



# the tampa bay economy

## PERSISTENTLY LOW REAL INTEREST RATES IN ADVANCED ECONOMIES: IS THERE A STRUCTURAL EXPLANATION?

by Vivekanand Jayakumar, Ph.D.

**T**he current U.S. expansionary cycle (which began in July 2009) is five and a half years old. Yet, short-term and long-term interest rates in the U.S. remain mired at historically low levels. Interest rates in other advanced economies (France, Germany, and Japan) are even lower than those in the U.S. Despite herculean efforts by the Federal Reserve (Fed), the European Central Bank (ECB), the Bank of Japan (BOJ) and the Bank of England (BOE), post-crisis economic recovery in advanced economies has been disappointing. Rich-world central banks have also struggled to attain their explicitly stated long-term inflation target of 2 percent.

Standard narratives of post-crisis era developments have generally highlighted unconventional monetary policy actions of the rich-world central banks as the primary factor underlying historically low nominal and real interest rates. The main themes of such narratives can be summarized as follows. Once the Fed and other central banks reduced their key short-term policy rates to near zero, they faced the limitations imposed by the zero lower bound. Constrained by their inability to push short-term policy rates into negative territory, the rich-world central banks decided to pursue unconventional policies to aid their moribund economies. For instance, the Fed and the BOE pursued a two-pronged unconventional approach that consisted of large-scale asset purchases (or quantitative easing) and forward guidance (management of inflation and interest rate expectations via explicit central bank commitments).

Quantitative easing (QE), which entailed sizable purchase of assets in the secondary market with newly created reserves by rich-world central banks, was expected to impact monetary and financial conditions via three primary channels – the portfolio rebalancing

channel, the liquidity channel and the signaling channel. When central banks reduced the availability and yield on safe assets (long-dated government securities) via QE, it was believed that investors would flock to riskier assets such as corporate securities and equities—the so-called portfolio rebalancing channel. Resultant increase in asset values was expected to provide a positive wealth effect and a rise in business investment.

Central banks, by adding vast quantities of newly created reserves into the financial system, were also deemed to have boosted liquidity and eased financial frictions—the so-called liquidity channel. Finally, by undertaking large-scale asset purchases, central banks provided a clear market signal regarding their commitment to keep rates low for an extended period of time—the so called signaling channel. The signaling channel is generally assumed to complement forward guidance statements put forth by rich-world central bankers. Official statements that promised to hold interest rates low for an extended period of time, or, until specific labor market and/or inflation targets were met, formed the bedrock of the forward guidance policy principle. The underlying objective was to push market participants to raise their future inflation expectations.

Given the above discussion, it is tempting to declare that unconventional monetary policies bear significant responsibility for the persistently low interest rates observed in the rich-world. A cursory examination of the balance sheet expansions of the rich-world central banks and the recent declines in government bond yields may even suggest a direct link between the two (see Figure 1.1). In addition, market volatility that often accompanies actual or expected actions of rich-world central banks have given rise to popular perceptions that monetary authorities are omnipotent, and that they

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possess the ability to fundamentally shape major market trends.

There is however a risk that, by emphasizing the short-run reactions of markets, we may be falling into the trap of overstating the actual impact of monetary policy actions. It is critical to discern whether central bank policies are ultimately adjusting to underlying structural trends, or, if monetary policies are indeed the primary drivers of critical market trends involving inflation rates and interest rates. Isolating underlying long-term trends from temporary market fluctuations is necessary to obtain a thorough understanding of the extent of the impact of unconventional monetary policies.

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Persistently Low Real Interest Rates in Advanced Economies: Is there a Structural Explanation?

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While the inclination of many is to expect a direct and unambiguous relationship between unconventional central bank policies (such as QE) and long-term interest rates, close scrutiny of data suggests that reality may be a bit more complicated. An examination of bond market reaction to the initiation and subsequent expiration of Fed’s quantitative easing programs (QE1 lasted between November 2008 and March 2010; QE2 lasted between November 2010 and June 2011; and, QE3 lasted between September 2012 and October 2014) is particularly revealing.

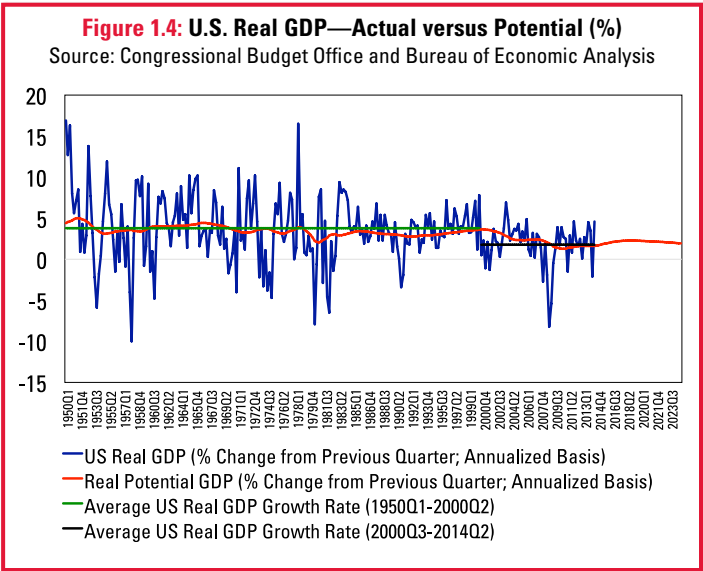
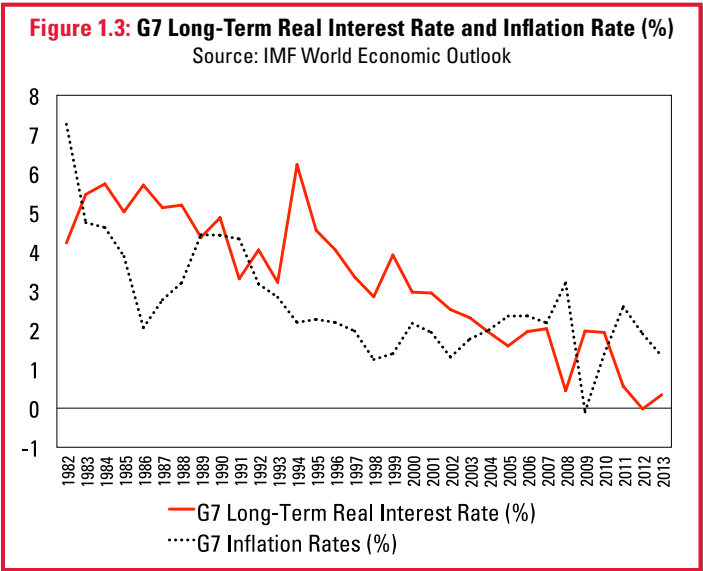
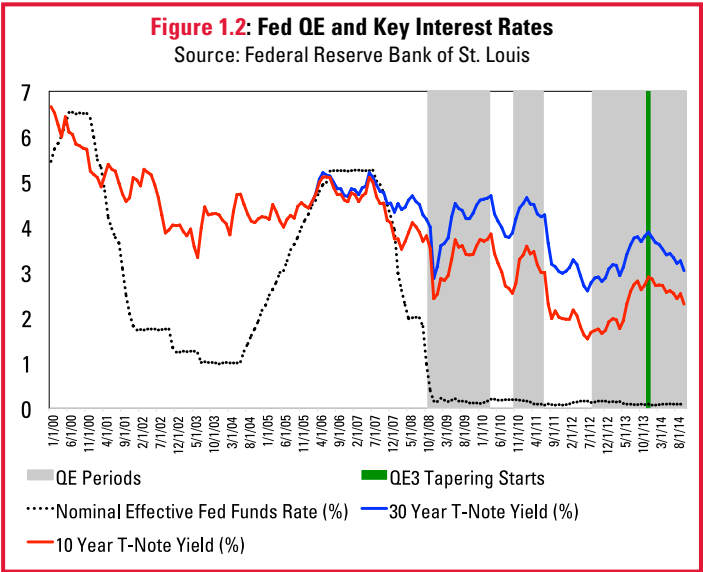
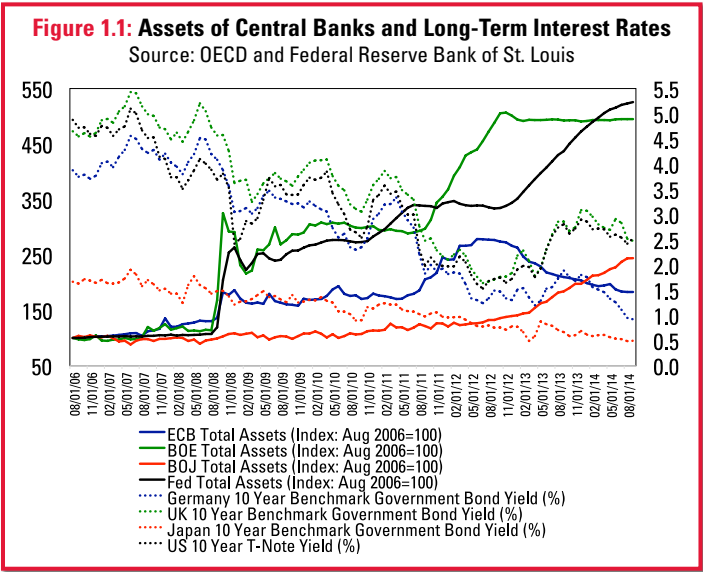
There is a clear distinction to be made between the near-term market reactions to indications of upcoming Fed policy changes

(the so-called announcement effect) and the market reactions to actual implementation of policies. As shown in Figure 1.2, yields on the 10-Year Treasury Note and the 30-Year Treasury Bond follow a surprising pattern —start of QE programs lead to a rise in yields, and expiration (or curtailment) of QE programs lead to a fall in yields. This appears to suggest that the underlying trend is essentially that of a steady decline in long-term interest rates.

Market reaction to QE tapering illustrates the distinction between short-term volatility and underlying long-term market trends. When Ben Bernanke suggested in May 2013 that the Fed may soon consider tapering its bond purchases, there was a temporary jump in Treasury yields. Yet, by the time actual tapering was implemented in October 2013, Treasury yields were once again on a downward trajectory as concerns about long-term growth prospects reemerged.

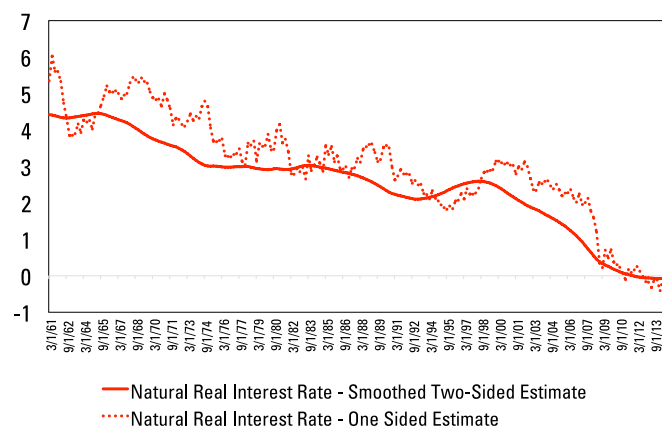
Importantly, long-term data trends suggest that persistently low inflation and interest rates in the rich-world are not just a recent phenomenon. In fact, both inflation rates and real interest rates have been trending lower for more than two decades in major advanced economies (see Figure 1.3). It is therefore essential to consider relevant long-term structural developments. Specifically, a careful analysis of actual and potential growth rates of advanced economies is critical as persistently low inflation and interest rates may reflect lower output trend growth rates in advanced economies rather than just temporary setbacks associated with the financial crisis.

As shown in Table 1.1, economic growth rates in key advanced economies have been fairly unimpressive at least since 2000. In Italy’s case, the size of the economy (measured in terms of real GDP) in early 2014 was about the same as it was in 2000.



**Figure 1.5: Laubach-Williams Estimate of U.S. Natural Rate of Interest (%)**

Source: Federal Reserve Bank of San Francisco



**Table 1.1: Average Annual Real GDP Growth Rates (%)**

Source: Raw Data Source: IMF World Economic Outlook

Database – October 2014

(Note: Data for 2014 reflects IMF forecast data)

Period	France	Germany	Italy	Japan	UK	U.S.
1980-2014	1.80	1.70	1.10	2.07	2.37	2.65
1980-1999	2.19	2.01	1.75	2.94	2.77	3.19
2000-2014	1.28	1.28	0.24	0.91	1.83	1.93
2008-2014	0.33	0.83	-1.27	0.21	0.30	1.11

Even the best performer in the group—the U.S.—has seen a sharp slowdown in GDP growth rates of late. Careful scrutiny of long-term U.S. economic growth rates suggests that a possible break in trend growth rate occurred around 2000 (see Figure 1.4). The Sequential Bai-Perron statistical test (utilized for identifying the presence of multiple unknown structural breaks in time series data) indicates the presence of a single statistically significant structural break around the third quarter of 2000.

Even the non-partisan Congressional Budget Office (CBO) has sharply revised down its estimates for current and future growth rate of U.S. potential real GDP (the maximum sustainable level of output determined by the economy's underlying productive capacity). The situation in Europe and Japan, both characterized by dire demographic trends, is even starker. Some economists at major central banks have begun to emphasize long-term structural changes as a potential driver of interest rates and inflation rates. Ben Broadbent, the deputy governor of monetary policy at the BOE, in a speech on Oct. 23, 2014, summarized the structuralist perspective by noting "...rather than causing the decline themselves, central banks have instead been accommodating a deeper downward trend in the "natural" or "equilibrium" rate of interest."

Knut Wicksell, a Swedish economist, highlighted the concept of natural rate of interest more than a century ago in his influential book *Interest and Prices* (originally published in 1898). Wicksell distinguished between "interest on money" (the financial interest rate that borrowers actually pay) and "profit on capital" (the natural rate of interest determined by the return on capital). If the financial interest rate was below the natural rate of interest, businesses will find

it advantageous to borrow and undertake fresh investments, and, if the financial interest rate was above the natural rate of interest, then businesses will likely abstain from new investments.

Wicksell observed that the "rate of interest is never high or low in itself, but only in relation to the profit which people can make with the money in their hands, and this, of course, varies. In good times, when trade is brisk, the rate of profit is high, and, what is of great consequence, is generally expected to remain high; in periods of depression it is low, and expected to remain low. The rate of interest on money follows, no doubt, the same course, but not at once, not of itself; it is, as it were, dragged after the rate of profit by the movement of prices and the consequent changes in the state of bank reserve, caused by the difference between the two rates" (Wicksell, Knut (1907). *The Influence of the Rate of Interest on Prices*, Economic Journal XVII, pp. 213-220).

Inspired by Wicksell, modern day economists typically assume that as the economy gravitates towards its long-run equilibrium, the actual real interest rate will equal the natural rate of interest. During recent decades, central banks have played a prominent role in the determination of the financial interest rate. In the short-run, when monetary authorities set policy rates, they can push actual real rates above (or below) the natural rate and thus depress (or stimulate) economic growth. Over the long-run, as noted by Wicksell, the real financial interest rate converges to the natural rate of interest. Though assumed to be relatively stable, natural rate of interest can, however, change in response to underlying structural changes in the economy.

The natural rate of interest is not directly

observable and has to be estimated. Two economists at the Federal Reserve Bank of San Francisco—Thomas Laubach and John Williams—have created a simple economic model that provides regular estimates of the natural rate of interest for the U.S. economy. The Laubach-Williams estimate of the U.S. natural rate of interest is shown in Figure 1.5. The estimates indicate a steady decline in the natural rate interest. Given the previously noted changes in trend output growth rate, the fall in the U.S. natural rate of interest is consistent with a structurally transformed American economy.

Persistently low interest rates may in fact be appropriate if it is reflective of subdued long-term growth prospects. In recent decades, advanced economies have struggled to attain decent growth rates in the absence of asset bubbles and/or credit fueled consumption binges. Though consideration of central bank actions (such as QE-related asset purchases) is critical for grasping short-run developments, structural changes are far more consequential over the long run. The gradual decline in the trend growth rates of advanced economies and the associated decline in the natural rate of interest are contributing to the persistence of low inflation and interest rates. The implication is that even when the Fed and other rich-world central banks ultimately raise rates, they will not push them back to levels that were considered normal levels in the past. The "new normal" level of interest rates is likely to be lower than that observed in previous decades. 📌

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# THE TAMPA BAY ECONOMY: NOVEMBER UPDATE

By Brian T. Kench, Ph.D.

The Tampa Bay metropolitan statistical area's (Hernando, Hillsborough, Pasco and Pinellas counties) economic expansion continues. Gross sales are growing year-on-year, but at a slower rate. Employment is expanding, but at a slower rate. Unemployment rates in Tampa Bay, and all four of its counties, are declining. Existing home price appreciation has stabilized, and the pace of new home permits has recovered since the slowdown experienced in 2013.

Gross sales in Tampa Bay totaled \$9.6 billion in August 2014, an 8.5 percent increase from August 2013 (see Figure 2.1). The year-on-year change in gross sales averaged 4.0 percent per month for the first eight months of 2014, which was slower than the average of the first eight months of 2013 by 1.8 percentage points. Since March 2010, the year-on-year change in gross sales has averaged 6.3 percent per month.

Figure 2.2 illustrates Tampa Bay's job loss duration because of the Great Recession and the last two U.S. recessions. As of September 2014, six years and eight months have passed since the recession began in December 2007 and the area remains net negative 37,200 jobs, which is three percent lower than the employment level observed in December 2007—there has been no improvement in this metric since the Summer 2014 outlook.

The year-on-year percent change in nonfarm payroll jobs for Florida, Tampa Bay and the U.S. are shown in Figure 2.3. As of August 2010, Tampa's year-on-year job growth turned positive. Relative to a year earlier, September 2014 nonfarm payroll jobs increased 1.3 percent in Tampa Bay, 2.7 percent in Florida and 1.9 percent in the U.S. Over the last year, the pace of year-on-year nonfarm payroll jobs increases have slowed by 0.1 percent per month—Tampa Bay is creating more jobs, but at a slower rate.

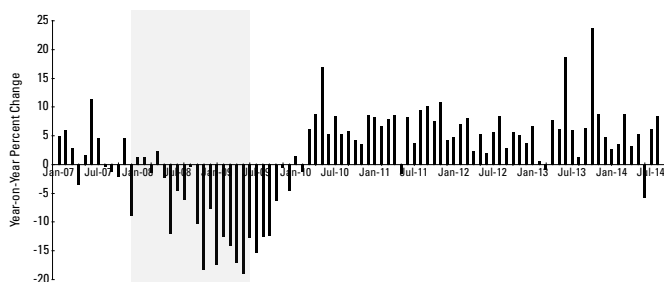
The unemployment rate measures the ratio of those unemployed and looking for work divided to the labor force. In Tampa Bay, the unemployment rate (NSA) was 6.2 percent in September 2014, which was higher than the national unemployment rate (SA) by 0.3 percent and higher than the unemployment rate (NSA) for the state of Florida by 0.1 percent. Despite its elevated level, the Tampa Bay unemployment rate fell in September 2014 relative to September 2013 by 0.7 percent. In September 2014, the unemployment rate (NSA) was 8.1 percent in Hernando County, 6.1 percent in Hillsborough County, 6.8 percent in Pasco County and 5.8 percent in Pinellas County.

The S&P's Case-Shiller housing price index (HPI) for Tampa Bay is based on observed changes in home prices in the area. Figure 2.4 shows the high, middle and low tier HPI segments of the Tampa Bay housing market. The top third of Tampa Bay's

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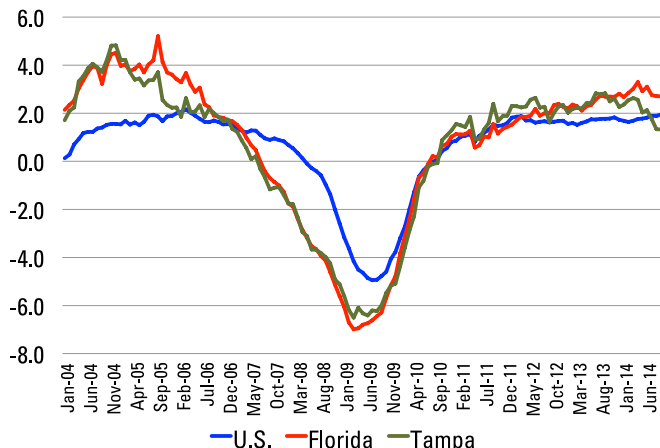
**Figure 2.1: Gross Sales in Tampa Bay: January 2007 – August 2014**

Source: Florida Department of Revenue



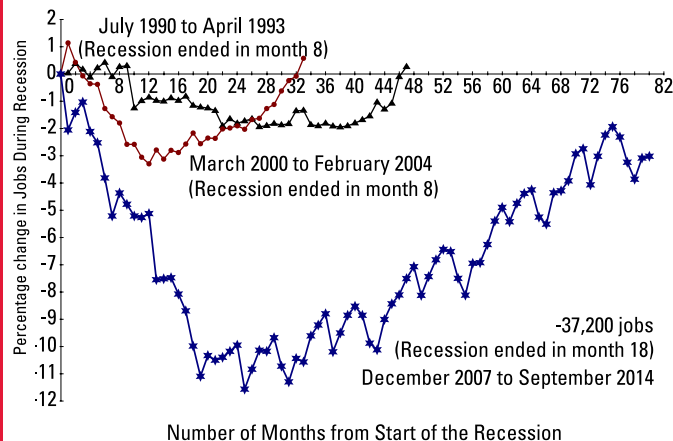
**Figure 2.2: Duration of Job Loss in Tampa Bay**

Source: Bureau of Labor Statistics



**Figure 2.3: Nonfarm Payroll Jobs: January 2000 – September 2014**

Source: Bureau of Labor Statistics



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November Update*

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housing market—the high tier segment—reached a maximum index value of 225 in May 2006. The high tier declined 43 percent over more than five years to reach its low HPI value in September 2011. As of August 2014, this segment of the Tampa Bay housing market has increased nearly 25 percent from its low point. The middle third of Tampa Bay’s housing market—the middle tier segment—reached a maximum index value of 245 in June 2006. The middle tier declined 52 percent over more than five years to reach its low HPI value in November 2011. As of August 2014, this segment of the Tampa Bay housing market has increased 33 percent from its low point.

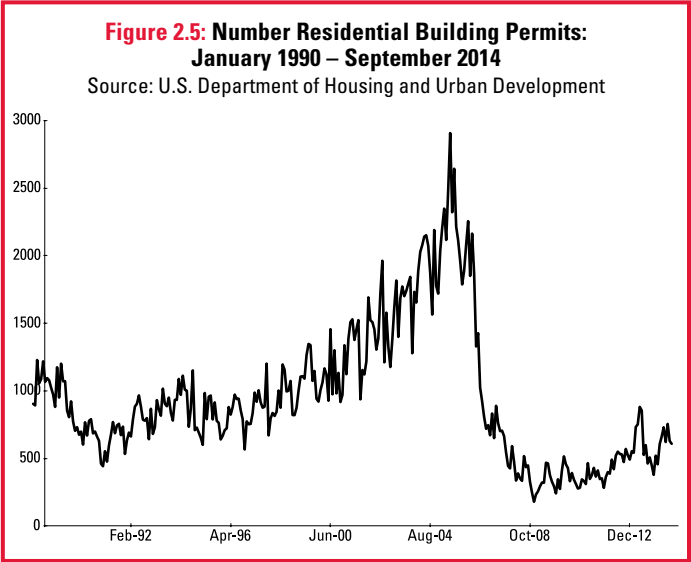
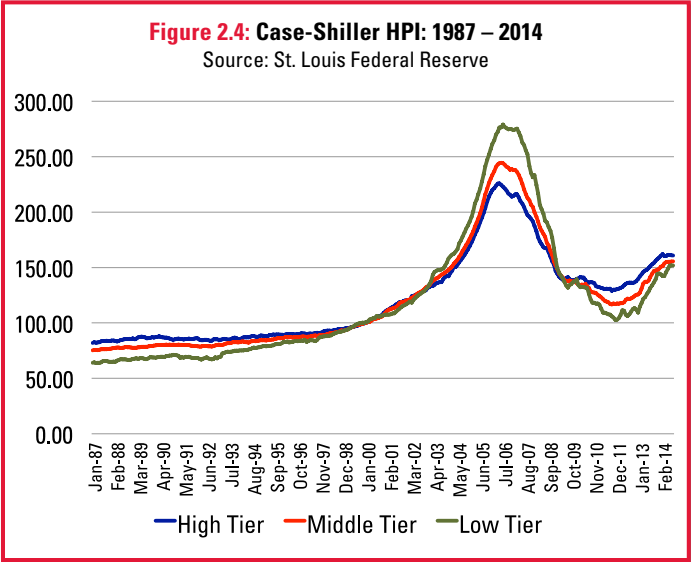
The bottom third of Tampa Bay’s housing market—the low tier segment—reached a maximum index value of 279 in July 2006. The low tier declined 63 percent to reach its low HPI value of in December 2011. As of August 2014, this segment of the Tampa Bay housing market has increased 48 percent from its low point.

Figure 2.5 shows the absolute number of privately owned one-unit residential permits for new homes in the Tampa Bay area. In May 2013, new permits totaled 882—a level not observed since November 2006. However, in May 2013, the Federal Reserve made its first statement that it would taper its stimulative bond-buying program in the near future. Although the Fed did not actually begin tapering until October 2013, it had a negative impact on new housing permits in Tampa Bay (and elsewhere). The turmoil

created by that announcement now appears to have passed. New housing permits are increasing once again in Tampa Bay. In September 2014, new permits totaled 609 and they have averaged 622 per month over the first nine months of 2014.

In summary, recent data continue to point in a positive direction. Gross sales in Tampa Bay continue to grow on a year-on-year basis, albeit at a slower rate. Tampa Bay continues to add nonfarm payroll jobs, although the rate of increase is slowing. Area unemployment rates are falling. The housing market is holding its recent gains, and new housing permits are rising, despite macroeconomic policy headwinds.

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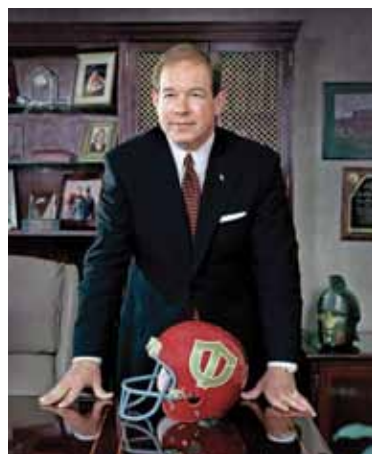


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