

When the Housing Market Returns to “Normal,” How Much Will Residential Construction Employment Rebound?

May 6, 2013

Fannie Mae Housing Insights, Volume 3, Issue 3

“A return to ‘normal’ market conditions won’t restore all of the homebuilding jobs lost during the housing bust. In 2016, the number of residential construction jobs is forecast to remain nearly 1 million fewer than at the peak of the housing boom. ”

This Housing Insights is the third part in our series Transition to “Normal,” which analyzes housing market conditions and their return to normalcy.

Introduction

The housing bust induced a 41 percent drop in residential construction jobs between 2006 and 2011.¹ Fannie Mae’s Economic and Strategic Research (ESR) Group predicts that homebuilding activity will return to “normal” by 2016, with housing starts roughly doubling over the next four years.² The return to normal also implies an increase in residential construction employment, but how many jobs will be created by the homebuilding rebound?

This *Housing Insights* uses the historical relationship between housing starts and residential construction employment, plus ESR’s housing starts forecast, to project future homebuilding employment. If housing starts return to normal levels in 2016, as expected, residential

construction employment is predicted to rise to nearly 2.5 million jobs, an increase of 412,000 over current levels. Despite this substantial gain, homebuilding employment is forecast to remain nearly 1 million less than at the peak of the housing boom.

Full recovery is unlikely in the near term because residential construction employment exceeded levels needed to meet fundamental housing demand growth by roughly 1.6 million jobs at the top of the housing bubble.³ The number of homebuilding jobs is now better aligned with fundamental demand, setting the stage for sustained gains in homebuilding employment. However, even with renewed job growth, many residential construction workers who were employed at the peak of the boom and displaced during the downturn are unlikely to regain employment in their former trade and might need assistance in transitioning to work in other sectors of the economy.

The Boom and Bust in Homebuilding Employment

Residential construction activity soared during the housing bubble, with total housing starts reaching 2.1 million units in 2005. Residential construction employment ascended with construction activity, as homebuilding jobs increased by a third between 2000 and 2006 and reached a peak of 3.4 million (see Exhibit 1).⁴ In comparison, total nonfarm payrolls grew by only 3 percent during the same period.

¹ “Residential construction jobs” include employment in the construction of residential buildings and residential specialty trade contractors. The former category includes jobs at establishments, such as general contractors and operative builders, that have primary responsibility for residential construction. The latter category includes employment at establishments that specialize in residential contracting work such as framing, drywall installation, masonry, roofing, electrical work, and plumbing. In this *Housing Insights*, residential construction jobs are also termed “homebuilding jobs” or “homebuilding employment.”

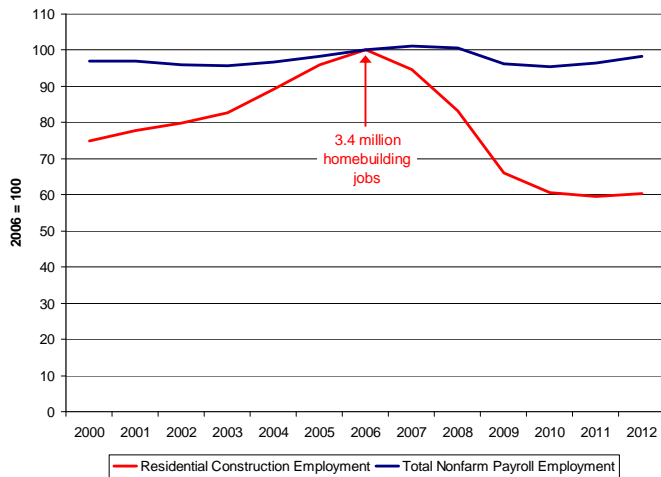
² See Brian Hughes-Cromwick’s FM Commentary, *Transitioning to “normal”: What does a healthy housing market look like and how far off is it?* (<http://www.fanniemae.com/portal/about-us/media/commentary/031413-hughes-cromwick.html>)

³ As explained in greater detail below, fundamental housing demand growth is estimated as the sum of household growth, the increase in vacancies needed to accommodate household growth, and net removals of units from the housing stock.

⁴ Residential construction jobs represent only a portion of total housing-related employment. Including housing-related employment in sectors such as manufacturing, wholesale and retail trade, and finance and real estate produces an estimate of 9.2 million residential-investment-related jobs at peak in 2006. (Dawsey, Kris, and Hui Shan, *U.S. Daily: Housing Sector Jobs Poised for a Comeback*, Goldman Sachs Research, February 11, 2013.)

The fall of homebuilding employment has been even more spectacular than its rise. Between 2006 and 2011, residential construction jobs dropped by 1.4 million, a decline of 41 percent. Although homebuilding employment is expanding once again, the number of jobs in the sector has increased by just 6 percent since bottoming in early 2011.

Exhibit 1. Homebuilding Jobs Rose and Fell Much More Rapidly Than Overall Employment



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages and Current Employment Statistics

Even When Housing Construction Normalizes, Many Lost Homebuilding Jobs Won't Return

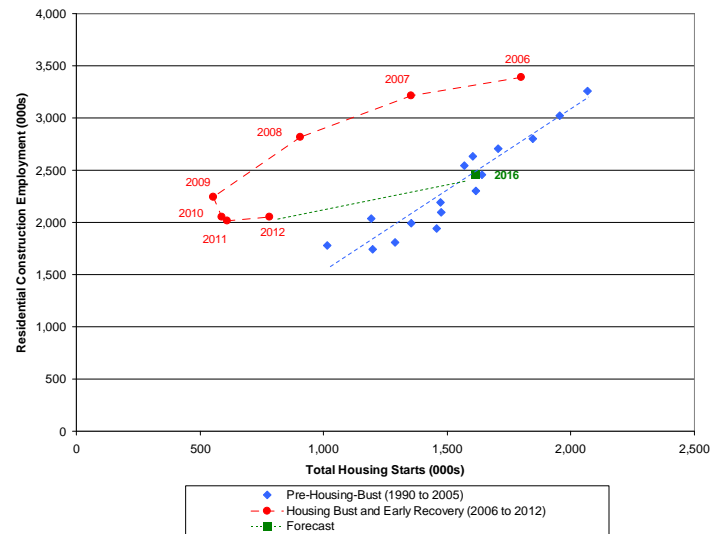
ESR's housing construction forecast indicates that total starts will recover to a "normal" level of about 1.6 million units in 2016. What does this return to normalcy mean for homebuilding employment?

Answering this question requires examining the historical relationship between new home construction and homebuilding employment. Prior to the onset of the housing bust, residential construction employment was highly correlated with total housing starts (see blue data points in Exhibit 2).⁵ This linear relationship broke down during the

⁵ Each data point in Exhibit 2 shows residential construction employment (y-axis) and total housing starts (x-axis) for a single year. During the "pre-housing-bust" period, the R² between housing starts and residential construction employment was 0.89. (The R² statistic measures the degree of linear correlation between variables and ranges from zero to one, with larger values indicating a stronger linear relationship.)

housing bust and initial recovery (see red data points in Exhibit 2).

Exhibit 2. A Return to a "Normal" Housing Market Won't Restore All of the Lost Homebuilding Jobs



Sources: Census Bureau, Survey of Construction; Bureau of Labor Statistics, Quarterly Census of Employment and Wages and Current Employment Statistics; ESR forecast

A key assumption of ESR's homebuilding employment forecast is that the pre-bust linear relationship between starts and residential construction jobs re-emerges by 2016. Given this assumption, ESR's housing starts forecast for 2016 can be plugged into the linear regression equation that describes the pre-bust relationship, yielding a forecast of residential construction employment in 2016 (see the green data point in Exhibit 2).⁶

The resulting forecast predicts that residential construction employment will increase by 412,000 jobs between 2012 and 2016.⁷ The 20 percent jump in homebuilding employment will be roughly three times greater than the forecasted pace of total job growth during this period. However, gains will not be rapid enough to bring back all homebuilding jobs lost during the housing bust. In

⁶ The straight green line in Exhibit 2 is used to connect the 2012 and 2016 data points in time sequence and is not intended to indicate an actual forecast path between these years.

⁷ A similar forecasting approach that separates single-family from multifamily starts in the regression equation predicts an increase of about 470,000 homebuilding jobs by 2016. This alternative approach accounts for some, although not all, of the impacts on homebuilding employment arising from changes in the composition of production. For example, a shift within the single-family category toward larger homes could require greater labor input per unit produced. (Michelle Meyer, "Back to Work We Go," Bank of America/Merrill Lynch, *Housing Watch*, December 11, 2012.)

2016, the number of residential construction jobs is forecast to remain nearly 1 million fewer than at the peak of the housing boom.

A Legacy of Overbuilding: Excess Homebuilding Employment

Many of the lost residential construction jobs won't be restored any time soon because housing construction far outstripped fundamental housing demand growth during the housing boom, leading to an oversupply of both housing and residential construction workers. A rough estimate of excess homebuilding employment can be developed by comparing increases in fundamental housing demand with actual housing construction. Here, fundamental demand growth is estimated by applying the same methodology as used to develop ESR's "normal" housing demand projections, with the only difference being that historical estimates of household growth are used rather than demographic projections.⁸

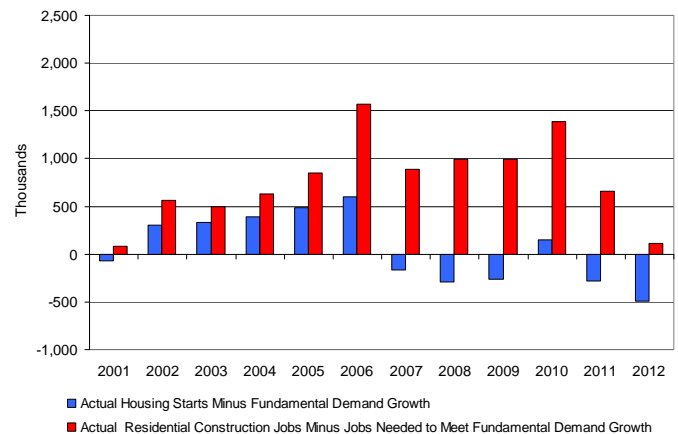
Between 2002 and 2006, estimates of fundamental demand growth are substantially less than actual housing starts, signifying excess housing construction (see the positive blue bars in Exhibit 3). On the labor market front, the actual number of residential construction jobs also exceeded levels consistent with fundamental housing demand growth during this period, representing excess employment (see the red bars in Exhibit 3).⁹ At the

⁸ See Brian Hughes-Cromwick's recent FM Commentary, *Transitioning to "normal": What does a healthy housing market look like and how far off is it?*, for a brief description of the "normal" housing demand projection methodology. The methodology is discussed in detail at: http://www.fanniemae.com/resources/file/research/emma/pdf/Appendix_012413.pdf

⁹ The number of residential construction jobs needed to meet fundamental demand growth is estimated by plugging the number of starts needed to meet increases in fundamental demand into the linear regression equation that describes the relationship between total housing starts and residential construction employment in the pre-bust period. The red data series in Exhibit 3 depicts the difference between actual homebuilding employment and the estimated number of jobs needed to meet fundamental demand growth. It is important to note that the estimates of excess starts and residential construction jobs are based on fundamental demand growth only, and do not take into account housing stock conditions. For example, during a period of elevated vacancies, such as existed during the housing bust, some fundamental demand growth can be accommodated within the existing stock, thus decreasing the need for new housing production. Under such conditions, excesses in housing starts and residential construction employment would be greater than shown in Exhibit 3. An alternative approach that considers vacancies in the existing stock suggests that excess residential construction jobs peaked at about 1.8 million, but also indicates that employment excesses now have been largely eliminated.

peak of the housing boom, the number of excess residential construction jobs reached roughly 1.6 million. Although housing starts corrected quickly in 2007 to better match fundamental demand, residential construction employment was slower to adjust and only in 2012 appeared to reach levels more in line with fundamental demand growth.¹⁰ The re-alignment of residential construction employment with levels needed to meet fundamental demand growth sets the stage for sustained growth in homebuilding jobs over the next several years given ESR's forecast for continued expansion of housing demand.¹¹

Exhibit 3. Housing Starts and Residential Construction Jobs Outstripped Fundamental Demand Growth During the Boom



Sources: ESR estimates based on Census Bureau, *Survey of Construction and Housing Vacancy Survey (2011 and 2012 household growth estimates)*; Bureau of Labor Statistics, *Quarterly Census of Employment and Wages and Current Employment Statistics*; Lawler Economic & Housing Consulting, *2001-2010 household growth estimates*.

Implications of Renewed Growth in Homebuilding Employment

The economic implications of a return to homebuilding normalcy extend beyond the

¹⁰ As noted by Dawsey and Shan, the slower adjustment of employment compared with production may be the result of "labor hoarding," which "...reflects businesses' reluctance to fire workers at a rate commensurate with the decline in their sales" and likely reflects the anticipation of improvements in demand. See Kris Dawsey and Hui Shan, *U.S. Daily: Housing Sector Jobs Poised for a Comeback*, Goldman Sachs Research, February 11, 2013.

¹¹ Fundamental housing demand growth is estimated to have increased from less than 500,000 units in 2010 to nearly 1.3 million units in 2012. ESR's normal market forecast calls for further improvement to 1.6 million units in 2016.

forecasted growth in residential construction employment. A rebound in housing construction will not only create new homebuilding jobs, but it also will produce positive ripple effects throughout the residential sector and across the broader economy by spurring home sales, mortgage lending, purchases of home furnishings, and manufacturing.¹²

However, the massive and lingering construction job losses created by the housing bust also present broader economic challenges, as many residential construction workers who were displaced by the housing downturn might never again find homebuilding jobs and might be forced to find employment in other sectors of the economy.¹³ Without assistance in transitioning to other industries, some former residential construction workers might face long-term unemployment or might depart the labor force altogether, creating a loss of valuable human capital and a potential drag on future economic growth.

Patrick Simmons
Director, Strategic Planning
Economic & Strategic Research Group

The author thanks Orawin Velz, Doug Duncan, and Manhong Feng for valuable comments in the creation of this *Housing Insights*. Of course, all errors and omissions remain the responsibility of the author.

Opinions, analyses, estimates, forecasts and other views of Fannie Mae's Economic and Strategic Research (ESR) Group included in these materials should not be construed as indicating Fannie Mae's business prospects or expected results, are based on a number of

¹² Recent research by Deutsche Bank suggests that one new construction job generates at least one additional job elsewhere in the economy. See Peter Hooper, Torsten Slok, and Matthew Luzzetti, "Construction Boom = Substantial Improvement in Labor Market," *Deutsche Bank Markets Research*, April 1, 2013.

¹³ In analysis conducted at the Federal Reserve Bank of New York, Richard Crump and Aysegul Sahin find that unemployed construction workers, as a group, have not experienced worse labor market outcomes than all unemployed workers during the current recovery. (See "Skills Mismatch, Construction Workers, and the Labor Market" at <http://libertystreeteconomics.newyorkfed.org/2012/03/skills-mismatch-construction-workers-and-the-labor-market.html>) They also find that a high percentage of unemployed construction workers who become reemployed remain in the construction industry. However, data for residential construction workers are not broken out in their analysis. As a counterpoint to Crump and Sahin, Pedro Silos and Lei Fang of the Federal Reserve Bank of Atlanta find that unemployed construction workers who become reemployed in other industries typically suffer much larger wage declines than workers who are displaced from other sectors (See "Are Unemployed Construction Workers Really Doing Better?" at <http://macroblog.typepad.com/macroblog/2012/03/are-unemployed-construction-workers-really-doing-better.html>).

assumptions, and are subject to change without notice. How this information affects Fannie Mae will depend on many factors. Although the ESR Group bases its opinions, analyses, estimates, forecasts and other views on information it considers reliable, it does not guarantee that the information provided in these materials is accurate, current or suitable for any particular purpose. Changes in the assumptions or the information underlying these views could produce materially different results. The analyses, opinions, estimates, forecasts and other views published by the ESR Group represent the views of that group as of the date indicated and do not necessarily represent the views of Fannie Mae or its management.