August 2015 Housing Commentary



Urs Buehlmann

Department of Sustainable Biomaterials
Virginia Tech
Blacksburg, VA
540.231.9759
buehlmann@gmail.com

and

Al Schuler

Economist (retired) Princeton, WV

Table of Contents

Slide 3: <u>Housing Scorecard</u>

Slide 4: New Housing Permits, Starts, & Completions

Slide 5: New and Existing House Sales

Slide 5: New Construction Data

Slide 6: <u>Conclusions</u>

Slide 7: <u>European Construction Markets</u>

Slide 8-44: Additional Comments&Data

Slide 45: <u>Disclaimer</u>

This report is a free monthly service of Virginia Tech. Past issues can be found at: http://woodproducts.sbio.vt.edu/housing-report/

To sign up for the report please email <u>buehlmann@gmail.com</u>

August 2015 Housing Scorecard

	M/M	Y/Y
Housing Starts	∇ 3.0%	Δ 16.6%
Single-Family Starts	∇ 3.0%	Δ 14.9%
Housing Permits	Δ 3.5%	Δ 12.5%
Housing Completions	∇ 6.1%	Δ 3.3%
New Single-Family House Sales	Δ 5.7%	Δ 21.6%
Existing House Sales (NAR®)	▽ 4.8%	Δ 6.2%
Private Residential Construction Spending	Δ 1.3%	Δ 16.4%
Single-Family Construction Spending	△ 0.7%	Δ 14.0%

M/M = month-over-month; Y/Y = year-over-year

Housing Data

	August	July	August 2014
Total permits*	1,170,000	1,130,000	1,040,000
Single-family permits	699,000	680,000	643,000
Multi-family 2-4 unit permits	31,000	28,000	35,000
Multi-family ≥ 5 unit permits	440,000	422,000	362,000
Total starts	1,126,000	1,161,000	966,000
Single-family starts	739,000	762,000	643,000
Multi-family 2-4 unit starts**	6,000	9,000	17,000
Multi-family ≥ 5 unit starts	381,000	390,000	306,000
Total completions	935,000	996,000	905,000
Single-family completions	646,000	636,000	613,000
Multi-family 2-4 unit completions**	6,000	11,000	10,000
Multi-family ≥ 5 unit completions	283,000	349,000	282,000

^{*} All data are presented at a seasonally adjusted annual rate (SAAR).

Source: U.S. Department of Commerce-Construction: www.census.gov/construction/nrc/pdf/newresconst.pdf; 9/19/15

^{**} US DOC does not report 2 to 4 multi-family starts and completions directly, this is an estimation.

Housing Data

	August	July	August 2014
New single-family sales	552,000	522,000	454,000
Median price	\$292,700	\$291,100	\$291,700
Existing sales ^a	5,310,000	5,580,000	5,000,000
Median price	\$228,700	\$231,800	\$218,400
Private Construction	\$383.2 billion	\$378.5 billion	\$330.1 billion
SF construction	\$218.8 billion	\$217.3 billion	\$191.9 billion
MF construction	\$53.5 billion	\$51.0 billion	\$42.9 billion
Improvement construction ^b	\$110.9 billion	\$110.2 billion	\$95.2 billion

a NAR®

Sources:

NAR® www.realtor.org/topics/existing-home-sales; 9/21/15

 $U.S.\ Department\ of\ Commerce-Construction:\ www.census.gov/construction/nrs/pdf/newressales.pdf;\ 9/24/15$

 $U.S.\ Department\ of\ Commerce-C30\ Construction:\ www.census.gov/construction/c30/pdf/privsa.pdf; 10/1/15$

^b The US DOC does not report improvements directly, this is an estimation. All data is SAAR and is reported in nominal US\$.

Conclusions

August's housing data was mixed on a month-over-month basis. All data were positive year-over-year. SF starts, on an adjusted basis, decreased 3%. SF construction spending eked out a small gain; yet, is still up 14% year-over-year. SF data are important from a wood products perspective, as SF starts is an essential indicator of business activity. For most data reported, we must remind ourselves housing remains well below historical averages in most categories.

Housing normally correlates well with the overall economy; with an improving economy we should expect to see most of the housing sectors progressing as well. However, as in written in previous months, the near-term outlook on the U.S. housing market remains unchanged – there are potentially several negative macro-factors or headwinds at this point in time for a robust housing recovery (based on long-term averages).

Why?

- 1) A constrained quantity of well-paying jobs being created;
- 2) a tepid economy;
- 3) declining real median annual household incomes;
- 4) strict home loan lending standards though loosening with new programs; and
- 5) slowing world economy, and
- 6) global uncertainty

July 2015 EU Housing Scorecard

		M/M	Y/Y
Production in Construction ^A	EU 28	Δ 0.7%s	Δ 2.3% $^{\mathrm{s}}$
	EU 18	Δ 1.0%s	Δ 1.8%s
	Germany	Δ 3.5%	∇ 0.3%
	France	Δ 1.0%	∇ 3.0%
	UK	∇ 1.3% ^p	∇ 2.3% ^p
	Spain	Δ 0.2% ps	Δ 0.6% ^p
Building permits (m ² floor) ^A	EU 28		-,-
	EU 18	Δ 7.7% ⁽⁰⁶⁾	Δ 16.4 ⁽⁰⁶⁾
	Germany	∇ 3.5%s	∇ 3.0%
	France	∇ 10.8% ^s	∇ 7.0% ^e
	UK		
	Spain	∇ 2.3 ^{s(06)}	$\Delta 45.3^{(04)}$

M/M = month-over-month; Y/Y = year-over-year

Source: Eurostat (http://ec.europa.eu/eurostat/web/short-term-business-statistics/data/main-tables) A see http://ec.europa.eu/eurostat/web/short-term-business-statistics/overview/sts-in-brief

Housing comments – August, 2015

- August totals were down 3% (to 1.126 million, annual rate) from revised July numbers <u>single family fell 3% to .739 million (SAAR)</u>. Housing getting better up 16% on annual basis, with SF up 14% and MF up 22%, but still "not normal"
- Multi family still the driver rental prices still increasing single family sales remain weak and this has big impact on wood product prices. This trend will probably continue for some time as "1st time buyers' remain on sidelines.
- Economic issues slowing world economy(China GDP slowest in past 6 years). China slowdown plus currency devaluation will drive commodity prices lower, and rekindle deflation concerns around the world.
- Increasing geopolitical risk and continued domestic/Washington gridlock causes uncertainty which leads to less investment which leads to slower productivity growth, and ultimately slower GDP growth and lower standard of living!
- Job market is improving, albeit slowly, and wage gains remain weak, and the real unemployment rate remains high at 10.3%. This equates to about 16 million people who are either unemployed, stopped looking, or working part time because they can't find full time jobs. This "slack" in the job market will keep wage gains modest for some time.
- Income growth in U.S. remains pathetic latest Census report shows real incomes fell again in 2014. This suggests to me that housing will remain sub par for some time many 1st time buyers just can't enter the market.
- World GDP growth outlook is shaky at best main problem today is the slowdown in China which has been the major economic engine over the past 5 – 6 years. European growth is expected to be relatively weak while back here in USA, growth will probably remain below par (<3%) for some time.

Return TOC

- QE/quantitative easing, etc. has probably kept us from economic catastrophe, but it has not been able to jump start the economy. Despite "zero interest rates" for the past 7 years, we have no serious inflation issues. What we have, instead, are asset bubbles caused by "cheap money" chasing higher returns. And, we all know how asset Bubbles end.
- . A potentially more serious problem with QE, etc. is that the FED and other central banks don't have many "arrows left in their quivers" to deal with the next downturn (which is inevitable).
- Fed decision (September 17) to keep rates steady based on "slowing global growth and financial market volatility". This is a new one for me I thought the Fed's role was inflation/currency stability, and maybe jobs here in USA. Now the "global Fed" is concerned with "global growth." Sounds like they are just unsure what is happening status of the economy and decided to "punt" (another word for "procrocastinate") and look for more signs of economic health here in USA. They did say housing is not supporting this economic recovery "duh" I think we already knew that?
- . All this to say that we can look forward to interesting times ahead housing and wood products will continue to face challenging times, and continuing uncertainty will negatively impact investment decisions. Businesses won't invest, add jobs, etc., when uncertainty is so apparent. Leadershipis sadly lacking, not just here in U.S. but, Europe and elsewhere.
- The Fed and other central banks are uncertain re: what to do. And, to be fair, fixing the economy isn't their main job. What we really need is for our politicians/leaders to make the gutsy decisions, and they disappoint us, again and again. If you want to see 1st hand how scary things can get, just listen to the latest political debates here in the USA. Little substance on solutions, but lots of BS! Trust is big issue with today's voters. I wonder why? God help us!

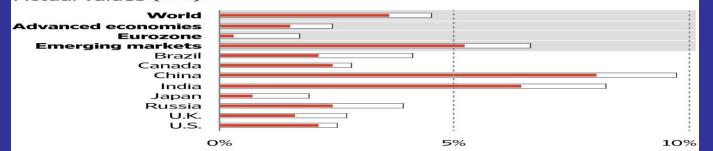
"Cheap money alone can't fix the world's economy" – India's Central Bank Governor – "economies need to be more innovative, productive, and competitive".

My opinion – gutsy leadership missing here in USA, Europe, Canada, and rest of developed world! Current polls here in US and elsewhere indicate many voters are disgusted with current crop of politicians, and for good reason.

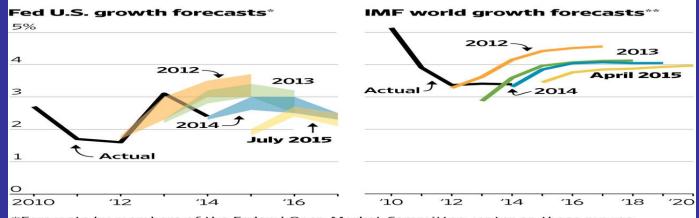


Despite central banks injecting \$8 trillion into the global economy, world growth has persistently fallen short of expectations as governments failed to raise long-term potential growth.

Average economic growth, 2011-2014 IMF projections from April, 2010 () Actual values ()



Both the Fed and the IMF have had to repeatedly revise down their forecasts for the U.S. and the global economies, respectively.



*Forecasts by members of the Federal Open Market Committee center on these ranges. **Forecasts are from October of each year, except 2015 which was made in April Sources: WSJ calculations and IMF data (growth); Federal Reserve, IMF (forecasts) THE WALL STREET JOURNAL.

Rental demand versus single family housing ---

There are growing indications that rental demand may continue to Increase for some time – a recent study by the Urban Institute suggests it may continue for another decade or two

(http://www.wsj.com/articles/new-housing-crisis-looms-as-fewer-renters-can-afford-to-own-1433698639)

Why - - demographics; growing minority population; student debt; weak Income growth; E.g., Minorities (nonwhite) will make up 75% of net household growth Over the next 10 years, and 85% during 2020-2030 (see next slide). They are less likely To own homes (lower incomes is main reason) so home ownership Continues To fall toward 60% by 2030. During this time, rental demand will Increase Dramatically. Although this is just one study, it provides food for thought. One potential question with the study, however, is other studies show that Although immigrants, for example, rent initially, but, over time they purchase homes at a rate equal to or higher than native born Americans. Why - people come to the U.S. to Improve quality of life, and for most, this means homeownership. This suggests that the U.S. has to find solutions to immigration issues like "Illegal immigrants" while encouraging legal immigration. This country was founded by immigrants seeking a better life, and they are key to our future. And, incomes for all Minorities has to improve if home ownership is to return to "good old days"

(http://www.engineeredwood.org/Data/sites/3/documents/EngWoodJournal/EWJ_Spring2010.pdf)

Anyway, this has potential implications for home ownership; single family construction; and demand for wood products – lots of variables and scenarios.

Key findings and numbers from recent Urban Institute study On Home Ownership (http://www.wsj.com/articles/new-housing-crisis-looms-as-fewer-renters-can-afford-to-own-1433698639)

Key findings (Laurie Goodman, et.al.)

- (1) For next 15 years, new renters will outpace new homeowners
- (2) Headship rate, (rate at which people create new households) is declining
- (3) Majority of new households (HH) formed between 2010 2030 will be nonwhite 43% Hispanic and only 18% white
- (4) Majority of new homeowners will be nonwhite
- (5) Number of senior HH to expand dramatically from 2010 2030

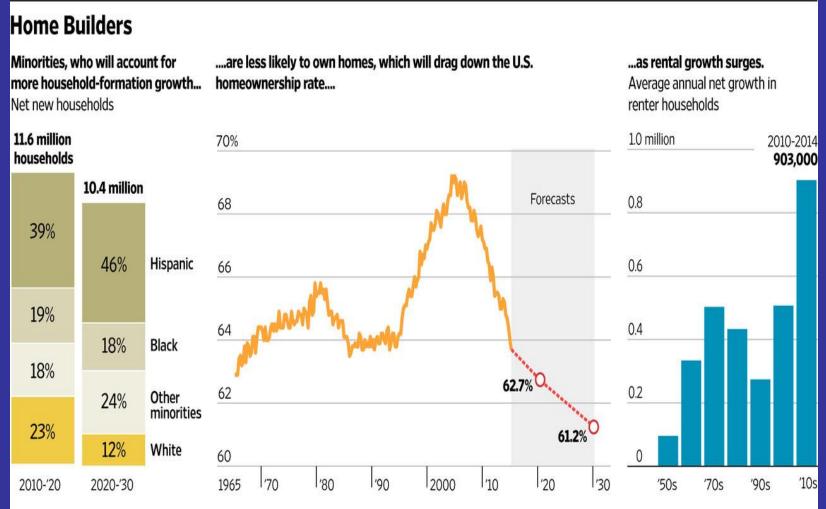
Key numbers (Laurie Goodman, et.al.)

- (1) Between 2010 2030, there will be 22 million new HH 13 million will rent and 9 million (4 million fewer) will buy
- (2) By 2030, the homeownership rate will drop from 65.1 % to 61.3%
- (3) Of the 11.6 million net new HH formed between 2010 2020, 77% will be nonwhite and 88% of new HH will be nonwhite.

My "two cents worth"

- (1) Minorities salary is considerably less
- (2) They are less able to purchase homes
- (3) We need to deal with this issue if housing is to get back on track
- (4) We better start building more rental units or rent prices will become too high for many people already, high rents prevent potential home buyers from saving enough for a down payment for a house

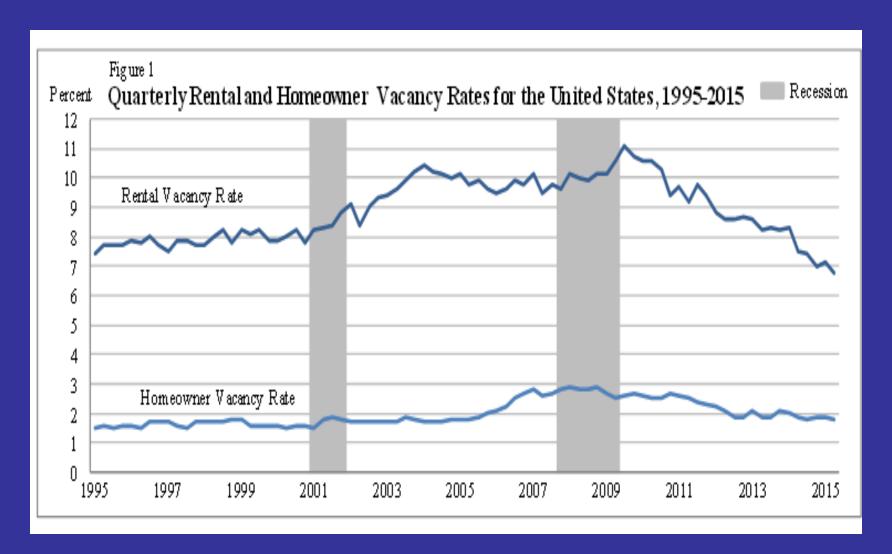
Urban Institute study – demographics, growing minority population, weak income growth, and student debt combine to drive homeownership lower!! That means fewer single family starts and stronger rental demand - - - A trend that could last for another two decades according to the Urban Institute



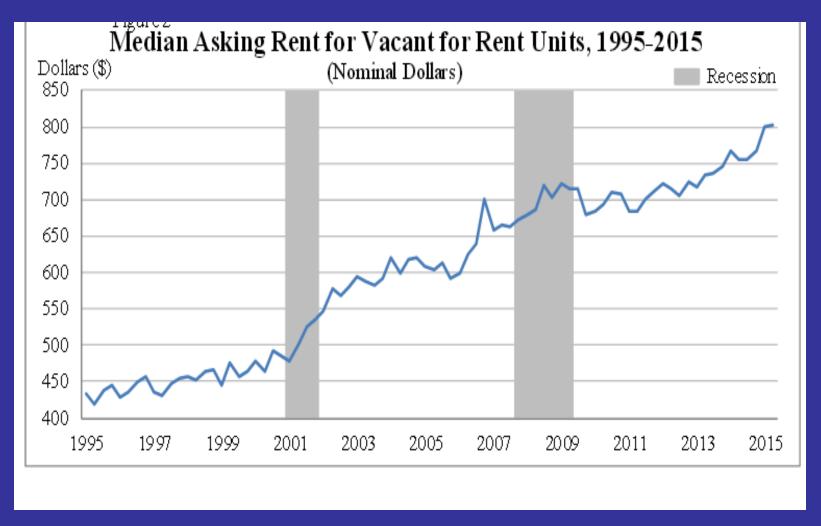
Sources: Urban Institute (household formation, homeownership rate forecasts); Commerce Department (homeownership rate); Harvard Joint Center for Housing Studies (renting households)
THE WALL STREET JOURNAL.

Rental vacancy rates lowest in 20 years

Falling rental vacancy rates will drive rental prices higher and this will drive multi family construction – Economics 101

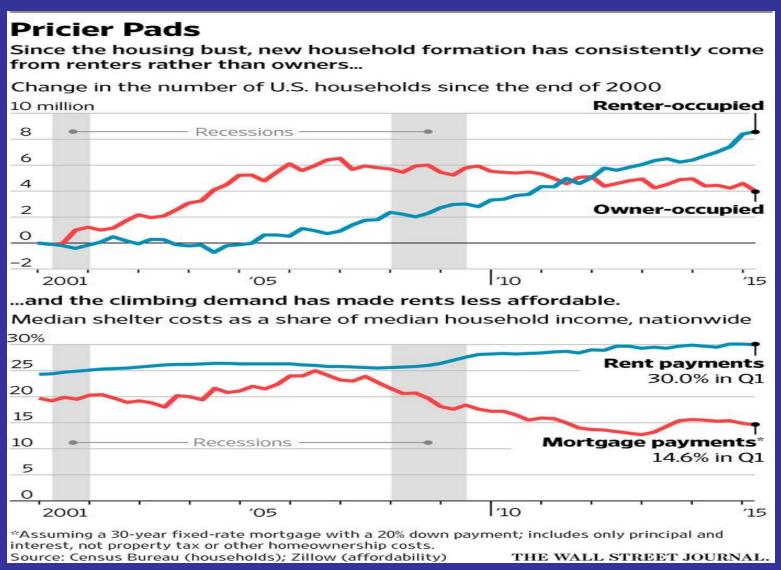


Increasing rents will slow housing starts - - makes it more difficult for renters to save for down payment for house purchase

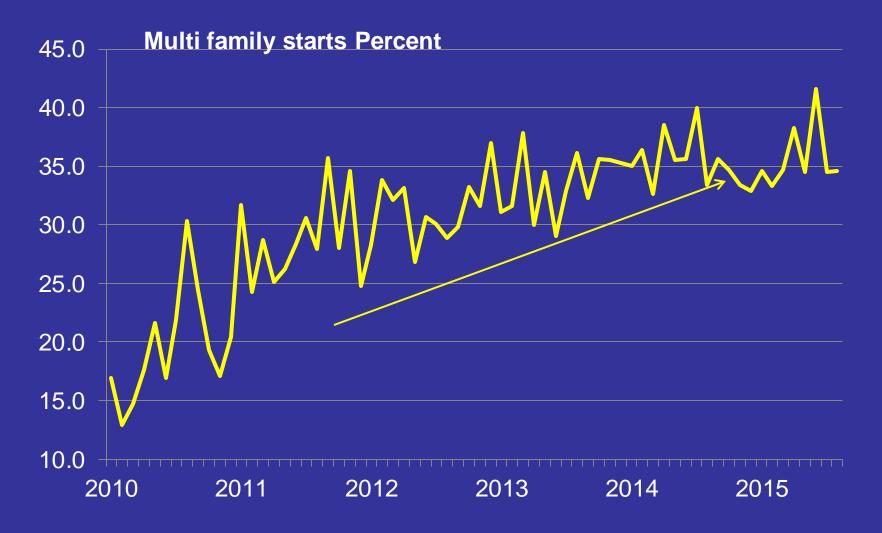


Source: Census: (http://www.census.gov/housing/hvs/files/qtr115/currenthvspress.pdf)

Household formations are up, but most are renting, and, in the past decade, rent payments exceeded mortgage payments – but, most can't get a mortgage due to poor credit or can't save enough for a down payment



Multi family share of housing starts – upward trend expected to continue for some time. Also, since the housing crash in 2008, single family rentals have now reached 13% of overall housing stock, up from 9% in 2005 (http://blogs.wsj.com/economics/2015/07/20/signs-of-overheating-in-the-single-family-rental-market/)



Higher prices don't necessarily mean the Market is good which is what economic theory would suggest.

Housing inventory – short supply is driving up prices! – In addition, builders are building bigger houses to accommodate "well healed customers" which is driving new home prices higher. Existing home sales reflect similar trends.

One more issue impacting housing – with starts remaining weak, we will see a continuing shortage of inventory, and that means higher prices. Many builders just don't see enough traffic supporting an increase in starts. Also, many smaller builders are having trouble getting financing. In the resale market, many people can't list their homes due to foreclosure issues, underwater mortgages, Job problems, credit issues – i.e., can't qualify for a new mortgage)

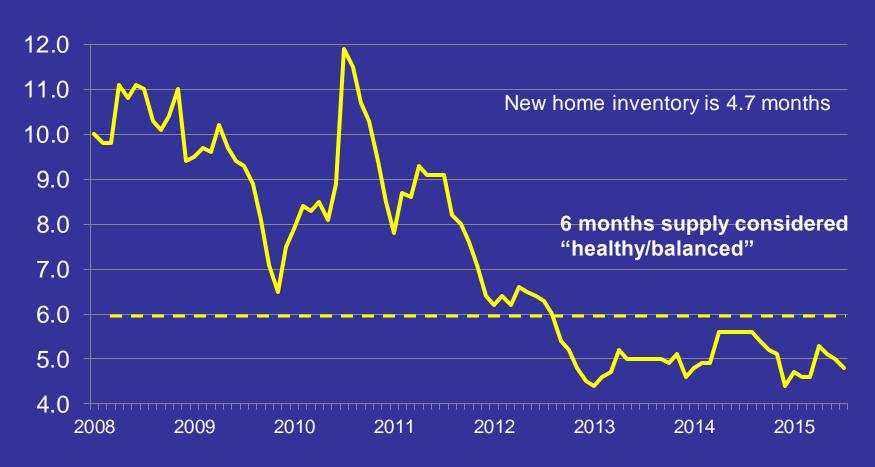
(http://www.wsj.com/articles/bidding-wars-return-to-home-market-1437350840)

Current inventory is 4.7 months for new homes and 5.2 months for existing homes – six months supply is considered a 'healthy market"

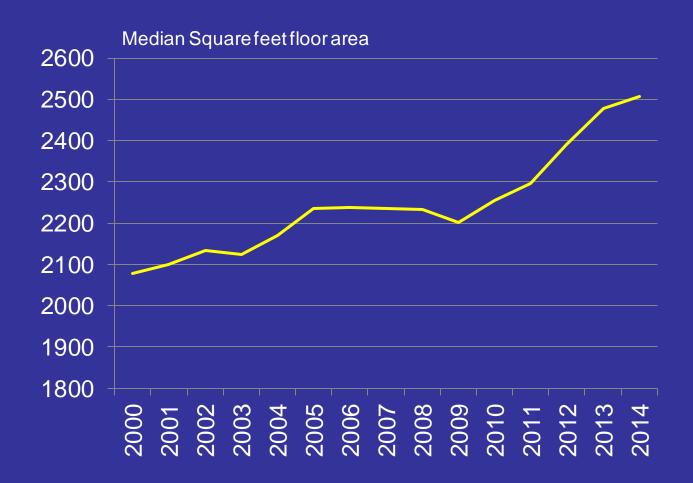
Another good article on current housing situation re: dilemma for 1st time buyers. Limited choices; higher prices; weak income growth; weak new home construction; --- short supply drives prices higher putting more 1st time buyers out of the market. I've said this before – return of 1st time buyers is needed before housing returns to "normal"!

Existing home inventory at 4.7 months – Short supply still driving drives prices higher

Months supply, single family



Size of New Homes sold has increased dramatically In past 6 years as builders cater to "well healed" buyers as many 1st time buyers are missing



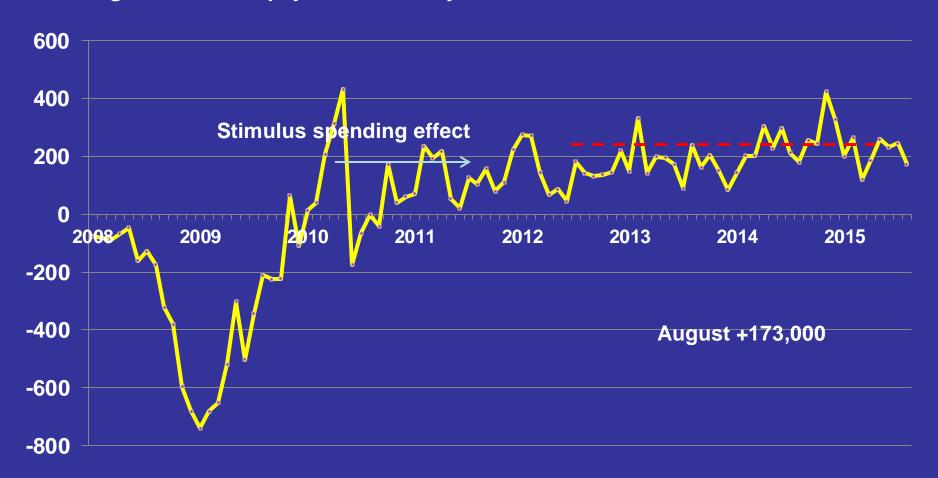
Consequently, median price of new homes has increased dramatically



(https://www.census.gov/construction/chars/sold.html)

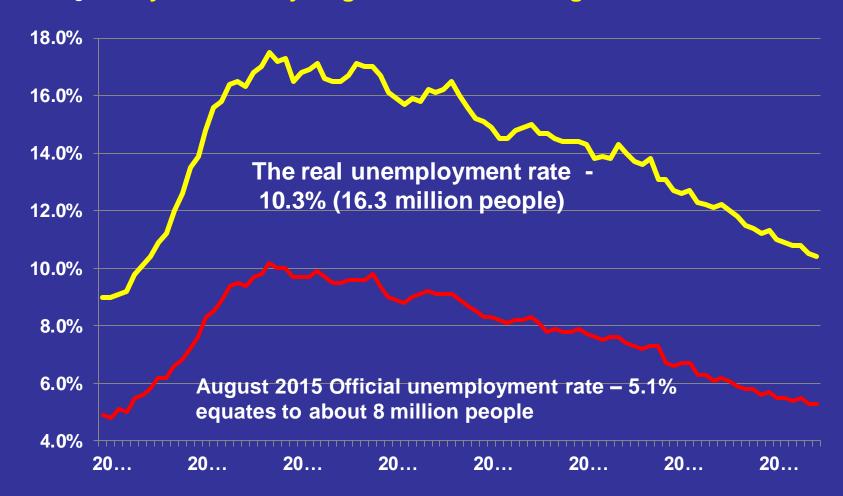
Employment situation - our biggest problem

Net change in non farm payrolls – monthly, thousands

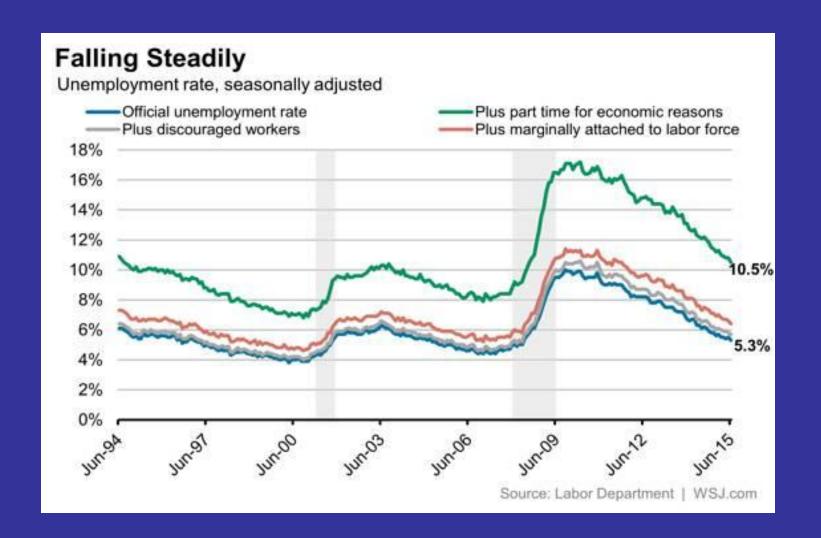


Unemployment rate keeps coming down – but, nearly 7 million remain "underemployed" – working part time, but want full time jobs

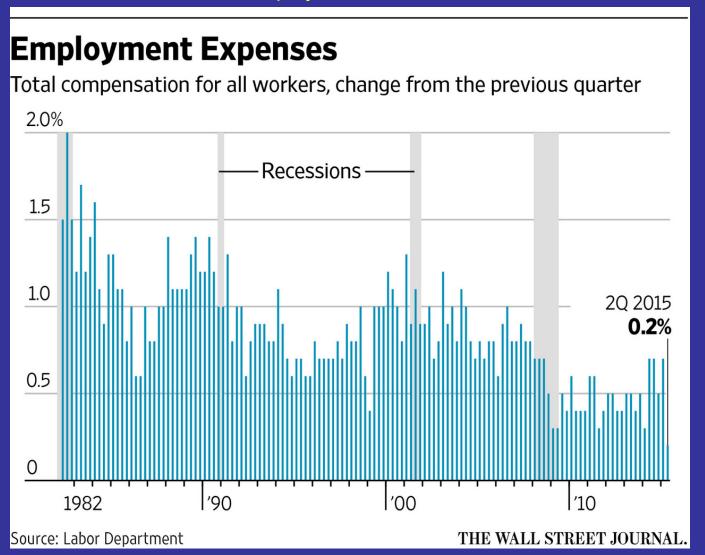
**There are about 17 million people either unemployed, underemployed, or stopped Looking – Key reason why wage increases are stagnant!



Closer look at "real unemployment rate" – things are improving, but we really need stronger <u>earnings</u> growth



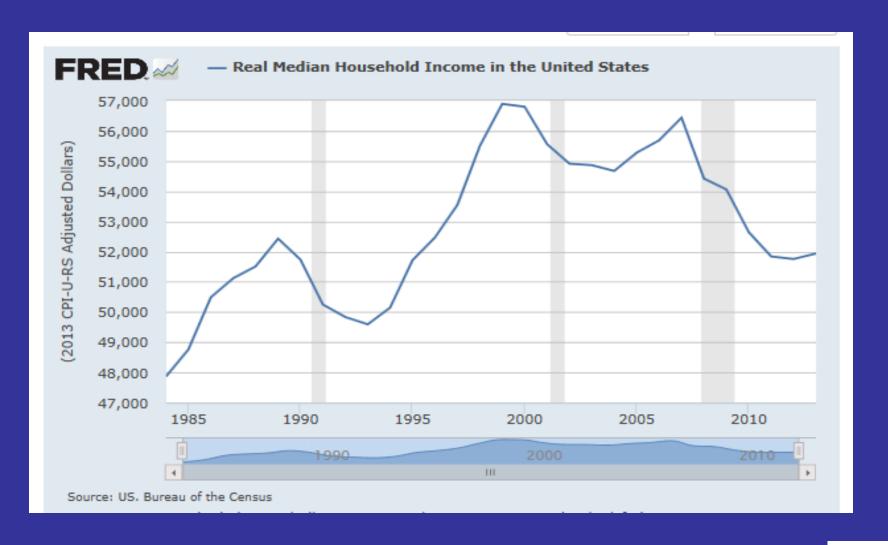
Latest Employment cost index (ECI) shows that wages and benefits are lagging In this recovery – due primarily to continued slack in the job market with the "real unemployment rate" at 10.5%



A look at real incomes over the past twenty years ---

real incomes have been shrinking for the past 20 years and the reason is probably tied to productivity – here is good article

on the subject (http://www.wsj.com/articles/politicians-pay-heed-to-productivity-problem-1437582206?cb=logged0.19101819254186214)

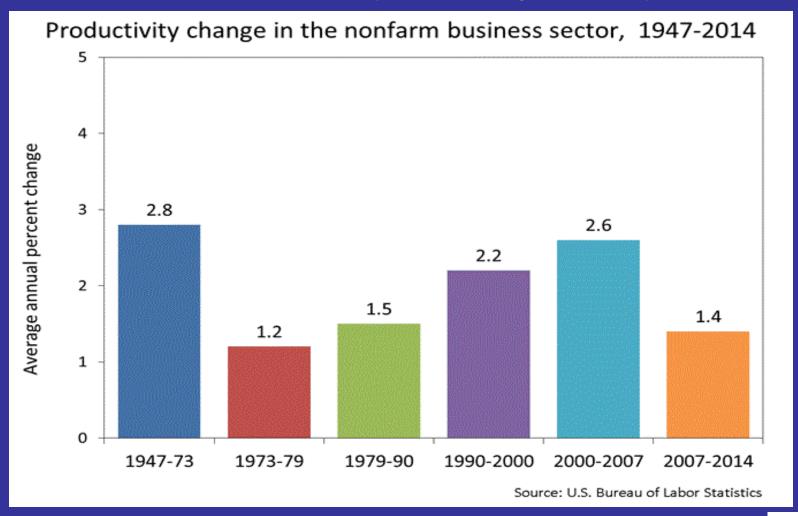


We need to invest more to become more competitive, create better paying jobs, and grow GDP

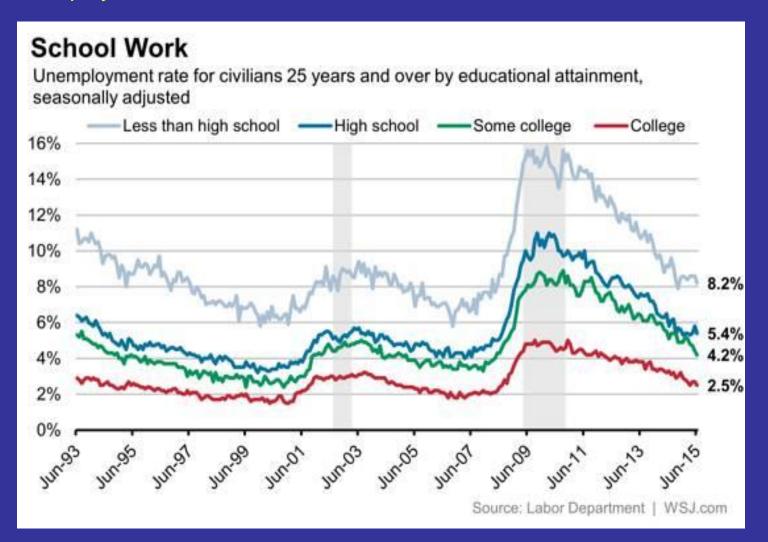
GDP derives from number of workers plus productivity (real GDP/worker) – (http://marketrealist.com/2015/01/2-factors-drive-real-gdp-growth/)

-- with lower productivity, higher employment won't generate as much growth in GDP – this is why improving employment doesn't give us strong GDP growth.

Innovation and entrepreneurship is key to increasing productivity

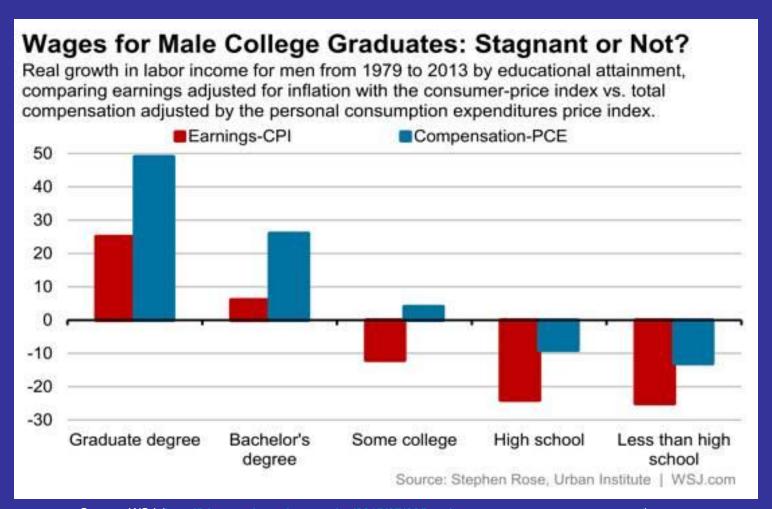


One way to improve productivity and incomes --- education improves your chances of staying out of the unemployment line.



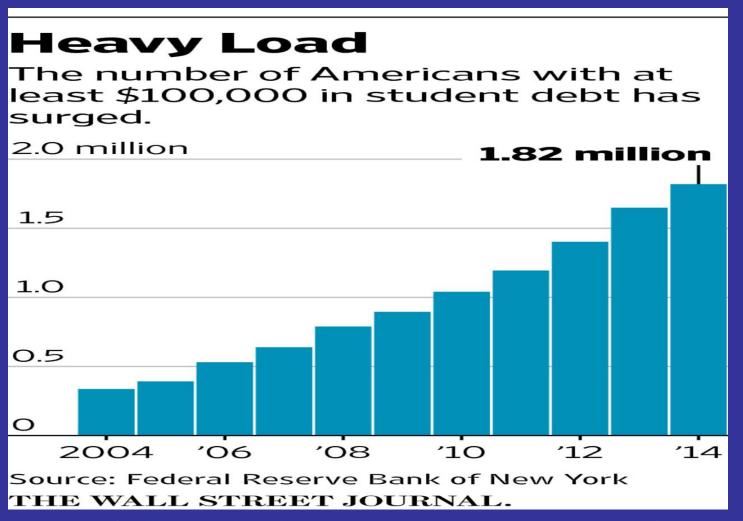
More evidence that education pays

Earnings vs Compensation -- compensation includes Benefits like employer paid health care, pensions, etc. while earnings are wages only. CPI and PCE are two indexes used to adjust for inflation.



Source: WSJ (http://blogs.wsj.com/economics/2015/07/06/just-how-stagnant-are-wages-anyway/)

But, there is a serious problem with financing higher education – current debt exceeds one trillion \$ - this slows household formations and shifts demand for shelter to renting!

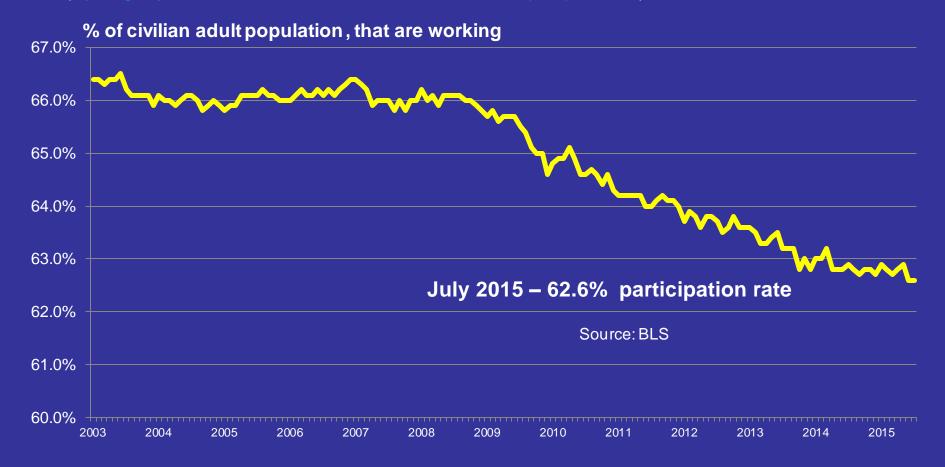


(http://www.wsj.com/articles/loan-binge-by-graduate-students-fans-debt-worries-1439951900)

Labor force participation rate is shrinking – demographics is probably the main reason – we'll see skilled labor shortages increase over the next decade - we're already seeing construction related shortages with brick layers, masons, electricians, plumbers, etc. One solution – Revamp our education system (a 4 year degree isn't for everyone – 2 year Community colleges, vocational schools, are better fit for many, and they are much cheaper). Excellent article (http://linance.yahoo.com/news/should-l-go-to-a-trade-school-162413337.html#)

Interesting article shows that in most countries labor force participation rate is increasing

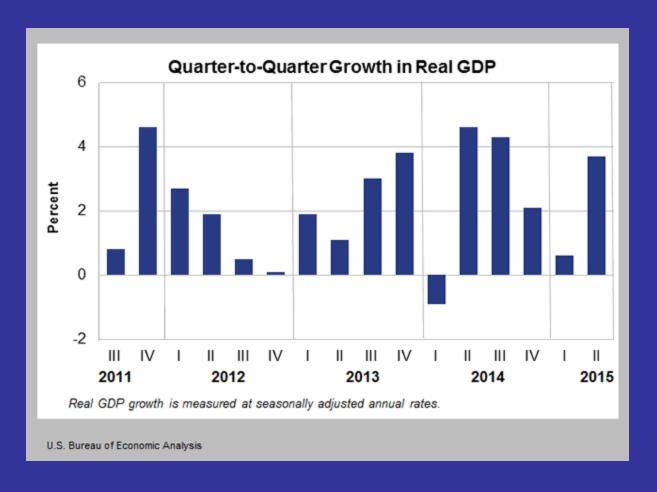
(http://blogs.wsj.com/economics/2015/06/26/the-u-s-stands-out-on-labor-force-participation-rates/)



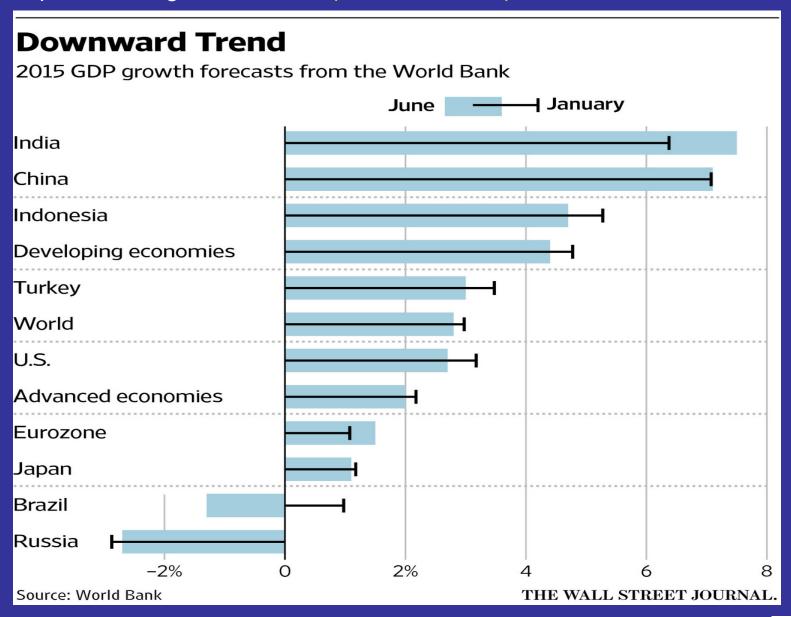
Economic growth of 3.7%, up from revised 0.6% in Qtr 1.

Some headwinds continue - -

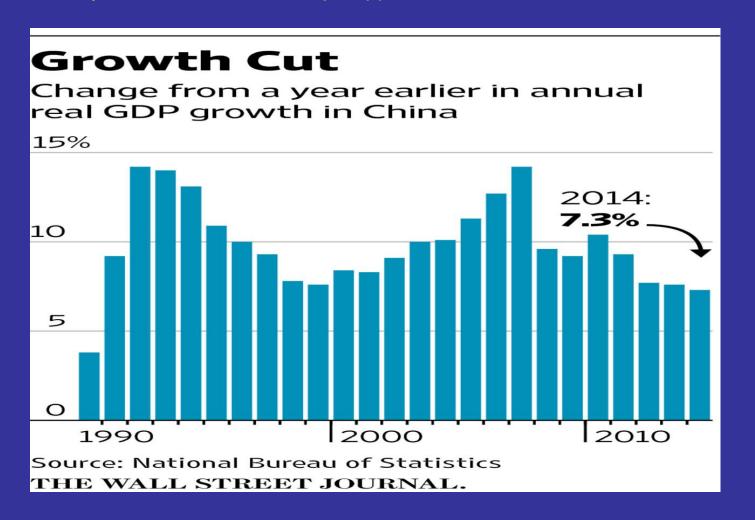
- (1) Slowing world economy (European recession; weaker China growth)
- (2) Stronger dollar will reduce exports and increase imports negative impact on manufacturing jobs which is key to income growth in USA
- (3) Political stalemate, terrorism, currency wars, growing national debt, ...



World Bank forecast cuts world growth to 2.8% in 2015, but expects 3.2% growth in 2016 (I don't believe it)



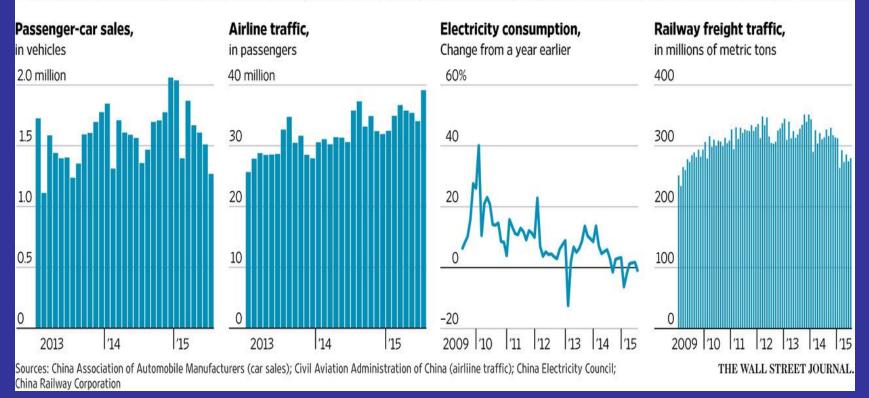
China's growth is slowing, – this is key to world economy (China Is 2nd largest economy) and even more important for commodity prices – the recent Yuan devaluation is an indication that the Chinese government Is concerned. For past 5 – 6 years, China accounted fro the bulk of world GDP growth so any slowdown will have major ripple effects.



China's economy shifting from infrastructure investments and exports (smokestack industries) To domestic demand driven economy (services and consumers) – this will take time – in the transition, GDP growth will probably slow significantly thus impacting world GDP growth

Looking to the Consumer

China's government sees big hopes in unlocking the buying power of its population, and some indicators of consumerism have bucked economic weakness.



Recent Housing statistics

Starts are inching forward – I'm concerned that the Feds will 'grease the wheels' again – e.g., Fannie and Freddie, FHA --- lowering down payment requirements and premiums on mortgage insurance, I guess they forgot what happened in 2008? The FED has kept interest rates near zero for <u>6 years</u>, but housing remains lethargic. Interest rates aren't the main problem.

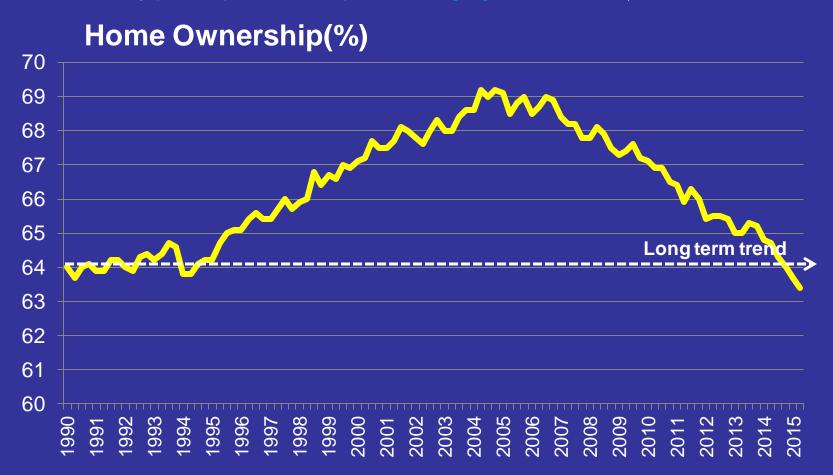


Source: Census (http://www.census.gov/const/www/newresconstindex.html)

Impact of weak household formations and shift to renting --

homeownership rates have been falling for the past ten years – when the economy gets back to normal, Will people return to to single family or will renting remain in favor with many? There will be impacts on wood products demand

Good article with some reasons why ownership is falling and why it will continue to fall for some time (http://finance.vahoo.com/news/why-americans-waiting-longer-ever-070132848.html)



New Single Family Home sales are the key statistic to watch – Sales drive housing starts – this drives demand for wood products!

Supply still constrained at 4.7 months and this drives prices higher.



Source: Census (http://www.census.gov/const/www/newressalesindex.html)

Resale market continues to improve, but still heavy to cash sales (24%) with 1st time buyers still below trend, but improving (traditionally they represent about 40 – 45% of market, but today they are at 32%). Another problem today is tight supply (which drives prices), currently at 5.2 months. Healthy market is about 6 months supply.

Single family (incl condos), Monthly, Thousand units, SAAR



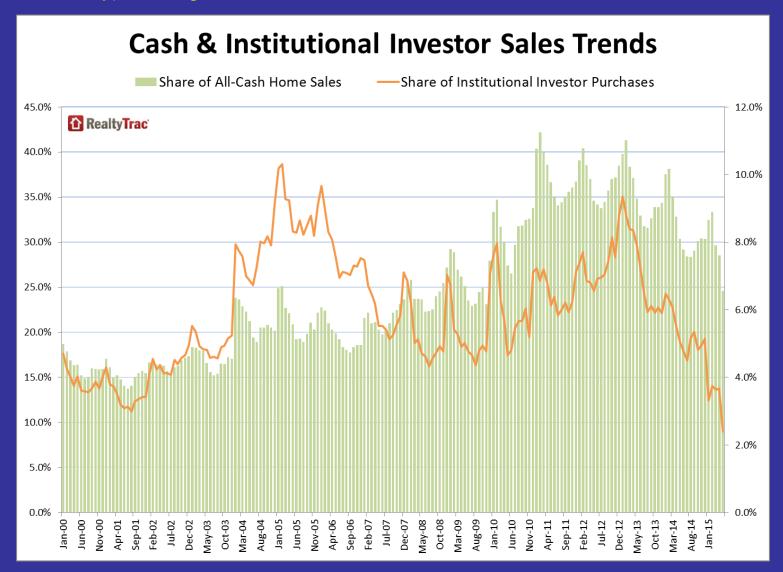
Housing Market breakdown - - New home sales = 10 - 15% of housing market Existing home sales = 85 - 90%

Home sales

Home sales offer the best gauge of housing demand at prevailing prices and interest rates. Sales of new homes tend to pack a bigger punch for overall economic growth, but they remain well below their pre-bubble levels. All figures are seasonally adjusted at an annual rate



Cash sales back to trend values of 25% - good news for 1st time buyers - - we need a return of 1st time buyers to get back to a more traditional (and healthy) housing market read excellent article by Realty Trac referenced below)



Some conclusions – housing continues to improve albeit slowly

- (1) Economy will continue to improve slowly -- 2015 growth expected to be about 2.5% however, slowdown in China will have serious ripple effects on world economy
- (2) Still not a healthy housing market 1st time buyers (32% today) are below trend (45%) and household formations are off 50% from trend.
- (3) The key to a recovery in housing is the return of 1st time buyers, traditionally about 40- 45% of the market. Current market still skewed to cash buyers and investors. 1st time buyers are mostly young people, but they can't find good jobs. Additionally, rising rents pose problems for home ownership making it more difficult for renters to save for a down payment for home purchase.
- (4) Political discourse will continue to slow a truly strong economic and housing recovery too much uncertainty re: Affordable Care Act/Obama care; immigration reform; direction of economy. Now, the Fed doesn't know what to do they seem confused reading the minutes to September meeting is not encouraging they say one thing, but then change their mind, again and again.
- (5) Productivity becoming a problem for U.S. economy real GDP driven by population (number of workers) and real GDP/worker or productivity. During past 7 years, productivity has grown 1.7% annually whereas the average over previous 17 years was 2.4%. The recent drop is probably due to in large part to lack of investment by private sector. That won't change much until they get more confident about the future of the country. Political discord is a real drag on the economy whether you want to believe it or not it creates uncertainty, and clouds decision making. Plus, these are difficult times geopolitically personally, I'm amazed that we do as well as we do.
- (6) World economy is slowing China, particularly, but Europe also experiencing problems as well as the commodity focused economies like Australia and Canada.

Longer term:

- (1) makeup of U.S. economy is changing and this is impacting spending patterns and housing choices.
- (2) There are growing concerns that the job market is undergoing long term structural changes. Automation seems to be reducing job prospects for the middle class while creating jobs for the highly skilled and less skilled sectors. End result is stagnating family incomes that could translate to lower total housing demand with more emphasis on multifamily/rental demand.
- (3) Education is more important today than ever before don't forget two year programs; community Colleges; apprenticeships;... 4 year/University degree not always best option
- (4) Currency devaluations are the preferred solution to "low inflation" concerns. Central banks in Europe and Japan are following the U.S. with quantitative easing/printing money, in order to spur demand by weakening their currencies. Good article in WSJ suggesting that the "low inflation world" is really a symptom of too much capacity relative to demand, and the solution isn't currency devaluation. Better solution may be developing technology to produce products that fulfill market place demands not being met by existing products -
 - Seehttp://www.wsi.com/articles/global-glut-challenges-policy-makers-1429867807?mod=rss_markets_main
- (6) Rental housing demand is expected to remain relatively strong for some time into the future demographics; economy; debt/credit issues; ... will constrain single family demand
- (5) Eventually, Central banks will have to raise rates and nobody knows how the various economies will respond. We've never had so much liquidity in the system it causes various types of bubbles (assets like houses, stocks, etc.), and a misallocation of resources. Interesting times ahead.

Disclaimer of Non-endorsement

Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by Virginia Tech. The views and opinions of authors expressed herein do not necessarily state or reflect those of Virginia Tech, and shall not be used for advertising or product endorsement purposes.

Disclaimer of Liability

With respect to documents sent out or made available from this server, neither Virginia Tech nor any of its employees, makes any warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

Disclaimer for External Links

The appearance of external hyperlinks does not constitute endorsement by Virginia Tech of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, Virginia Tech does not exercise any editorial control over the information you may find at these locations. All links are provided with the intent of meeting the mission of Virginia Tech's web site. Please let us know about existing external links you believe are inappropriate and about specific additional external links you believe ought to be included.

Nondiscrimination Notice

Virginia Tech prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the author. Virginia Tech is an equal opportunity provider and employer.