



the tampa bay economy

DOES THE US FACE A LONG-TERM FISCAL SUSTAINABILITY PROBLEM?

By Vivekanand Jayakumar, Ph.D.

Imagine a hypothetical economy growing well above its potential (or trend) growth rate and experiencing historically low unemployment rates. Despite nearing the peak of its expansionary cycle, suppose this hypothetical economy has rising government budget deficits and record high debt levels. Faced with this scenario, an objective observer might express concern over the lack of fiscal discipline in this hypothetical economy. If this hypothetical economy is also experiencing an increase in the dependency ratio (ratio of those not in labor force to those in the labor force) due to an aging population and declining fertility rates, then the observer would be forgiven for questioning its long-term fiscal sustainability.

One need not stretch the imagination too far to envision such a fiscally irresponsible country—the U.S. economy in 2018 fits the bill. At the end of the 2018 fiscal year (FY2018 began on Oct. 1, 2017 and ended on Sept. 30, 2018), the U.S. government reported a budget deficit of \$779 billion (3.8% of GDP), which was \$113 billion more than the FY2017 budget deficit. For FY2019, the budget deficit is expected to exceed \$1 trillion. Meanwhile, the U.S. Treasury reported that, as of Oct. 31, 2018, the U.S. gross debt was \$21.7 trillion (107% of GDP), and the debt

held by public (which ignores intragovernmental debt) was \$15.8 trillion (78% of GDP). These large budget deficits and record high debt levels are being recorded despite strong economic growth (GDP growth rate was 4.2% in 2018Q2 and 3.5% in 2018Q3) and historically low unemployment rates (3.7% in October 2018).

“Will continuing to run large government budget deficits lead to higher real interest rates and crowding out of private sector investment? How will the unprecedented aging of the population and declining fertility rates affect fiscal sustainability? These are some of the critical questions that need to be explored as the U.S. exhibits signs of fiscal profligacy.”

The reemergence of fiscally irresponsible behavior has once again brought to the forefront a set of questions that have not been properly

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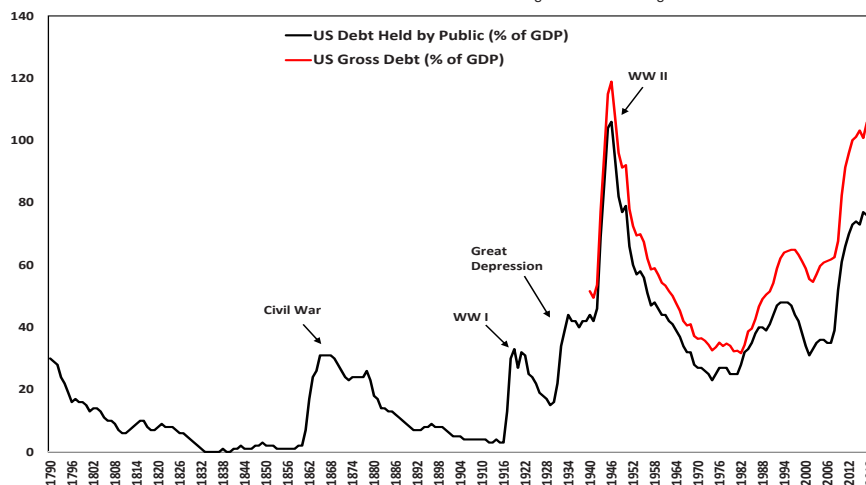
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by John R. Stinespring, Ph.D.
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Figure 1.1: US Government Debt (% of GDP) - Historical Trends

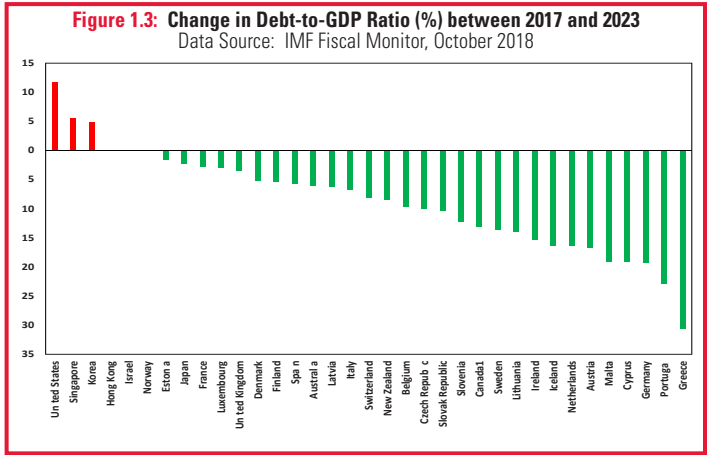
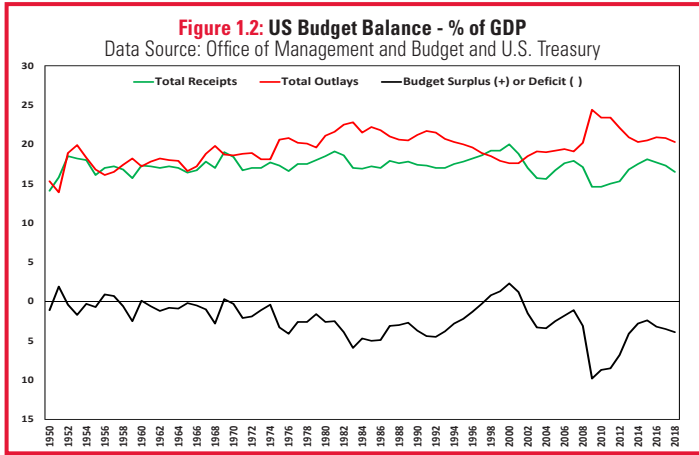
Data Source: CBO and Office of Management and Budget



addressed since the experiment with large-scale peacetime budget deficits began in the early 1980s. When the economy's resources are fully employed (or when the economy is growing above its potential growth rate), will continuing to run large government budget deficits lead to higher real interest rates and crowding out of private sector investment? Are there some adverse consequences associated with running budget deficits for an extended period of time, especially when it results in an ever-increasing stock of government debt? How will the unprecedented aging of the population and declining fertility rates affect fiscal sustainability? These are some of the critical questions that need to be explored as the U.S. government exhibits signs of fiscal profligacy.

When government spending exceeds its revenue collection, it typically borrows to cover the budgetary gap. Historically, the U.S. government tends to run large budget deficits that result in sharp increases in debt levels during periods of major military conflicts (see Figure

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1.1). During post-war periods, the government typically works to reduce its debt burden. This was especially true in the post-World War II era. After the debt-to-GDP ratio reached a record high in 1945-1946, steps were taken to ensure a steady reduction in the debt load over the following two decades. Starting in the early 1980s, however, the U.S. fiscal landscape was fundamentally altered when the Reagan administration initiated sizable tax cuts and increased military spending without significantly changing non-military expenditures. This led to one of the largest peacetime budget deficits in American history (budget deficit reached 6% of GDP in 1983) and caused a sharp spike in the government debt-to-GDP ratio. Budgetary reforms (including tax hikes and spending cuts) implemented during the presidential terms of George H.W. Bush and Bill Clinton helped curtail the growth in the debt obligations of the U.S. government. Indeed, between FY1997 and FY2001, the U.S. government recorded budget surpluses (see Figure 1.2). However, the era of budgetary restraint and fiscal rectitude proved to be short-lived. Starting in 2001, George W. Bush embarked on a fiscal program that featured large scale tax cuts, huge increases

in military spending, and additional spending increases on non-military items (farm subsidies and a prescription drug benefits program for the elderly being two of the more prominent items). Once more, debt-financed government spending

“Following the 2016 elections, the U.S., despite having one of the highest gross debt-to-GDP ratios in the advanced world, decided to engage in highly pro-cyclical fiscal policies...the U.S. is expected to see the biggest increase amongst advanced economies in gross debt-to-GDP ratio levels between 2017 and 2023.”

became the norm.

The cumulative burden resulting from long-term fiscal profligacy is reflected in today's high debt-to-GDP ratio. The 2007-2009 financial crisis and the resultant recession caused governments in advanced economies to engage in financial bailouts and stimulus spending. Additionally, tax revenue fell due to a dramatic rise in the unemployment rate and a sharp sell-off in asset

markets. Consequently, the immediate aftermath of the financial crisis saw record high peacetime budget deficits pushing debt-to-GDP ratios to historically high levels in many developed countries. However, by 2012, either due to a spike in market risk premium, heightened political pressure, or improvements in underlying economic conditions, several advanced countries took steps to reduce their budget deficits and to stabilize their debt-to-GDP ratios. In the U.S., the so-called ‘fiscal cliff’ crisis in 2012, and the American Tax Payer Relief Act of 2012 laid the groundwork for a return to some form of fiscal discipline. Falling budget deficits, however, proved to be a short-term phenomenon. Following the 2016 elections, the U.S., despite having one of the highest gross debt-to-GDP ratios in the advanced world, decided to engage in highly pro-cyclical fiscal policies. A combination of tax cuts and higher government spending has caused both the budget deficit and the debt-to-GDP ratio to rise sharply. According to the IMF's 2018 Fiscal Monitor report, the U.S. is expected to see the biggest increase amongst advanced economies in gross debt-to-GDP ratio levels between 2017 and 2023 (Figure 1.3).

The non-partisan Congressional Budget Office (CBO), recently forecast that the share of the population that is 65 years or older is expected to rise sharply over the next three decades (see Figure 1.4). Consequently, the CBO estimates that, in the absence of major

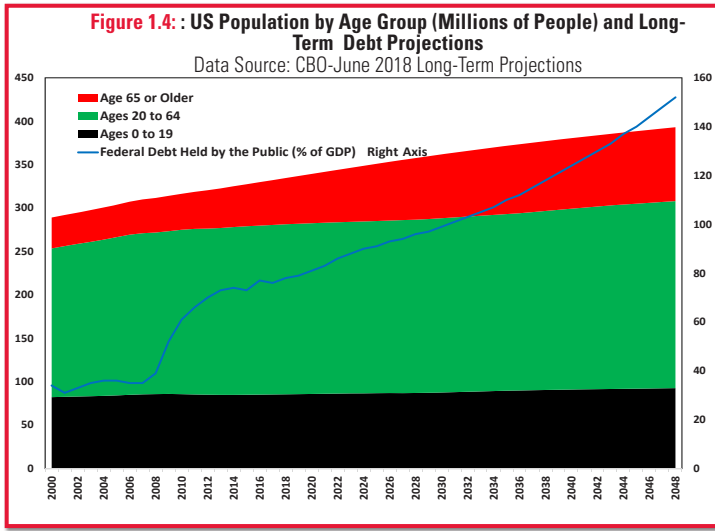
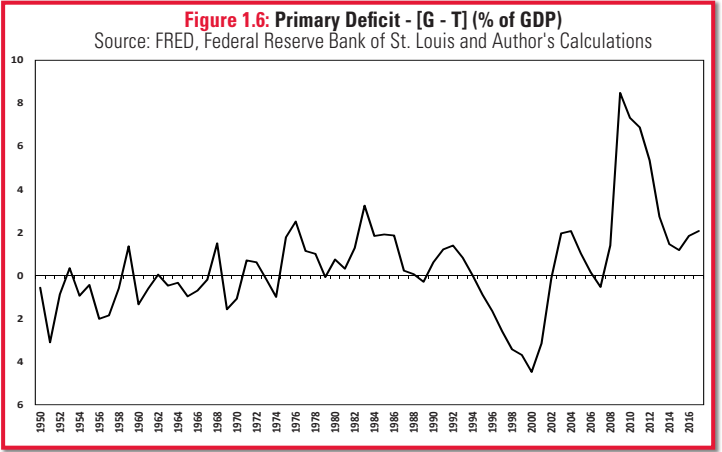
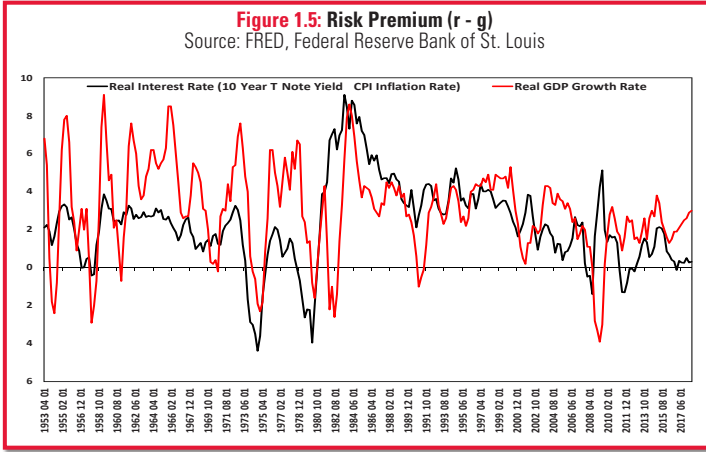


Table 1: US Government Spending and Revenue (% of GDP)
Source: *The 2018 Long Term Budget Outlook* (CBO, June 2018)

Spending/Outlays (% of GDP)	Social Security	Major Health Care Programs	Other Noninterest Spending	Net Interest	Total Spending
1968	2.6	0.7	15.3	1.2	19.8
1988	4.2	2.1	11.4	2.9	20.6
2018	4.9	5.2	8.9	1.6	20.6
2028	6.0	6.8	7.9	3.1	23.6
2048	6.3	9.2	7.6	6.3	29.3

Note: Major health care programs refers to Medicare, Medicaid and Children's Health Insurance Program (CHIP) and a few other minor items.

Revenue (% of GDP)	Individual Income Taxes	Corporate Income Taxes	Payroll Taxes	Other Revenue Sources	Total Revenues
1968	7.6	3.2	3.8	2.4	17.0
1988	7.8	1.8	6.5	1.5	17.6
2018	8.2	1.2	5.9	1.4	16.6
2028	9.8	1.5	6.0	1.2	18.5
2048	10.9	1.4	5.9	1.6	19.8



policy reforms, the federal budget over the next three decades will come to be dominated by spending on transfer programs such as Social Security, Medicare and Medicaid (see Table 1.1). Additionally, the growing debt burden would impose an onerous cost on future generations as the interest payments on accumulated federal debt is predicted to reach an astounding 6.3% of GDP by 2048.

Importantly, the failure to reduce the debt burden during a period of relative market calm (long-term bond yields have been unusually low in recent years) and solid economic performance bodes ill for long-term debt sustainability. While disagreement exists regarding the existence of some generally applicable threshold debt limit that might trigger a sovereign debt crisis, most economists believe that increases in the debt-to-GDP ratio beyond some threshold hurt economic growth prospects. For instance, rising public sector debt can raise the equilibrium real interest rate and crowd out private sector borrowing. A large debt-to-GDP ratio can trigger market concerns regarding default risk, and, as bond investors begin to fret about debt sustainability, a spike in risk premium will become inevitable. The experience of the Euro Area periphery during the 2011-12 period offers a cautionary tale, where sudden spikes in borrowing costs occurred for Greece, Italy, Ireland, Spain and Portugal. A sudden loss of investor confidence, amidst rising concerns over the ability of governments

to meet their outstanding debt obligations, led to a sharp increase (most notably for Greece) in the default risk premium. While the U.S. does not face any such risks in the near term, it is worth considering the long-term fiscal sustainability challenges facing the American government.

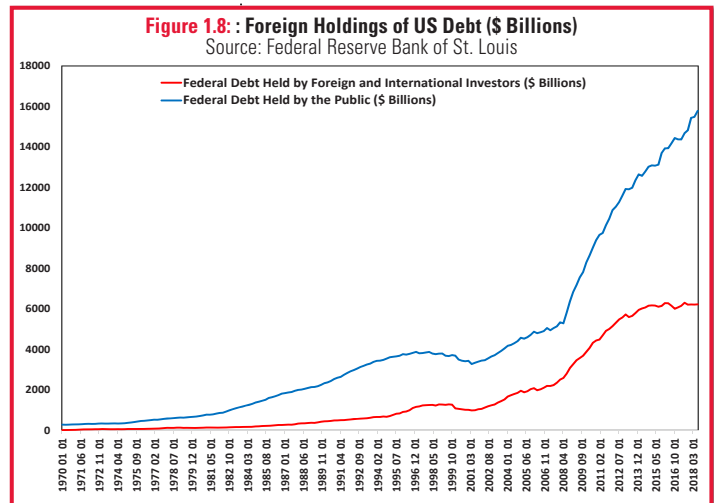
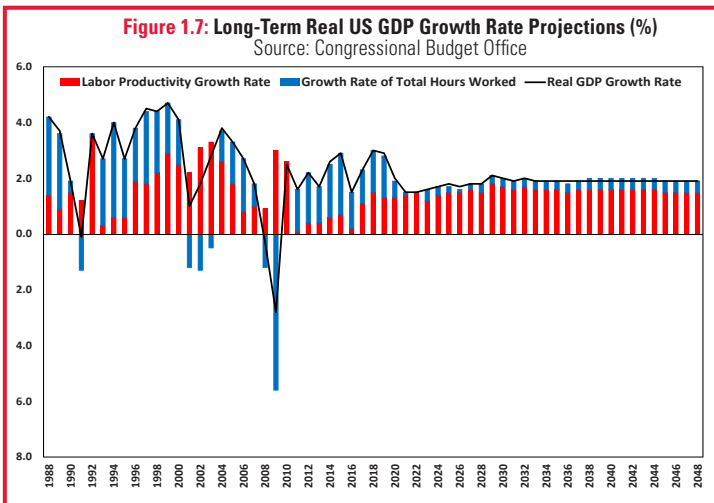
Simply put, *debt sustainability entails the stabilization of a country's ratio of public debt to GDP*. The fundamental debt sustainability condition (see online appendix for mathematical details) states that the government's primary budget surplus (the excess of revenue over *noninterest* spending) *must equal* the stock of outstanding public debt to GDP ratio times the risk premium (the difference between the effective real interest rate (r) paid on existing debt and the real GDP growth rate (g)). Otherwise, the ratio of debt to GDP will just explode. This basic insight is of great significance to policymakers, economists, and the voting public alike.

If we assume that the U.S. is not going to default on its future obligations, and that the federal government will not force the Federal Reserve to monetize its debt obligations (by requiring the central bank to create new currency or reserves to buy U.S. Treasuries and/or fund government obligations), then the available choices for stabilizing the debt-to-GDP ratio are relatively straightforward. Figure 1.5 and Figure 1.6 illustrate past dynamics involving the risk premium on outstanding debt and the primary balance of the U.S. government. The

real interest cost has for the most part remained below the real GDP growth rate, which implies that the risk premium has typically been negative for the U.S. This has prevented explosive growth in the debt-to-GDP ratio despite the fact that the U.S. persistently runs a primary deficit (as shown in Figure 1.6, non-interest spending typically exceeds revenues for the U.S. government).

In the future, if the risk premium on outstanding debt were to increase, then fiscal authorities will be forced to raise tax revenues and curtail non-interest government spending to achieve a primary surplus in order to stabilize the debt-to-GDP ratio. It is worth noting that many economists believe that the U.S. potential growth rate has declined since around 2004. Looking ahead, slower labor force growth rate in combination with lower labor productivity growth rate will likely keep U.S. trend growth rate below that observed for much of the 20th century (see Figure 1.7). Additionally, as noted in Table 1, the U.S. government is expected to run primary deficits for the foreseeable future. Persistent primary deficits resulting from higher spending on transfer programs (a result of a rapidly aging population) in combination with a decrease in potential growth rate creates a recipe for explosive growth in debt-to-GDP ratio over the next three decades or so. If long-term budgetary reform measures are not undertaken relatively soon, investors are going to start to demand a higher default risk premium. There are

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TAMPA BAY FORECAST: LOCAL ECONOMY OUTPACES NATIONAL

By John R. Stinespring, Ph.D.

A divergence between the local and national economies is appearing. While the national economy is experiencing a slowing housing market, moderate wage growth, and increasing economic uncertainty, Tampa Bay remains on an upward economic trajectory. In this update, we will compare economic indicators from the Tampa Bay metropolitan area (consisting of Hernando, Hillsborough, Pasco, and Pinellas counties combined) to those of the nation. We will see divergence appear in the labor markets, housing markets, and measures of aggregate spending. Though the national economy continues to grow, the Tampa Bay economy (TBE) is clearly outpacing it.

Before considering individual markets, we first use the Federal Reserve's indices of aggregate economic activity, shown in Figure 2.1, to get a bird's-eye view of economic performance at the national and local levels.

(Values above zero indicate an expanding economy; those below, a contraction.) The most recent data show the TBE reaching 4.0 in June 2018, while the U.S. Index reached 1.8 at that time. With the exception of the decline that occurred around Hurricane Irma in fall 2017, the TBE index has remained well above that of the U.S.

For individual markets, we begin with labor. Figure 2.2 shows that unemployment's historically long decrease that began in December 2009, has continued through September 2018, when unemployment dipped to 2.9% for the TBE. This dip represents a divergence from the national unemployment rate that appears to have stabilized at 3.7%. The TBE unemployment rate is below its pre-Great Recession historic average of 4.7%, and just above its historic low of 2.8% recorded in June 1999. While the U.S. rate is also below its 1990-2007 average of 4.7%, it reveals a pronounced plateauing.

The decrease in unemployment is mirrored by an increase in payrolls as shown in Figure

2.3. The plot of monthly job growth shows a rally back to the mid-2016 peaks, after the evident plunge in September 2017. Payroll growth reached 3.9% for the TBE in September 2018, well above the national rate of 1.7% at that time.

“While the national economy is experiencing a slowing housing market, moderate wage growth, and increasing economic uncertainty, Tampa Bay remains on an upward economic trajectory.”

High job growth and low unemployment have combined to put upward pressure on wages, causing inflation-adjusted weekly earnings to rise by 5% from September 2017 to September 2018 for the TBE and 0.8% for the U.S. economy. Figure 2.4 reveals that real

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Figure 2.1: Monthly Economic Activity Indices, US and Tampa Bay MSA Feb 2000–June 2018
Source: St. Louis Federal Reserve

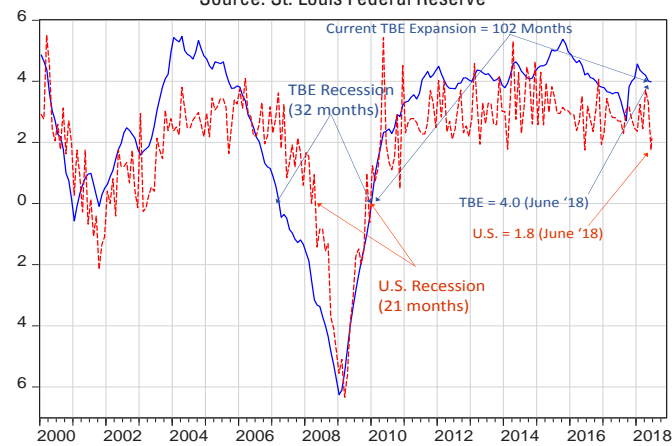


Figure 2.2 Unemployment Rate (%) for US and Tampa Bay MSA, May 2006–Sept 2018
Source: U.S. Bureau of Labor Statistics (Seasonally-Adjusted)

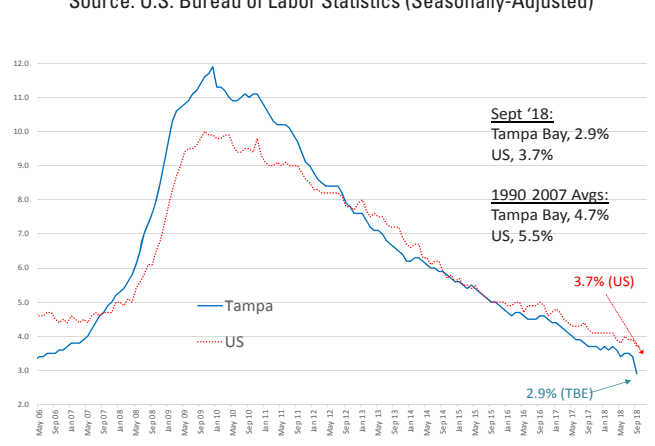


Figure 2.3: Percentage Change in Monthly Nonfarm Payrolls, 2010–2018
Source: Bureau of Labor Statistics Seasonally-Adjusted

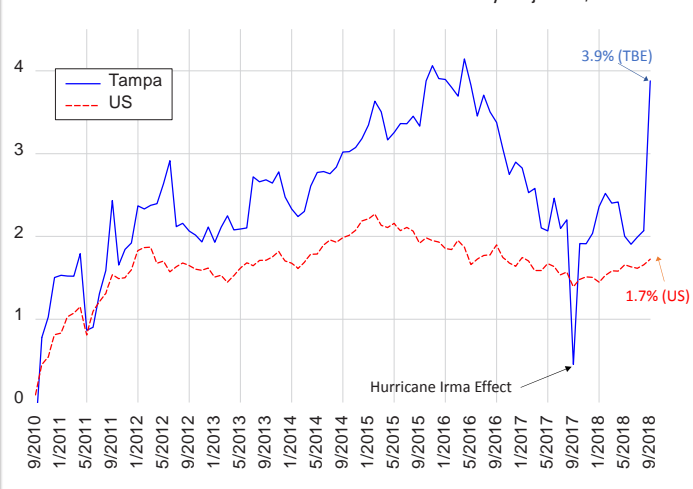
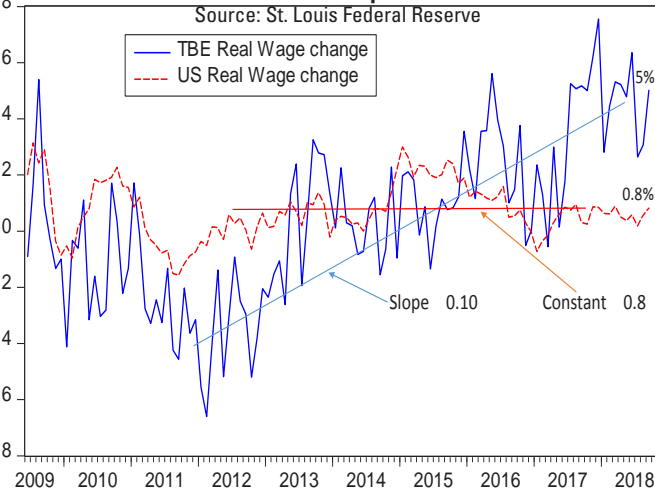


Figure 2.4: Percentage Change (Y-Y) in Monthly Real Wages (SA): June 2009–Sept 2018
Source: St. Louis Federal Reserve



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wage growth leveled out near 0.8% for the U.S., while the TBE wage growth continued along a higher path. A simple regression line of TBE real wage growth reveals a consistent, if somewhat jagged, increase of 0.1% points per month since 2012. The line for the U.S. shows no slope but is instead relatively flat at a consistent 0.8% rate.

As *lagging indicators*, labor market data only tell us where the economy was in the business cycle. Gross Sales, on the other hand, is a *coincident indicator* that marks the economy's current position in the business cycle. Gross Sales serve as a proxy for the aggregate demand within our local economy. Figure 2.5 shows that Gross Sales trend up with local expansions amid seasonal spikes in December, March, June, and September. Our forecast of Gross Sales (dotted line in Figure 2.4) shows a trend of an additional \$39 million per month through 2018. This estimate is \$1 million below the previous year's monthly growth rate of \$40 million. Our model provides a close fit between predicted (dotted line) and actual sales over the period

and forecasts strong holiday spending in the TBE that will exceed \$14.5 billion in December.

Perhaps the market in which the TBE is outpacing the national economy most notably is housing. The housing market serves as a *leading indicator* that helps predict where an economy is headed. Sustained increases in housing construction foretell economic expansions while sustained declines often presage recessions. To compare the national and local economy housing markets, consider the year-over-year monthly seasonally adjusted building permits for new residential construction from St. Louis Federal Reserve Bank data. While the U.S. experienced a 4.6% average growth rate for 2018 up to October, the TBE recorded a monthly average of 11.5% for the same period. This trend for the TBE is evident from Figure 2.6, which shows local Housing Starts by Building Permits. Though volatile, the data follow a clear upward trend with seasonal spikes, which our forecast (dotted line) predicts with 90% accuracy. From it, we estimate an average of 1,158 permits per month in 2018. This continues to exceed the 2015, 2016, and 2017 averages and shows little sign of abating. Supply may have even more room to grow given we remain

well below the 2005 monthly average of 2,241.

The impressive increase in housing supply in Tampa Bay is outpaced by housing demand, as reflected by sharp price increases in all price ranges. Figure 2.7 shows the Case-Shiller Home Price Index for low-, middle-, and high-tier home prices in the region August 2001 (note each index = 100 in year 2000). Over the past five years, the price increases have averaged 14% for low-tier, 8% for middle-tier, and 5% for high-tier as illustrated by the slopes of these lines for the period 2013 to the present. After bottoming out in 2011, TBE home prices have risen significantly and persistently. High-tier and middle-tier home prices have risen 53 percent and 86 percent, respectively, while low-tier homes have more than doubled in price at 149 percent above their trough. As is evident from Figure 2.7, all tiers remain below their 2006 peak prices. For comparison, the index for the U.S. home price average (dotted line) is shown. It had already exceeded its 2006 peak more than a year ago, has grown less than the TBE indices over the past 5 years, and is flattening out in the most recent periods.

Our local economy's outpacing of the U.S. will continue into 2019. Our comparatively stronger economy will continue to attract more financial support, talented workers, and families to our metro. This in-migration will further bolster the TBE's economic fundamentals and will be crucial to the TBE considering it, like Florida, relies heavily upon in-migration. Only 10% of Florida's population growth comes internally (births minus deaths). The remaining 90% comes from migration within the U.S. and from abroad. More potential Tampanians is just one of the benefits from our local economy's outperformance.

Figure 2.5: Gross Sales in Tampa Bay, June 2009–December 2018
Source: Florida Department of Revenue and author's calculations

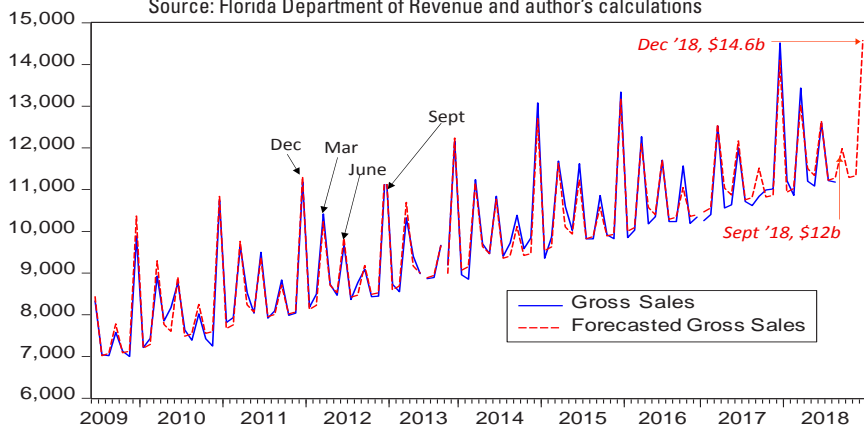


Figure 2.6: New Residential Building Permits in Tampa Bay: 2009–2018
Source: U.S. Department of Housing and Urban Development and author's calculations

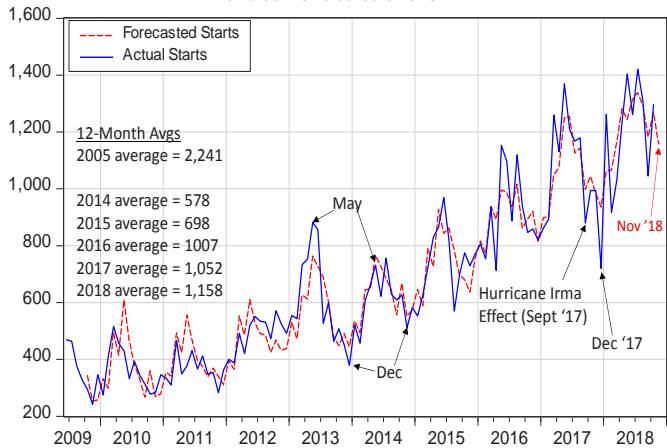
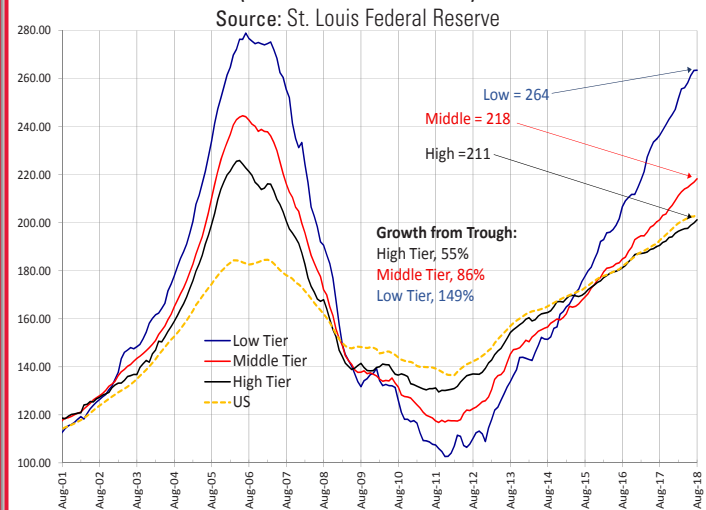


Figure 2.7: Case-Shiller HPI for Tampa MSA (SA) August 2001–August 2018
(Index = 100 in Year 2000)
Source: St. Louis Federal Reserve



Write to Professor Stinespring at jstinespring@ut.edu.

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some early indications that foreigners are starting to limit their exposure to U.S. Treasury securities. Figure 1.8 indicates that foreign purchases of U.S. Treasuries has started to level off in recent years. To continue to attract domestic buyers, the U.S. Treasury may have to start offering higher yields in the future. Unconventional monetary policies (especially, quantitative easing (QE)) implemented by the Federal Reserve, the European Central Bank (ECB), and the Bank of Japan (BOJ) have kept a lid on sovereign bond yields in recent years. However, the Federal Reserve, which ended QE in 2014, has started to gradually reduce its asset holdings, and it is expected that the ECB and the BOJ will soon end their QE programs.

It is therefore imperative that profligate behavior by fiscal authorities is not allowed to persist for much longer. Besides the obvious short-term need to have healthier fiscal balances in order to have the wherewithal to deal with the inevitable next economic downturn, there is a growing

realization that the unprecedented aging of the population and falling fertility rates pose a severe long-term threat to the fiscal solvency of many advanced economies.

There is still a window of opportunity to lay the groundwork for stabilizing debt-to-GDP ratios. In particular, gradually reducing primary deficits and maybe even ultimately running primary surpluses will go a long way towards restoring fiscal health. This, however, requires bipartisan agreement to deal with the expenditure side as well as the revenue side. Given the highly polarized nature of politics in America, it is hard to foresee a return to fiscally responsible behavior in the near term. A market shock, most likely in the form of a sudden spike in government borrowing costs, may ultimately be necessary to restore fiscal sanity.



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Save the Date - Upcoming Events

February 4, 2019-**Leadership Speaker Series**

Featuring: Gene Lunger, Executive Vice President of Retail Operations (Ashley HomeStores) for the global manufacturer, Ashley Furniture Industries

February 13, 2019-**Leadership Summit**

Featuring: Jen Shirkani, Author of "*Choose Resilience*" and "*Ego vs EQ*", Emotional Intelligence Speaker

February 21, 2019-**Sykes Hall of Fame Business Speaker Series**

Featuring: Hubertus Muhlhauser, CEO, CNH Industrial

April 4, 2019-**The Adam Smith Breakfast: An Annual Tampa Bay Economy Update**

Featuring: Associate Professors of Economics, John Stinespring, Ph.D. and Vivekanand Jayakumar, Ph.D.

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