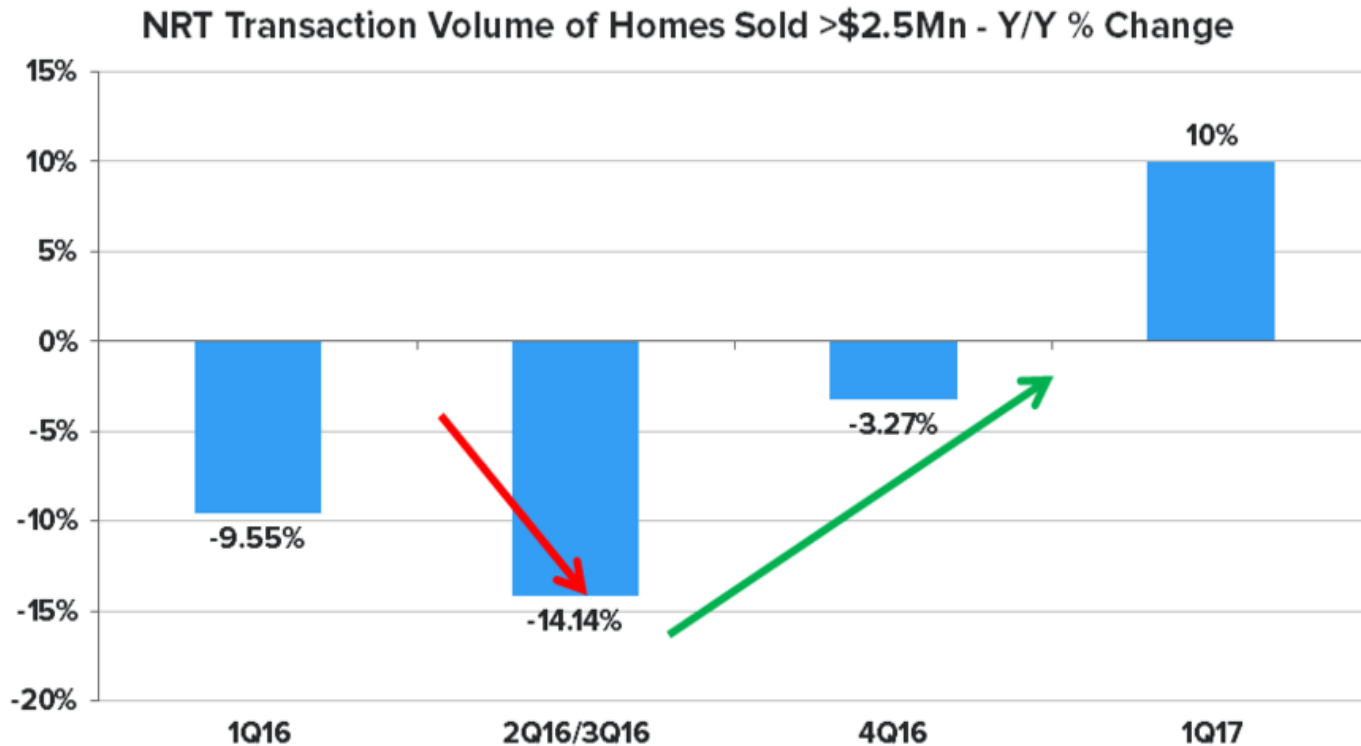
After collapsing for 2 years into mid-2016 alongside stagnant asset price growth, high ticket discretionary consumption has begun to re-accelerate on a short lag to resurgent equity price reflation.

*Luxury Goods = PCE for Pleasure Boats, Aircraft, Jewelry, Watches

**SPX: Performance calculated using average annual price, 2017 = Ave price YTD, prices as of 5/1/17

Source: Bloomberg

TOTAL HIGH END TRANSACTION VOLUME: ACCELERATING



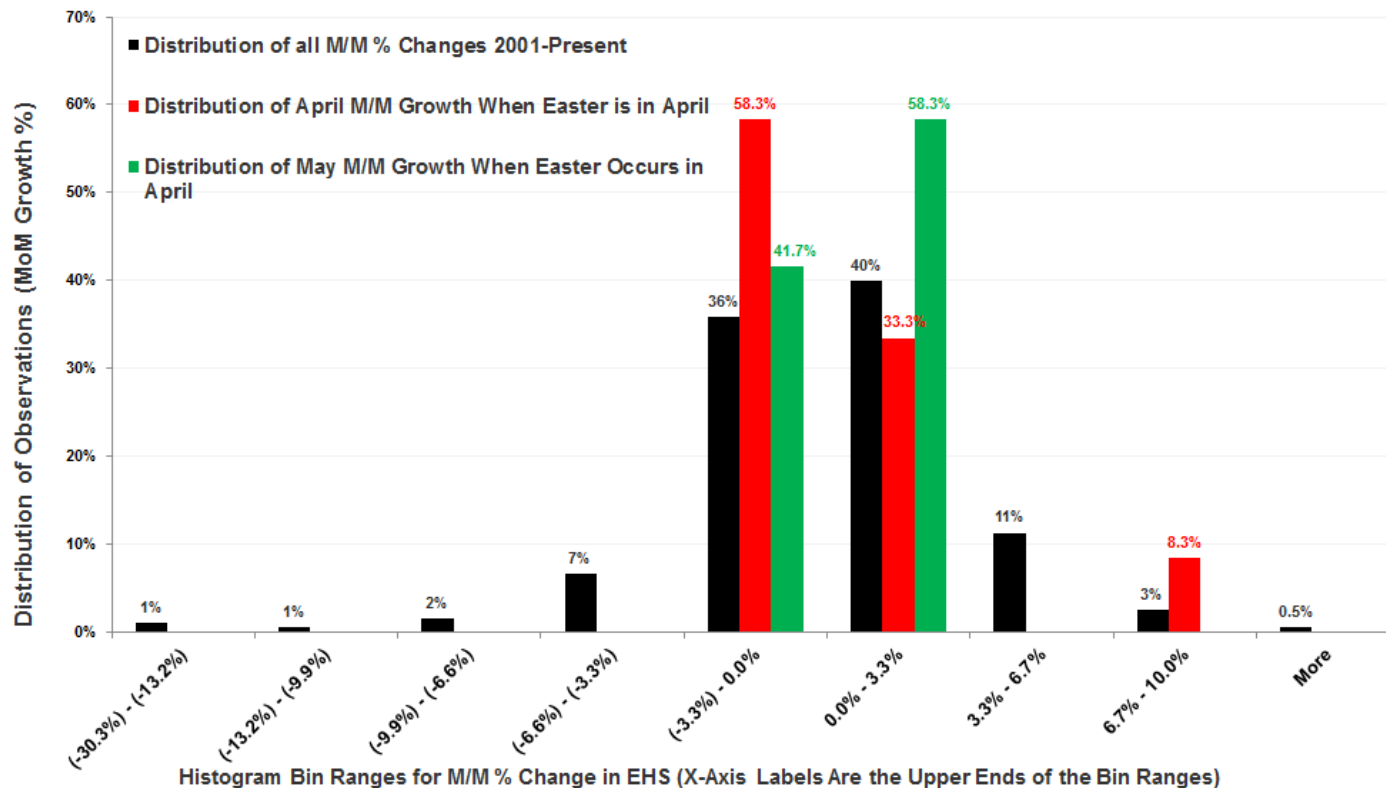
Transaction volume in the greater than \$2.5mn category realized an increase of +10% Y/Y in the first quarter.

Source: SEC Filings, Company Documents, Transcripts

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EHS EASTER DISTORTION: APRIL ↓, MAY ↑

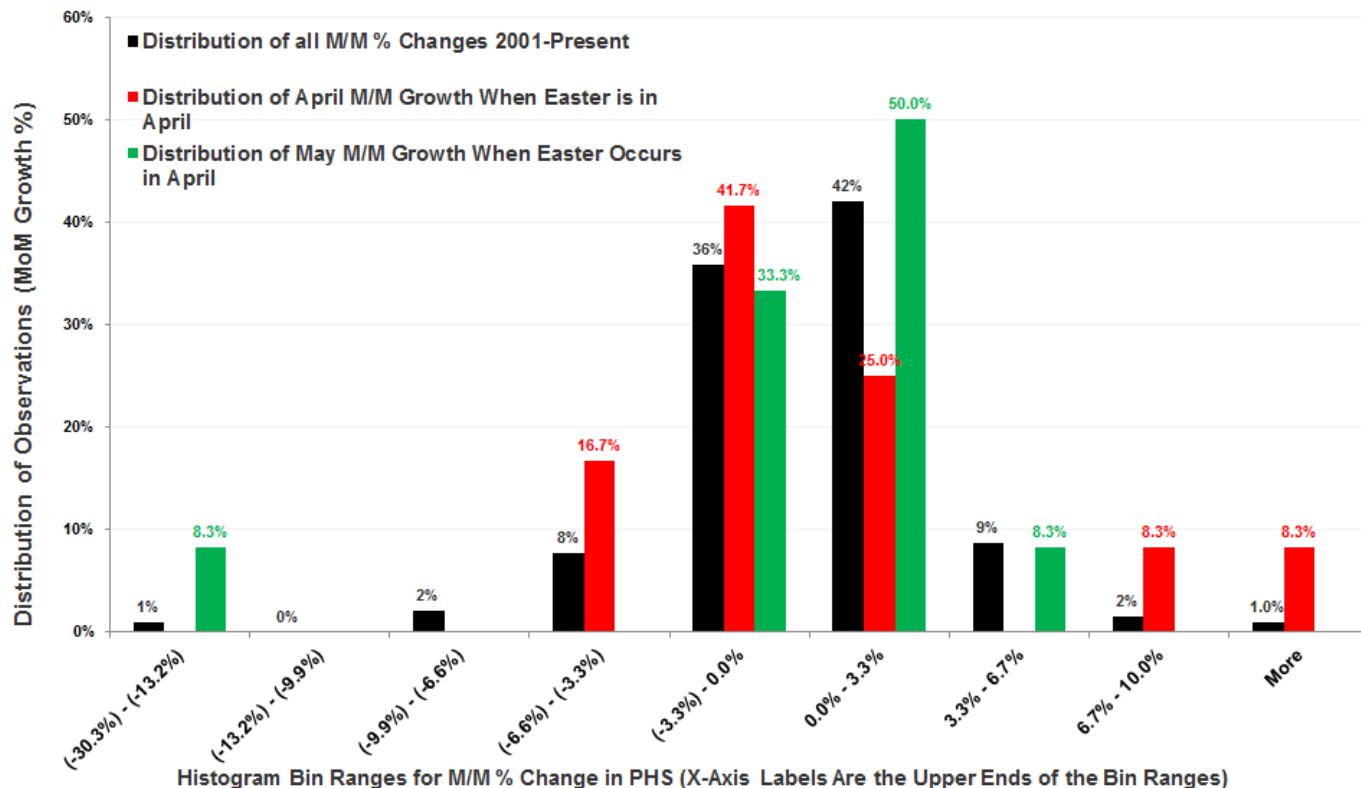
ARE EXISTING HOME SALES IMPACTED BY APRIL EASTER?



When Easter falls in April, housing demand has historically been pulled forward into March. This results in a consistent pattern of subsequent weakness in April followed by rebound strength in May.

PHS = SAME DISTORTION

ARE PENDING HOME SALES IMPACTED BY APRIL EASTER?



We expect that this will cause the April prints to be generally soft on a sequential and Y/Y basis.

HEADING INTO THE HEADWIND SEASON

Housing Seasonality				
<i>Average Performance by Quarter</i>				
<i>Average Absolute Performance, Trailing 6Y</i>				
Security	1Q	2Q	3Q	4Q
ITB	10.0%	2.1%	-4.9%	12.0%
XHB	8.8%	-0.3%	-3.5%	9.9%
S5HOME	12.3%	2.2%	-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%
2017				
Security	1Q	2Q		
ITB	16.4%	3.1%		
XHB	10.0%	1.4%		
S5HOME	22.4%	0.8%		
<i>*Prices as of 5/19/17</i>				

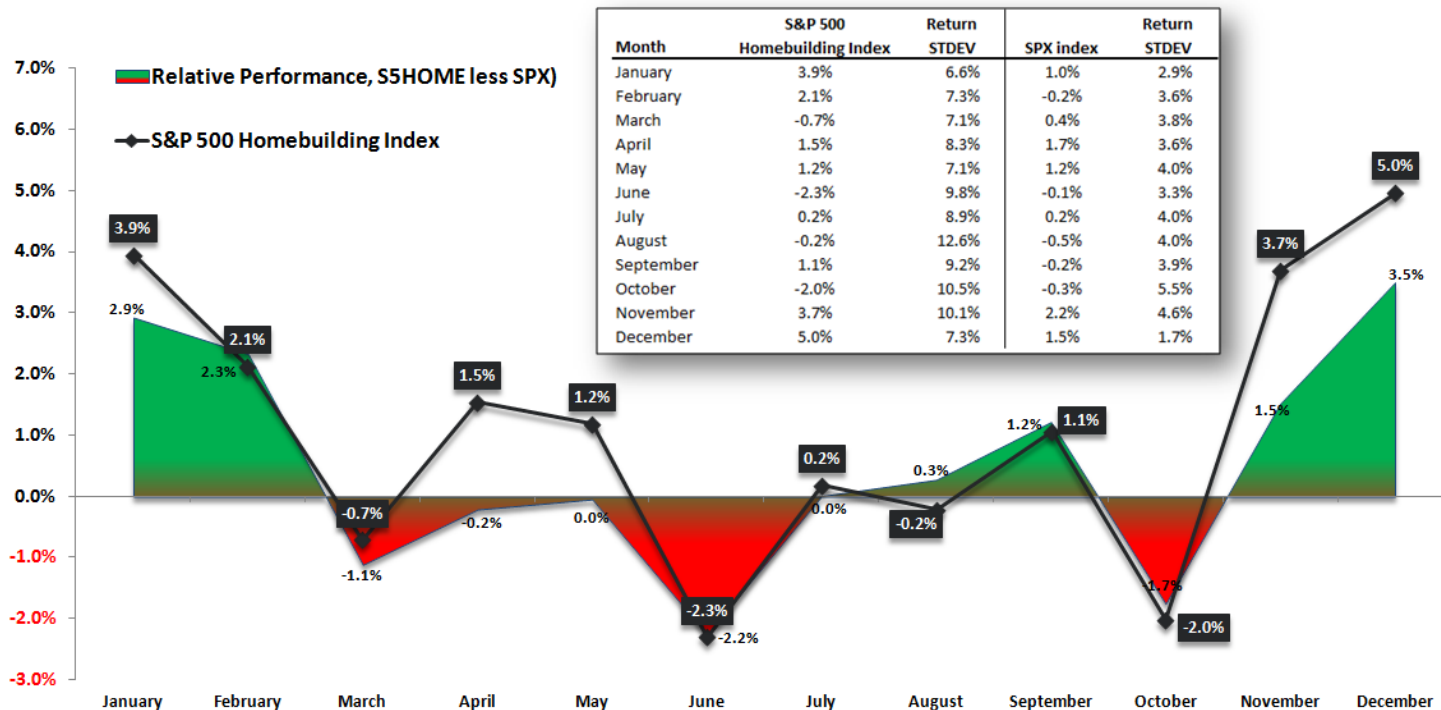
Here's how the seasonality looks on a quarterly basis. It's pretty clear which quarters generate positive P&L and which don't.

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

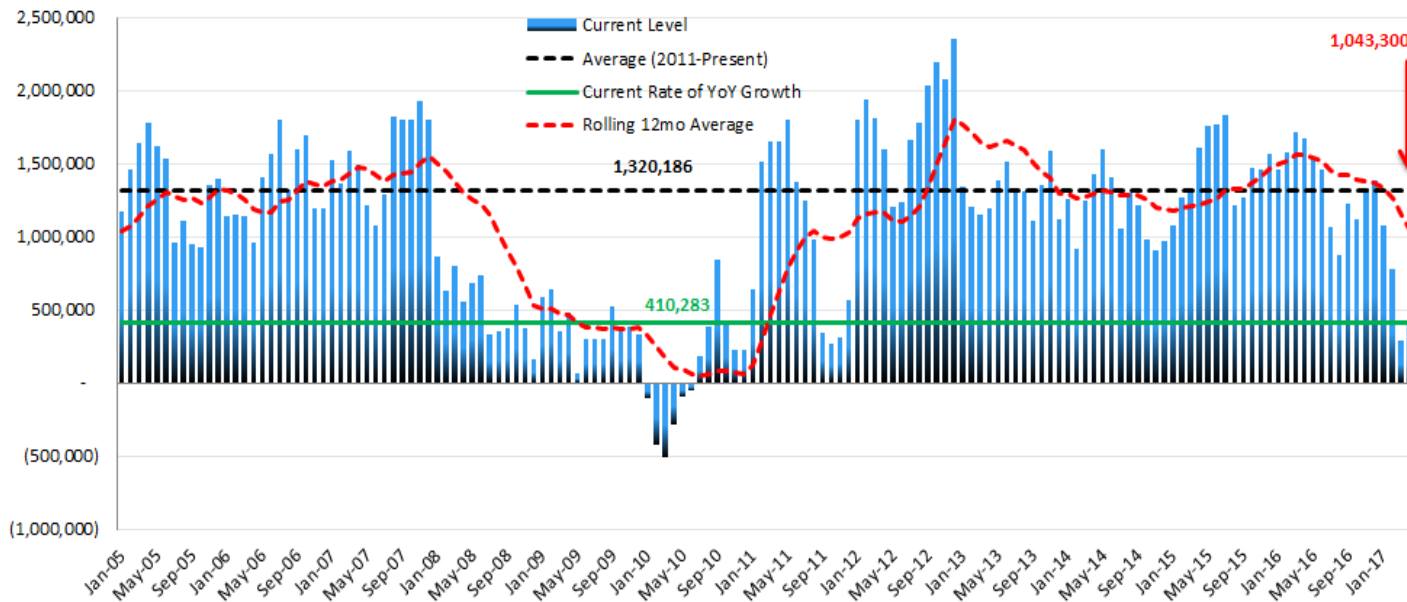


*Performance calculated using average monthly price; sample period = 1996-2014

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

HOUSEHOLD FORMATION: ROC SLOWING

YEAR-OVER-YEAR GROWTH IN US HOUSEHOLDS BY MONTH (2005-PRESENT)



410,283 more households were formed in April 2017 than in April 2016.

Total Household Formation growth slowed to +0.56% YoY or approximately +714K households in 1Q17, according to the CPS microdata.

Broadly, this represents a 13th month of slowdown off the 1.56M pace recorded in Mar/April of last year and the slowest pace of growth – both absolutely and rate-of-change – since 2010.