THE LINNEMAN LETTER

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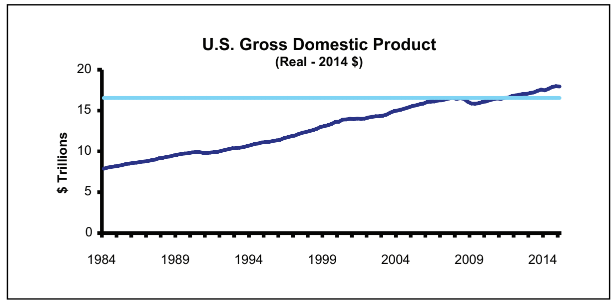
# The Chirping Continues

By Dr. Peter Linneman, PhD
Chief Economist, NAI Global
Principal, Linneman Associates

The latest GDP data indicated that the U.S. economy shrank by 0.04% over the first quarter of 2015, or 0.2% annualized (rounded). But this is nonsense, reflecting flaws in the BEA seasonal adjustor rather than a shrinking economy. There is no way the economy shrank while employment grew by 586,000 and new unemployment claims stayed below 300,000 throughout the quarter. While the economy is not on the pace that it could achieve given less intervention, it is clearly growing. Keep in mind that the BEA seasonal adjustment is a statistical manipulation, not a fact. And while -0.04% is an improvement from the BEA's second estimate, do not lose sleep over the ramifications of "negative" growth. In the meantime, another 500,000 aggregate jobs were created in April and May.




But even as the U.S. supposedly experienced negative growth in the first quarter, real GDP and per capita real GDP exceeded their respective pre-recession highs by 8.5% and 2.5%, respectively. Year-over-year real GDP growth of 2.7% through the first quarter of 2015 reflects about 73 basis points (bps) of growth from population increases (versus about 95 bps over the past 40 years) and 197 bps from productivity growth (versus a norm of about 200 bps). It is notable that population growth remains about 20-25bp below its pre-recession norm even though the economy has largely recovered (with the exception of the housing sector). It remains to be seen if this is a new norm or a temporary aberration, as demographic trends take a decade or more to confirm.

The U.S. economy remains far below its long-term trend, with real GDP nearly $2.6 trillion (12.5%) below trend GDP. This gap now represents a loss of $8,035 per capita, exceeding the total real GDP of Brazil, and rapidly approaching the total real GDP of the U.K., the sixth largest economy in the world. That is, this shortfall is economically significant.

Real GDP and real GDP per capita remain 1.15 and 0.56 standard deviations below trend, respectively. The GDP gap underscores the extreme cost of ignoring and destroying market signals. In May, the

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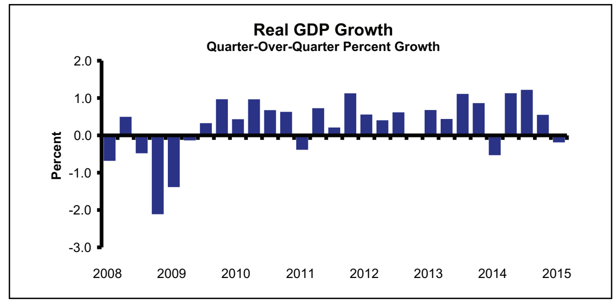
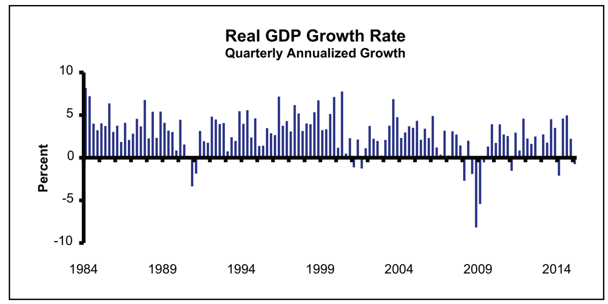
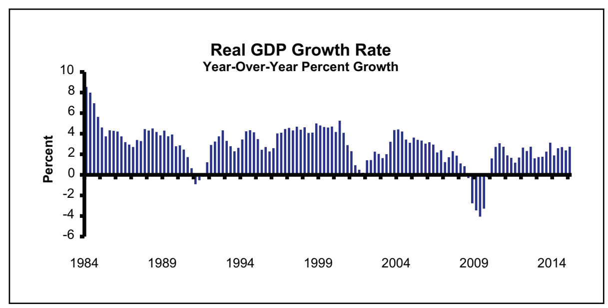
national unemployment rate remained at about its historical average 5.5%, down 80 bps over the past year. Most MSAs are at new employment highs, though some continue to struggle. And with greatly reduced oil prices, employment growth in Houston, Dallas, and Denver will slow. However, over the past six months, jobs have managed to increase in these MSAs by 13,500, 51,500, and 19,800 jobs, respectively. The best news for real estate owners (though not developers) in these markets is that development activity has effectively ceased as capital sources react to lower oil prices.



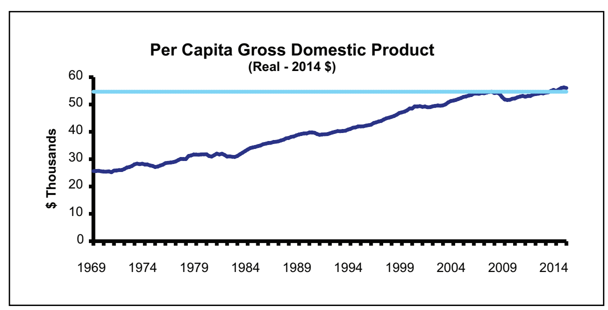

Turning to U.S. employment, we have averaged 233 bps of job recovery per month over the past 56 months through May 2015. But the economy remains 18.7 million jobs (0.95 standard deviations) below trend. This employment gap nearly equals the combined employment of New York, New Jersey, and Pennsylvania. Through April 2015 (latest available), 35 of 45 MSAs in our survey were above the 100% job recovery threshold, versus only 24 a year ago and just 16 two years ago. The good news is that the job gap has declined by 650,000 since its peak in February of this year.



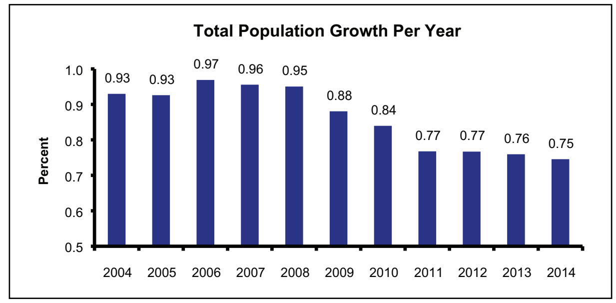

Single family housing remains the laggard sector of the economy, as artificially low interest rates strangle the capacity of households to generate down payments. We have a cumulative housing production shortfall of 3.1 million units (single family and multifamily combined) since the start of 2002. And while the auto sector is now above normal output levels, the U.S. has produced about 8.8 million cars fewer than historic norms over the past decade. However, this is an improvement from the 10.2 million car cumulative shortfall reached in 2013. This under-production of housing and automobiles amounts to more than $1.1 trillion and $430 billion of pent-up economic activity, respectively. Housing and auto represent 43.2% and 16.8% of the real GDP gap, respectively, and are major employers of the U.S. middle class. Housing starts are being crushed by the Fed's low-rate policy, eliminating interest income for those saving for down payments and discouraging grandparents from making transfers to their grandchildren.

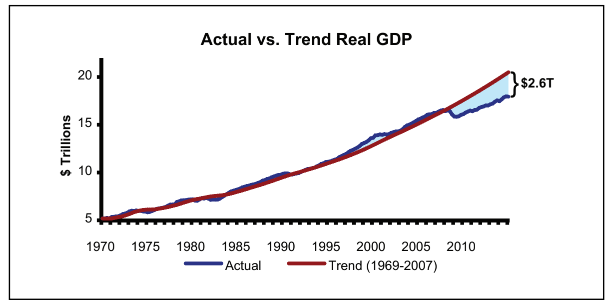


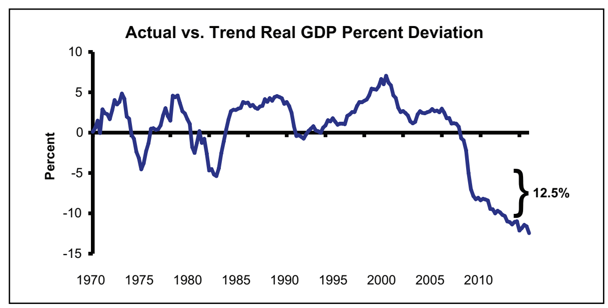

Through the first quarter of 2015, real per capita household net worth, median home prices-to-per capita disposable personal income, multifamily home starts, and real home prices reported by the Census Bureau are above their respective trends. However, conflicting home price evidence persists, as the real median home

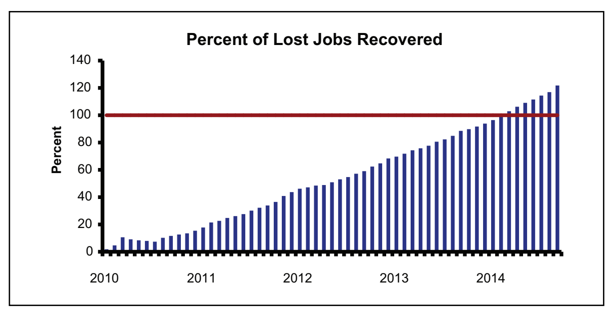


price reported by the Federal Housing Finance Agency (FHFA) remains 1.1 standard deviations below trend. After briefly surpassing trend in late 2014, multifamily housing starts declined to below an annualized rate of 300,000 in January and February of 2015, but stood at 349,000 in May 2015, bringing it to 1.1 standard deviations above trend. Other key economic metrics remain 0.1 (unemployment rate) to 7.6 (corporate profits) standard deviations below their long-term norms. Corporate profits were the first of the metrics to rebound, but are now significantly below trend.



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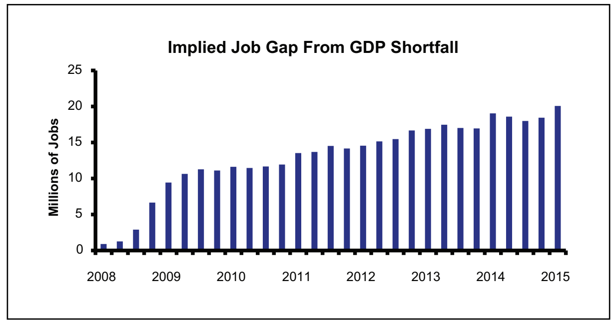


**On the Road to Recovery**

| | Pre-Recession Best | Recessionary Worst | Current* | % of Loss Recovered | Predicted Trend** | Difference From Trend | % Change Needed To Achieve Trend | Std. Dev. from Trend |
|---|---|---|---|---|---|---|---|---|
| Real GDP (2014 $ billions) | $16,539.3 | $15,837.4 | $17,942.9 | 300.0 | $20,497.3 | -$2,554.4 | 14.2 | -1.15 |
| Real Per Capita GDP | $54,663.2 | $51,650.9 | $56,028.4 | 145.3 | $59,590.8 | -$3,562.3 | 6.4 | -0.56 |
| Real Retail Sales (2011 $ millions) | $382,267.0 | $326,232.8 | $394,657.5 | 122.1 | $444,457.9 | -$49,800.4 | 12.6 | -0.84 |
| Real Median Home Price Index (FHFA) | 225.0 | 178.5 | 197.6 | 41.2 | 296.4 | -98.8 | 50.0 | -1.10 |
| Durable Industrial Output Index | 102.3 | 75.0 | 111.2 | 132.7 | 130.2 | -19.1 | 17.1 | -1.36 |
| Non-Durable Industrial Output Index | 100.6 | 86.2 | 95.3 | 63.7 | 120.4 | -25.1 | 26.3 | -1.08 |
| Real Per Capita HH Net Worth | $259,801.0 | $200,325.5 | $258,958.8 | 98.6 | $247,353.6 | $11,605.2 | 0.0 | 0.32 |
| Payroll Employment (000s) | 138,365.0 | 129,649.0 | 141,679.0 | 138.0 | 160,391.8 | -18,712.8 | 13.2 | -0.95 |
| Unemployment Rate | 4.4 | 10.0 | 5.5 | 80.4 | 5.1 | 0.4 | -8.0 | 0.12 |
| Conference Board Consumer Confidence Index | 111.9 | 25.3 | 95.4 | 80.9 | 114.0 | -18.7 | 19.6 | -0.46 |
| Median Weeks Unemployed | 7.5 | 25.2 | 11.6 | 76.8 | 8.7 | 2.9 | -24.6 | 0.25 |
| Capacity Utilization | 80.8 | 66.9 | 78.2 | 81.2 | 80.4 | -2.2 | 2.8 | -1.54 |
| SA Auto & Light Truck Sales - Thousands | 1,464.4 | 751.9 | 1,371.5 | 87.0 | 1,538.5 | -167.0 | 12.2 | -0.57 |
| Median Home Price-to-Per Capita DPI | 7.8 | 5.6 | 6.7 | 51.7 | 6.1 | 0.6 | 0.0 | 1.54 |
| Profits After-Tax (2014 $ billions) | $1,394.4 | $878.3 | $1,416.9 | 104.4 | $1,778.2 | -$361.3 | 25.5 | -7.64 |
| Percent of Industries Adding Workers (LTM Avg) | 65.8 | 25.0 | 67.5 | 104.1 | 83.1 | -15.6 | 23.1 | -0.70 |
| Multifamily Starts (SAAR 000s) | 378.0 | 53.0 | 349.0 | 91.1 | 334.4 | 14.6 | 0.0 | 1.05 |
| Single-Family Starts (SAAR 000s) | 1,823.0 | 353.0 | 680.0 | 22.2 | 1,101.2 | -421.2 | 61.9 | -0.60 |
| Real Home Prices (2011 $) (Census) | $292,522.5 | $210,632.7 | $282,660.8 | 88.0 | $277,430.6 | $5,230.2 | 0.0 | 0.12 |

**Quarterly data through 1Q15; latest monthly varies, Mar-May 2015. SAAR indicates seasonally-adjusted annual rates.*
*** Trend data based on historical data through 2007.*