November 2013 Housing Commentary

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Princeton, WV
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## November 2013 Housing Scorecard

<table>
<thead>
<tr>
<th>Category</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Starts^A</td>
<td>△ 22.7%</td>
<td>△ 29.6%</td>
</tr>
<tr>
<td>Single-Family Starts^A</td>
<td>△ 20.8%</td>
<td>△ 26.2%</td>
</tr>
<tr>
<td>Housing Permits^A</td>
<td>▼ 3.1%</td>
<td>△ 7.9%</td>
</tr>
<tr>
<td>Housing completions^A</td>
<td>▼ 0.1%</td>
<td>△ 21.6%</td>
</tr>
<tr>
<td>New Single-Family House Sales^A</td>
<td>▼ 2.1%</td>
<td>△ 16.6%</td>
</tr>
<tr>
<td>Existing House Sales^B</td>
<td>▼ 4.3%</td>
<td>▼ 1.2%</td>
</tr>
<tr>
<td>Private Residential Construction Spending^A</td>
<td>△ 1.9%</td>
<td>△ 16.6%</td>
</tr>
<tr>
<td>Single-Family Construction Spending^A</td>
<td>△ 1.8%</td>
<td>△ 18.4%</td>
</tr>
</tbody>
</table>

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

Source: ^A U.S. Department of Commerce-Construction; ^B National Association of Realtors® (NAR®)
## New Housing Starts

<table>
<thead>
<tr>
<th></th>
<th>Total Starts*</th>
<th>Single-Family Starts</th>
<th>Multi-Family 2-4 unit Starts</th>
<th>Multi-Family 5 or more unit Starts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>November</strong></td>
<td>1,091,000</td>
<td>727,000</td>
<td>10,000</td>
<td>354,000</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>889,000</td>
<td>602,000</td>
<td>6,000</td>
<td>281,000</td>
</tr>
<tr>
<td><strong>2012</strong></td>
<td>983,000</td>
<td>576,000</td>
<td>18,000</td>
<td>256,000</td>
</tr>
<tr>
<td><strong>M/M change</strong></td>
<td>22.7%</td>
<td>20.8%</td>
<td>66.6%</td>
<td>26.0%</td>
</tr>
<tr>
<td><strong>Y/Y change</strong></td>
<td>29.6%</td>
<td>26.2%</td>
<td>-55.5%</td>
<td>38.3%</td>
</tr>
</tbody>
</table>

* All start data are presented at a seasonally adjusted annual rate (SAAR)

## New Housing Permits and Completions

<table>
<thead>
<tr>
<th></th>
<th>Total Permits*</th>
<th>Single-Family Permits</th>
<th>Multi-Family 2-4 unit Permits</th>
<th>Multi-Family 5 or more unit Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>November</strong></td>
<td>1,007,000</td>
<td>634,000</td>
<td>27,000</td>
<td>346,000</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>1,039,000</td>
<td>621,000</td>
<td>27,000</td>
<td>391,000</td>
</tr>
<tr>
<td><strong>2012</strong></td>
<td>933,000</td>
<td>574,000</td>
<td>29,000</td>
<td>330,000</td>
</tr>
<tr>
<td><strong>M/M change</strong></td>
<td>-3.1%</td>
<td>2.1%</td>
<td>0.0%</td>
<td>-11.5%</td>
</tr>
<tr>
<td><strong>Y/Y change</strong></td>
<td>7.9%</td>
<td>10.5%</td>
<td>-6.9%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total Completions*</th>
<th>Single-Family Completions</th>
<th>Multi-Family 2-4 unit Completions</th>
<th>Multi-Family 5 or more unit Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>November</strong></td>
<td>823,000</td>
<td>596,000</td>
<td>6,000</td>
<td>221,000</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td>824,000</td>
<td>616,000</td>
<td>12,000</td>
<td>196,000</td>
</tr>
<tr>
<td><strong>2012</strong></td>
<td>677,000</td>
<td>520,000</td>
<td>9,000</td>
<td>148,000</td>
</tr>
<tr>
<td><strong>M/M change</strong></td>
<td>-0.1%</td>
<td>-3.2%</td>
<td>-50.0%</td>
<td>12.8%</td>
</tr>
<tr>
<td><strong>Y/Y change</strong></td>
<td>21.6%</td>
<td>14.6%</td>
<td>-33.0%</td>
<td>49.3%</td>
</tr>
</tbody>
</table>

## New and Existing House Sales

<table>
<thead>
<tr>
<th></th>
<th>New Single-Family Sales*</th>
<th>Median Price</th>
<th>Month’s Supply</th>
<th>Existing House Sales B*</th>
<th>Median Price B</th>
<th>Month’s Supply B</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>464,000</td>
<td>270,900</td>
<td>4.3</td>
<td>4,900,000</td>
<td>$196,300</td>
<td>5.1</td>
</tr>
<tr>
<td>October</td>
<td>474,000</td>
<td>259,200</td>
<td>4.5</td>
<td>5,120,000</td>
<td>$197,500</td>
<td>4.9</td>
</tr>
<tr>
<td>2012</td>
<td>398,000</td>
<td>245,000</td>
<td>4.5</td>
<td>4,660,000</td>
<td>$179,400</td>
<td>4.8</td>
</tr>
<tr>
<td>M/M change</td>
<td>-2.1%</td>
<td>-4.5%</td>
<td>-4.4%</td>
<td>-4.3%</td>
<td>-0.6%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Y/Y change</td>
<td>16.6%</td>
<td>-0.5%</td>
<td>-4.4%</td>
<td>-1.2%</td>
<td>9.4%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

* All sales data are SAAR

Source: U.S. Department of Commerce-Construction: [www.census.gov/construction/nrs/pdf/newressales.pdf](https://www.census.gov/construction/nrs/pdf/newressales.pdf); NAR® [www.realtor.org/topics/existing-home-sales](http://www.realtor.org/topics/existing-home-sales); 12/19/13
Existing House Sales

National Association of Realtors (NAR®) November 2013 sales data:

Distressed house sales: 14% of all sales – (9% foreclosures and 5% short-sales)

Distressed house sales: 14% in October and 22% in November 2012

All-cash sales: increased to 32%; 31% in October

Investors are still purchasing a substantial portion of “all cash” sale houses – 19%; 19% in October 2013 and 19% in November 2012

First-time buyers: unchanged at 28% (28% in October 2013) and 30% in November 2012

Source: ©NAR® www.realtor.org/topics/existing-home-sales; 12/19/13
November 2013 Construction Spending

November 2013 Private Construction: $345.53 billion (SAAR)

1.9% greater than the revised October estimate of $339.23 billion (SAAR)
16.6% greater than the November 2012 estimate of $296.40 billion (SAAR)

November SF construction: $174.76 billion (SAAR)
1.8% greater than October: $171.69 billion (SAAR)
18.4% greater than November 2012: $147.58 billion (SAAR)

November MF construction: $35.24 billion (SAAR)
1.8% greater than October: $34.94 billion (SAAR)
36.3% greater than November 2012: $25.84 billion (SAAR)

November Improvement\textsuperscript{D} construction: $135.53 billion (SAAR)
2.2% greater than October: $132.59 billion (SAAR)
29.6% greater than November 2012: $104.59 billion (SAAR)

\textsuperscript{D} The US DOC does not report improvements directly, this is an estimation. All data is the SAAR and is reported in nominal US$. 

Conclusions

The housing market exhibits stagnation; permits decreased slightly and existing home sales marginally decreased. Construction spending data improved somewhat. November’s new home sales also decreased.

As in previous months, the near-term outlook on the U.S. housing market remains unchanged – there are potentially negative macro-factors or headwinds at this point in time for a robust housing recovery (based on historical long-term averages).

Why?

1) a lack of well-paying jobs,
2) a “sluggish” economy
3) declining real median annual household incomes,
4) strict home loan lending standards, and
5) new banking regulations.
Housing comments – January, 2014

U.S. economy seems to be getting better –
Demand, Debt and Uncertainty are still nagging issues -
Two major concerns –
   (1) can the economy (and housing) stand on its own (without Fed stimulus)? We should get some indications this year.
   (2) Uncertainty is a key reason holding back job creating investments – also holding back consumer spending – but, uncertainty is diminishing, finally.

This is the 1st time since 2006 that I’m getting more optimistic about the economy, and housing. In the past, housing led the recovery from a recession, but this time, I think the economy will recover 1st, and this will create jobs, and people will buy houses again. Why this scenario? Interest rates are already low, so the FED can’t lower them anymore to jump start the economy (this is how we got out of most prior recessions). The economy will improve 1st because of so much “pent up demand”. As the job market improves, this will fuel demand, and the cycle continues. And, Congress seems to be getting its act together.
Why the economy will do better in 2014 – some drivers

- Less deleveraging at state and household levels
- Less dysfunctional “Washington”
- Health care costs showing some improvement – this is important because health care is about 17% of GDP and Medicare/Medicaid are biggest debt problems facing the federal government
- Inflation not a problem (for now) – in fact, this is the big unknown – inflation, disinflation (slower rate of inflation), or deflation. My bet is disinflation. What happens when Central banks unwind balance sheets is anyone’s guess.
- Stronger dollar – as U.S. economy improves and trade deficit shrinks, investment dollars flow to USA – this supports the dollar and job creation
- Job improvement will come from GDP growth – Household formation will follow – that is key to more housing starts
Some additional questions going forward:

(1) Sustainable housing recovery? Keeps looking better. But, there are still almost 10 million households that are seriously underwater as of Dec 2013.
(2) Job recovery remains the main problem – without good jobs with benefits, housing and the economy will remain relatively weak!!!
(3) Longer term, we need to deal with three major issues:
   (a) tax reform, (b) entitlements, and (c) debt. They are related! Hopefully, “Washington” gets the message and deals with these issues.
Housing, Economy, and wood products

They are “joined at the hip”
Housing’s contribution to GDP (%) – historically, it is almost 20% of the economy when you include housing services and fixed investment, but today it is down to 15%. In reality, it is even more important when you include purchased furniture, landscaping, general maintenance, etc.

Housing services = gross rents paid by renters (incl utilities) + owner’s imputed rent (how much it would cost to rent owner occupied homes) plus utility payments

RFI (residential investment) = construction of new SF and multifamily structures, remodeling, manufactured homes, plus broker’s fees

Source: NAHB
Housing starts and wood product prices – Economics 101

Following housing bust in 2008, wood prices fell and production capacity was reduced. So, when housing starts increased, there was an imbalance between demand and supply of wood products. The price mechanism brings demand and supply into balance. Initially, prices fell almost 50% – this instigated production cutbacks of 50% or more – then, as housing begins to turn around, prices increase – this encourages Production increases for wood products – and the cycle starts over.

Sources: Prices – Random Lengths (http://www.randomlengths.com); starts (Bureau of Census (http://www.census.gov/construction/nrc)
Job situation is getting better – we’re creating about 180,000 per month (net basis) and approximately 25% are part time jobs with little or no benefits (health care, retirement, etc.), and poor pay. And, it will only get more challenging as baby boomers retire. This will put more stress on government services like Social Security and Medicare. Where will we get the money to invest in the future?

As long as this scenario continues, demand for goods and services will remain weak. There are no “quick fixes” – government stimulus (QE, etc.) helps, but is not enough. Long term solution is R&D, education, infrastructure investment, fix the tax system to encourage investment/discourage consumption, and fix health care.

OK – here is one more plug for focusing more on education. The U.S. ranks poorly with other countries regarding math and science scores - Our reading comprehension is not all that great either. Making quality education available to everybody should be a high priority. I don’t know how it can be done, but I do know our standard of living will continue to worsen if we don’t become more competitive. Education is key to achieving a better competitive position.
Employment situation - our biggest problem - it’s getting better, but the jobs recovery remains weak by past standards, and many jobs. Don’t include health care or retirement benefits (because they are often part time jobs) – those kinds of jobs don’t encourage people to buy houses.

Net change in non farm payrolls – monthly, thousands

We need 100,000 – 150,000 net new jobs/month to keep up with new entrants to workforce. 300,000/month to bring unemployment down.

Latest number is deceiving – many of the jobs being created are low paying retail and health care with few benefits, and not much future – UNDEREMPLOYMENT these people won’t pay enough taxes to pay down our massive debt either!

Source: U.S. BLS (www.bls.gov)
Unemployment remains high and will remain relatively high for another year or two – but, it’s getting better “slowly”

**There are about 19 million people either unemployed, underemployed, or stopped looking – they are not buying houses**

Employment - We’re still 2.0 million below pre recession levels
Where the growth is --
30% of jobs created in past 5 years are “temporary jobs” – little
Or no health care, retirement, salary – i.e., these people don’t buy
Houses, cars, eat out, etc.  ---  again, underemployment is a big problem

Labor force participation rate is shrinking -
Major problems for social programs with our aging population – fewer people paying taxes, but more people collecting SSI, Medicare, etc. Also, demand for goods and services /GDP will remain relatively weak.

% of civilian adult population, that are working

Too much incentive for people to Collect welfare!!!

November 2013 – 63 % participation rate
Lowest rate on record

Source: BLS
Some inflation is good – shows demand and a healthy Economy. However, Japan had deflation and no growth. While Brazil had 9.4% per year which is too much inflation which eventually slows the economy. The job of the central bank is to maintain “healthy level of inflation” – major concern today is potential deflation in Europe.
Recent U.S. inflation trends are alarming - With latest below 2% despite “free money” for the past 4 years --- Europe is also facing potential deflationary trends

Annual rate
Recent Housing statistics

Background:
Markets are getting better –
Have we turned the corner? – I think so!
Starts are finally turning the corner

Single family starts, Thousand units, SAAR

Source: Census (http://www.census.gov/const/www/newresconstindex.html)
Multi family share is increasing – will it continue?
I believe it will!!

Source: Census (http://www.census.gov/construction/nrc)
Homeownership rates have been falling for the past seven years – big question – when the economy gets back to normal, will people go back to single family or will we see more multifamily?? To date, the “recovery” has been mainly multifamily.

Source: Census (http://www.census.gov/housing/hvs/files/qtr412/q412press.pdf)
New Single Family Home sales is the key statistic to watch – Sales drive housing starts – this drives demand for wood products!!! Getting better, but so slowly

Thousands, SAAR

November 464,000

Source: Census (http://www.census.gov/const/www/newressalesindex.html)
Resale market getting better

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

Source: NAR (http://www.realtor.org/research)
Some comments on recent house price increases - -

Let’s hope they keep increasing because higher prices will encourage builders to build more homes –

- - in addition - -
(1) higher prices are needed to slow foreclosures;
(2) enable people with negative equity to sell homes and move to better jobs;
(3) apply for refinancing - -
(4) this will turn housing market around along with improving economy
Shadow inventory coming down – a good sign
Good News

(1) Household formations are key to the housing recovery - there is a growing “pent up demand”

(2) Formations are improving – but, further improvement depends on a stronger economy – 2014 will see stronger economy!!!

(3) Remodeling is expected to improve through 2014 according the Harvard JCHS (http://www.jchs.harvard.edu/remodeling)
Good news is that household formations exceed starts — plus, when you include demolitions, there is considerable “pent up demand” for shelter — again, demand exceeds supply — a good thing.
Household (HH) formations Shortfall*

Facts:
(1) 1995 - 2007: 1.5 million HH formed per year
    2008 – 2010: 500,000 HH formed per year (1/3 of normal)

(2) During 1995 – 2007, population increased 2.9 million annually
    2008 – 2010, the increase was 2.7 million annually

**HH formation Shortfall (cumulative)**

2008 – 600,000
2009 – 1.7 million
2010 – 2.5 million
2011 – 2.6 million - this is the shortfall

* Shortfall based on model developed by Tim Dunne of the Cleveland Fed
  Based on historical relationship between economy, headship rates, population increase, Social norms, etc. ([http://www.clevelandfed.org/research/commentary/2012/2012-12.cfm](http://www.clevelandfed.org/research/commentary/2012/2012-12.cfm))
Remodeling to pick up as confidence improves, prices increase, and the economy picks up.
Bottom line – when economy returns to normal, demand for shelter will strengthen. That should happen in 2014.

Question – what will the mix be between detached single family and multi family housing and what are the implication for the wood products industry? Also, implications if house size gets smaller??

Most of you have seen this article by Craig Adair and myself and it is three years old, but there is some material there that addresses the question posed above as it relates to the wood products industry:

Another issue to ponder – the role of the federal government in housing. There is a huge federal presence – more than in any other country. Federal agencies (Fannie, Freddie, FHA, VA, etc.), control over 90% of the residential mortgage market. That means there is too much temptation to drive housing according to political whims. Fannie, and Freddie are still in “conservatorship” – i.e., wards of the state., and therefore depending on taxpayer support.

The real key to a housing recovery is the return of mortgage purchase business – i.e., owner occupant buyers in lieu of “REFI” business and speculators paying cash for distressed sales which are then rented. Again, that requires JOBS!
Some conclusions – housing continues to improve –

(1) Economy should see 3% GDP in 2014. Question – can the economy “stand on its own” without Fed stimulus?

(2) What will housing look like in the future? My guess – smaller homes; higher percentage of renters; and more people moving back to the city.

(3) We’re in “uncharted waters” territory right now (i.e., massive money printing) to date, it has helped prevent worsening of economy, but, certainly hasn’t had the impact the FED had hoped for (i.e., jump start the economy).

(4) Housing will continue to improve. Prices are increasing (this is a good sign). Housing affordability is a function of: price, interest rates and jobs/income factor. As long as people have decent income, they will be able to afford a house despite higher mortgage rates and higher house prices. Jobs are the single most important factor to better housing demand. E.G., despite recent record low interest rates and low prices, housing demand was only 1/3 of pre-recession highs. Why – without a job (or part time/low paying jobs), people can’t make the payments. Furthermore, they are not forming households, getting married, ..... JOBS, JOBS – JOBS
U.S. Wood Markets
- a focus on Housing

Coating Wood and Wood Composites Conference
October 29-30, 2013
Charlotte, North Carolina

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United States Housing Overview

Opening Comments
United States Housing Indicators
  Construction Spending
  Housing Barometers
  Residential Remodeling
  Housing Permits, Starts, and Completions
  Existing and New House Sales
  Future Housing Indicators
  Projections
  Demographics
Hardwood and Softwood Markets
United States Economic Indicators
Threats
New Markets
Conclusions
Housing’s Contribution to GDP: 1975 - 2013

Source: NAHB; US DOC
Housing’s Contribution to GDP: 1975 - 2013

Source: NAHB; US DOC
Construction Spending: 1993 - 2013

$US millions

Source: US DOC-Construction
# August/September 2013 Housing Scorecard

<table>
<thead>
<tr>
<th>Metric</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Starts&lt;sup&gt;A&lt;/sup&gt;</td>
<td>Δ0.9%</td>
<td>Δ19.0%</td>
</tr>
<tr>
<td>Single-Family Starts&lt;sup&gt;A&lt;/sup&gt;</td>
<td>Δ7.0%</td>
<td>Δ16.9%</td>
</tr>
<tr>
<td>Housing Permits&lt;sup&gt;A&lt;/sup&gt;</td>
<td>▲3.8%</td>
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</tr>
<tr>
<td>Housing Completions&lt;sup&gt;A&lt;/sup&gt;</td>
<td>Δ0.3%</td>
<td>Δ12.1%</td>
</tr>
<tr>
<td>New Single-Family House Sales&lt;sup&gt;A&lt;/sup&gt;</td>
<td>▼13.4%</td>
<td>Δ6.8%</td>
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<tr>
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<td>Single-Family Construction Spending&lt;sup&gt;A&lt;/sup&gt;</td>
<td>△1.6%</td>
<td></td>
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</tbody>
</table>

**Source:**<sup>A</sup>U.S. Department of Commerce-Construction; <sup>B</sup>National Association of Realtors® (NAR®)
Construction starts increased a bit, but still far from normal. Starts were at an 891,000 seasonally adjusted annualized rate – up 1% from July and 19% year-over-year. Still, construction starts are 40% off the way back to normal – the slowest recovering measure of Trulia’s Housing Barometer.

Existing home sales have returned to normal. Sales rose in August to a seasonally adjusted annualized rate of 5.48 million – that’s up 13% year-over-year, and up 29% year-over-year when foreclosures and short sales are excluded. Overall, existing home sales are 99% back to normal, even though foreclosures and short-sales still make up roughly one-eighth of all existing home sales.

The delinquency + foreclosure rate continued its downward march. The share of mortgages in delinquency or foreclosure dropped to 8.66% in August, the lowest level in over 5 years. The combined delinquency + foreclosure rate is 60% back to normal.

“Residential building, at $203.2 billion (SAAR), dropped 6% in September. Single family housing in September slipped 3%, registering its first month-to-month decline in dollar terms since January. Multifamily housing fell 14%, pulling back after rising by the same percentage during August.”

“Growth has softened slightly from earlier in the year at firms with a residential specialization…”

Residential Remodeling in July 2013
Residential remodels authorized by building permits in the U.S. in August were at a SAAR of 2,987,000. This is 13% below the revised July rate of 3,434,000 and is 5% below the August 2012 estimate of 3,140,000.

Viewing the Economic Recovery through Remodeling
“The end-of-summer drop this year was both earlier and more severe than last year but overall residential remodeling activity in 2013 still remains higher than it was in 2012.” - Joe Emison, Chief Technology Officer, BuildFax.

“The soft patch that home building has seen in recent months, coupled with rising financing costs, is expected to be reflected as slower growth in home improvement spending beginning around the middle of next year. However, even with this projected tapering, remodeling activity should remain at healthy levels.” -- Eric Belsky, Managing Director, Joint Center for Housing Studies.

Source: www.jchs.harvard.edu/home-improvement-upturn-expected-begin-tapering-2014; 10/17/13
United States Remodeling Opportunity?

92,960,508 homes: 40 years old or older – 63.8% of ALL homes

Source: www.census.gov/compendia/statab/cats/construction_housing/housing_units_and_characteristics.html
United States Remodeling Opportunity?

Total housing units: 82,472.3

Source: https://www.census.gov/compendia/statab/cats/construction_housing/housing_units_and_characteristics.html
Housing Units and Starts: 1880 to 2013

Source: US DOC-Construction
Housing Units and Starts: 1880 to 2013

Source: US DOC-Construction

Improvement – yes
But we’re at less than 1946 levels
Total Housing Permits, Starts, and Completions: 1968 - 2013

Source: US DOC-Construction
Total Housing Permits, Starts, and Completions – Raw and Unadjusted Data: 2013

Source: US DOC-Construction
Single-Family Permits, Starts, and Completions: 1968 - 2013

Source: US DOC-Construction
SF Housing Permits, Starts, and Completions – Raw and Unadjusted Data: 2013

Source: US DOC-Construction
“Builder index outpaces single-family starts”

“…has prompted some market watchers to question whether builders are overenthusiastic about what has been a slow-going recovery, or if the market is poised for a surge of new-home construction.”

Source: Random Lengths©, Vol. 69, Is. 43
Multi-Family Permits, Starts, and Completions: 1999 - 2013

Source: US DOC-Construction
MF Housing Permits, Starts, and Completions – Raw and Unadjusted Data: 2013

Source: US DOC-Construction
New and Existing Sales: 1999 - 2013

in thousands

Source: US DOC-Construction and NAR®
“…there’s an inventory shortage, not a housing shortage. Despite the shortage of listed inventory, there are plenty of vacant homes NOT listed for sale.”

“Household formation is lagging. As of 2013 Q2, annual household formation was 746 m according to the Census, and household formation since 2007 has averaged +/- 560 m – which is roughly half the normal rate of household formation of 1.1 mm.”

“When a long-term normal rate of +/- 1.1 mm household formations occur annually -- builders build more new homes; and then we need to start worrying about a future housing shortage.”

-- Jed Kolko, Chief Economist, Trulia

Investor Purchases: 2000 - 2013

Share of Cash Sales Remains Elevated

Cash Sales as a Share of Total Home Sales (%)

Source: CoreLogic

Long-term average +/- 25%

Source: www.fanniemae.com/resources/file/research/emma/pdf/Economic_Summary_091713.pdf; 9/10/13
Investor Purchases: 2011 - 2013

Single-family homes built-for-rent = 5%, Q4 2012
Somewhat less than the peak of 5.35%; Q1 2011
Nearly double the 20-year average of 2.7%

Source: http://eyeonhousing.wordpress.com/2013/04/02/single-family-built-for-rent-market; 4/2/13
“While the desire to own a home remains a bedrock principle in American life, this survey demonstrates that the American public’s views about housing are changing, in part due to the hangover from the housing crisis, but importantly, also because of changes in our lifestyles. The dynamic is no longer simply ‘renting versus owning’ -- perspectives are more complex, and people are viewing housing in a more holistic way.”

- - Peter Hart, Hart Research Associates

Will there be a mass move to theUrban center?

Are suburbs dying a slow death?

Leigh Gallagher, Managing Editor, Fortune Magazine

Gallagher argues more and more Americans are choosing urban living over the suburbs. The trend so profound it's causing mall operators to change business models.

Author: *The End Of The Suburbs: Where The American Dream Is Moving*

http://video.cnbc.com/gallery/?play=1&video=3000186284; 8/5/13

Why are young adults returning to the city?

Robert Steuteville, Editor and Publisher, Better! Cities & Towns

*Much has been said about Millennials — the generation born from 1980 through the late 1990s, sometimes called Gen Y and Echo Boomers — choosing downtown living.*

http://bettercities.net/article/why-are-young-adults-returning-city-20345; 8/13
“A key driver of household formation and rental demand is demographic trends.

U.S. population growth leads to an increase in the number of households.

… going back to World War II the U.S. population average growth rate is 1.2% annually.

In the last recession, population growth dropped to its lowest rate in five decades.

International migration is a key element to overall population growth.

Net migration is influenced by economic growth.

Without a strong economy, immigration also slows dramatically.”
Housing Supply

Single- and multi-family 1-4 building permits: 30-year average = 1 million permits

It will take time for single-family construction to catch up with the long run average of One million new units per year. For our forecasting and scenario analysis, we assume the following new single-family housing supply volumes from 2012 to 2015:

1. **No recovery scenario**: a constant 450,000 new single-family units.

2. **Slow recovery scenario**: new single-family units rising from the current level of 450,000 units to 750,000 units in 2015, with an average of 600,000 units per year from 2012 to 2015.

3. **Accelerated growth scenario**: new single-family units rising from the current level of 450,000 units to 1,000,000 units in 2015, with an average of 750,000 units per year from 2012 to 2015.
“…most industry practitioners, including us, expect overall economic growth to be slower than the long-run average. …

we forecast that the homeownership rate will continue to decline to around 65% level, which implies 3.1 million new families or more than half of total new households will move into rental units.

…multifamily demand: a total of 1.7 million net new renters from 2011-2015.

Pessimistic scenario, homeownership will dip from 65.5% to 64.1% in 2015.

In this scenario, the single-family rental sector is relatively competitive with the multifamily sector due to low house prices and the high foreclosure rate. Total new multifamily demand will still reach 1.6 million from 2011 to 2015.

If the overall economy strengthens, … a rebound in homeownership.

Unless there is a major jump in multifamily new construction, the multifamily market will still be balanced.

… the single-family rental market will see a significantly smaller increase of an estimated 800,000 households compared to 4 million growth in the ownership market.”
Housing Forecast

US Homeownership Rate

New Multifamily Demand (in thousands unit)

# Housing Forecast

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Base Scenario</td>
<td>1.7M</td>
<td>1.4M</td>
<td>1.7 M</td>
</tr>
<tr>
<td>No Recovery</td>
<td>-0.1M</td>
<td>1.7M</td>
<td>1.6M</td>
</tr>
<tr>
<td>Accelerated Recovery</td>
<td>4.0M</td>
<td>0.8M</td>
<td>1.0M</td>
</tr>
</tbody>
</table>

Structural change in the housing market include:

- a dramatic correction in median wealth of U.S. households as home values declined
- declining home ownership rates.

“... a gradual rebound in single-family housing starts, reaching the logarithmic trend line by 2020:

1.1 million

close to the long-run historical norm and within the range of current housing expectations

but much lower than recent RPA scenarios with similar or higher population growth.”

Future United States Housing Starts

Since July, the NAHB has lowered its forecast to 629 m single-family starts in 2013 (from 672 m in April) and decreased the forecast for 2014: 826 m from 858 m. F

In 2015, the NAHB projects 1.16 mm single-family starts. G

“...for the next 15 years, and then we would get an average of 1,660,000 housing starts. ... worst-case scenario = 800,000 to 900,000 starts...for the next fifteen years”

Source: Industry Intelligence Inc.; 8/15/13
“... the market's recovery will be tempered by continued high unemployment, modest income growth, and a subdued pace of household formations. In other words, the patient is on the way back to health, but don't expect the housing market to wake up to 98.6 degrees tomorrow morning.”

-- Frank Nothaft, Chief Economist, Freddie Mac

Source: www.freddiemac.com/news/blog/frank_nothaft/20121107_98_degrees.html
Future U.S. Housing Demand

Deferred Renters/Owners Will Drive Demand

18-34 Year Olds, in millions

Pent up rental demand from 1.5 million "excess" 18-34 Yr. olds living at home

LT Avg % of 18-34 Yr old population living at home = 27%

Source: U.S. Census Bureau, Raymond James & Associates, Inc.
United States Housing

Forest Products and Markets
Forest Products Markets – Hardwoods

Bill Luppold, Research Economist, USDA Forest Service - Princeton

- Hardwood lumber production has declined by 40% between 1999 and 2010, and has only increased modestly since

- We have permanently lost as much as a third of our hardwood lumber production capacity in the past 5 years – Liquidated or abandoned

Source: Bill Luppold, USDA Forest Service, Princeton WV
United States Hardwood Log and Lumber Markets

Hardwood Lumber Production and Consumption

1999 – 12.9 BBF
2005 – 11.6 BBF
2009 – 6.65 BBF
2012 – ≥ 7.3 BBF
2013 – somewhat greater
United States Log and Lumber Markets: Hardwoods

Eastern Hardwood Lumber Production

Source: Bill Luppold, USDA Forest Service, Princeton WV
United States Log and Lumber Markets: Hardwoods

Hardwood Lumber Consumption

Source: Bill Luppold, USDA Forest Service, Princeton WV
United States Log and Lumber Markets: Hardwoods

Hardwood log exports

Source: Bill Luppold, USDA Forest Service, Princeton WV
United States Housing


**U.S. Softwood Lumber**

- New Residential*: 40%
- Industrial: 16%
- R&A: 30%
- NR: 12%
- Export: 2%

**U.S. Structural Panels**

- New Residential*: 53%
- Industrial: 17%
- R&A: 19%
- NR: 10%
- Export: 2%

*New Residential incl. SF, MF, and Mobile Homes

Source: Lumber – WWPA; Panels - APA
United States Softwood Lumber Markets

**RISI: Residential Construction Markets**
Lumber consumed in residential construction increased 25%: 10.1 BBF – 2012
Forecast: increase to 28% in 2013 – 12.9 BBF and to 16.4 BBF – 2014

**RISI: Residential Repair and Remodeling, and Industrial Markets**
Lumber consumed in the repair and remodeling grew 8% to 12.6 BBF – 2012
Projected to grow at an average of 4% per year in 2013-2014
Growth in the industrial market increased 3% to 12.5 BBF – 2012
The industrial market is expected to slow to 1% per year in 2014

**RISI: Nonresidential Construction End-Use Market**
Deteriorated in 2012, decreasing another 12% to 1.3 BBF – 2012
Edge up 2% to 1.4 BBF – 2013; increasing 11% to 1.5 BBF – 2014

United States Softwood Lumber and Panel Markets


Southern Pine Logs and Lumber per MBF

Loss of sawmill production and kiln capacity

Source: ©2013 Forest2Market®, Inc.
Green Douglas Fir:
Doug Fir Logs and Lumber price per MBF

Green California market

Source: ©2013 Forest2Market®, Inc.
West Coast KD Hem-Fir: Hem-Fir Logs and Lumber price per MBF

Source: ©2013 Forest2Market®, Inc.
Coastal Northwest is the High Log Cost Region
Regional sawmill log prices (DF, Hem-Fir and Pine) compared by MBF

Source: ©2013 Forest2Market®, Inc.
Housing Crash Left Canadian Lumber Homeless

BC lumber exports to U.S. 1988-2012

Source: ©2013 Forest2Market®, Inc.
British Columbia Lumber Exports

BC lumber exports to Asia 1988-2012

2013: will increase again

Source: BC Stats

Source: ©2013 Forest2Market®, Inc.
As of mid-2013, we are now projecting that the 2015 timber supply deficit in China will be even higher than we had previously forecast, at nearly 198 million $m^3$, or 8.8% higher than we had projected in April 2011. ...in 2012 the wood products sector in China (lumber, plywood, blockboard, MDF, particleboard and OSB) consumed approximately 230 million $m^3$ of wood, net of sawmill residues.

United States Economy
United States Economy

Moves in the prices aren't encouraging moves in quantity.

United States Economy

Threats to growth are looming for forest, paper & packaging CEOs

- **Economic uncertainty**: 87% of sector CEOs say uncertain or volatile economic growth could threaten their prospects.
- **Over-regulation**: 76% of forest, paper & packaging CEOs think over-regulation could hurt growth.
- **Energy and raw material costs**: 76% see them as a concern, compared to just 52% of the overall sample.

Source: [http://www.pwc.com/gx/en/ceo-survey/2013/pdf/pwc-global-ceo-survey-2013-forest-paper-packaging-key-findings.pdf](http://www.pwc.com/gx/en/ceo-survey/2013/pdf/pwc-global-ceo-survey-2013-forest-paper-packaging-key-findings.pdf)
United States Economy

GOVERNMENT REGULATION GETS IN THE WAY

United States: NFIB: Government Requirements as the Top Problem

(percent of respondents)

Notes:
Shaded regions represent periods of U.S. recession
Source: National Federation of Independent Business

Consistent job growth, but 1.7 million jobs below the total establishment job peak in ’08

The problem -- slow pace of growth, job types, and many months below 200,000 jobs/month

“…the nation needs 8.3 million jobs to fully recover from the recession.”

United States Economy

Tens of millions of people are just giving up.

A RECORD NUMBER OF AMERICANS HAVE LEFT THE LABOUR FORCE

United States

People Not in Labor Force
(millions)

Share of population not in Labour Force
(percent)

Note:
Source: Bureau of Labor Statistics

Has the Great Recession created behavioral changes in the labor markets?
The proportion of the US working-age population that is employed (part time or full time) continues to stagnate. Why?
JPMorgan: The labor flow data show that the chance of an unemployed worker finding a job in a given month fell dramatically during the last recession and has remained near its lows since.
The Trend Toward Part-Time Employment: A Closer Look

“13.5% of US employees were part-timers in 1968; 20% in January 2010; 19% in August 2013.

The big question: is the ratio shift the result of structural change triggered by the Great Recession but now driven a combination of several factors, not least of which are workplace demographics and increased productivity driven by technology.”

-- Doug Short, Vice President of Research, Advisor Perspectives

United States Economy

The Young and the Jobless

The financial crisis and its aftermath have taken a particularly heavy toll on younger workers. Americans under 25 make up a disproportionately large number of the unemployed relative to their share of the population. Many are staying in school to avoid the harsh job market. And those who are employed are working fewer hours and making less money than before the recession.

Losing Ground

Change in median weekly earnings, adjusted for inflation, 2007–2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>16–19 years old</td>
<td>-4.6%</td>
</tr>
<tr>
<td>20–24</td>
<td>-6.9%</td>
</tr>
<tr>
<td>25–34</td>
<td>-0.7%</td>
</tr>
<tr>
<td>35–44</td>
<td>0.8%</td>
</tr>
<tr>
<td>45–54</td>
<td>0.4%</td>
</tr>
<tr>
<td>55–64</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

284,000: Number of U.S. college graduates working in minimum-wage jobs in 2012

Source: http://online.wsj.com/article/SB10001424127887323893004579057063223739696.html?mod=WSJ_hps_LEFTTopStories; 9/14/13
“...the recovery has left many young people behind. The official unemployment rate for Americans under age 25 was 15.6% in August, down from a peak of nearly 20% in 2010 but still more than 2½ times the rate for those 25 and older — a gap that has widened during the recovery.”

Source: http://online.wsj.com/article/SB10001424127887323893004579057063223739696.html?mod=WSJ_hps_LEFTTopStories; 9/14/13
Median annual household income in August 2013 -- $52,236
4.4% lower than the median of $54,614 in June 2009
7.2% lower than the median of $56,283 in January 2000

“These comparisons demonstrate how significantly real median annual household income has fallen over the past decade, and how much ground needs to be recovered to return to a median income level that existed more than ten years ago.” -- Gordon Green and John Coder, Sentier Research, LLC
The typical American family makes less than it did in 1995 and 1989

“In 1989, the median American household made $51,681 in 2012 dollars — $51,017 in 2012”

“This isn't a lost decade for economic gains for Americans. It is a lost generation.”

-- Neil Irwin, Columnist and Economics Editor, The Washington Post

First fall in US manufacturing output since 2009 as the Eurozone pulls ahead

“The flash PMI provides the first insight into how business fared against the backdrop of the government shutdown in October, and suggests that the disruptions and uncertainty caused by the crisis hit companies hard. The survey showed the first fall in manufacturing output since the height of the global financial crisis back in September 2009.”

-- Chris Williamson, Chief Economist, Markit

Student Debt – Another Headwind for Housing?

“… share of 25-year-olds with student debt has increased from just 25% in 2003 to 43% in 2012. … average student loan balance among those 25-year-olds with student debt grew by 91% over the period, from $10,649 in 2003 to $20,326 in 2012. … for the first time in at least 10-years, 30-year-olds with no history of student loans are more likely to have home-secured debt than those with a history of student loans.”

Student Debt – Another Headwind for Housing?

“… tighter underwriting standards, higher delinquency rates, and lower credit scores
...these factors — lowered expectations of future earnings and more limited access to credit

— may have broad implications for the ongoing recovery of the housing and vehicle markets, and of U.S. consumer spending more generally.

While highly skilled young workers have traditionally provided a vital influx of new, affluent consumers to U.S. housing and auto markets, unprecedented student debt may dampen their influence in today’s marketplace.”

Threats

European Sovereign Debt Crisis
United States Sovereign Debt
State and Local debt
Threats

European economy

- Recession in euro-zone (17 countries, not all in recession) + UK
- Construction decline 5% 2013
  - 3.5% residential (not wood-based)
  - 4% non-residential
  - 8 civil engineering
- Record unemployment
  - EU 10.7%
  - Greece and Spain 27%

Sources: Euroconstruct, Reuters, 2013
Threats

Federal Debt Held by the Public as a % of GDP
1790-2084


Source: http://www.hoisingtonmgt.com
Threats

State and Local Debt

Detroit, Stockton CA, Jefferson County AL, and....?
Future Wood Markets – New Products

Cross-Laminated Timber

Source: bruteforcecollaborative.com
Future Wood Markets – New Products

High-Rise Timber Structures

Source: www.binderholz.com
Conclusions

The housing market has improved – yet;

Is the market plateauing at an increased level – or will it go higher?

August total starts: 45 - 50% less than historical average – 1.6 mm

August SF starts: about 45% less than historical average – 1.1 mm

Household formation numbers are still weak: The share of those aged 25 to 34 living with their parents, which surged at the onset of the last recession, continued to edge higher to 13.6% in 2012.\(^H\)

Potential Headwinds:

   Global economy

   European debt crisis – it’s still with us

   U.S. student debt

   Have U.S. housing prices rose to quickly?

Source: \(^H\)www.fanniemae.com/resources/file/research/emma/pdf/Economic_Summary_091713.pdf; 9/10/13
Conclusions

The near-term outlook on the U.S. housing market remains unchanged – there remain too many potential negative and/or lackluster macro-factors at this point in time for a robust housing recovery. Why?

1) Consumer confidence – initial September reading decreased and many report that confidence is fragile,
2) a lack of well-paying jobs being created,
3) a sluggish economy,
4) declining real median annual household incomes,
5) strict home loan lending standards, and
6) new bank lending regulations in Q4 2013.

“*The* housing crisis has been successfully contained, but I don't think we're seeing a recovery that's robust and fundamentally sound.”

- - Daren Blomquist, Vice President, RealtyTrac®

Source: www.chicagotribune.com/classified/realestate/foreclosure/sc-cons-0418-umberger-20130419,0,2297043.column; 4/19/13
Questions?

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