

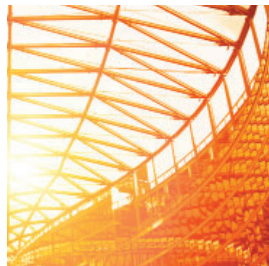
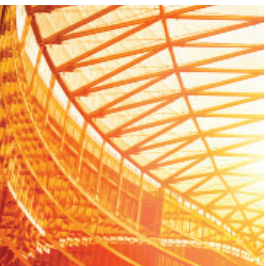
How Far Will US Rates Rise in the Next Cycle?

Benchmark ten-year US Treasury yields will be hard pressed to go above 3.5% to 4.0% in this cycle

- The interconnection of a number of variables affects how far rates can rise: growth, Treasury supply/demand, volume of debts and the costs of servicing them relative to revenues, and the distribution of assets and liabilities.
- Outside of a worst-case scenario, investors can maintain below target exposure to duration in their deflation-hedging allocations and could hold some cash for at least part of the allocation until ten-year US Treasury yields approach 3.5%. Those with lower risk tolerance may consider topping up before that level.

Ever since June 2013, when Ben Bernanke first mused aloud about tapering the Federal Reserve's purchases of Treasury and mortgage securities and Treasury note yields lurched higher, markets have been mesmerized by the question of how far rates will rise in the next cycle. Risk assets are priced at varying premiums off the "risk-free rate," usually defined by the US Treasury yield curve. Meaningful changes in its level and direction, as well as the speed of change, will affect other asset classes as they re-price accordingly.

Any examination of the question of how high rates and therefore yields can go is fraught with assumptions and affected by the interconnection of a number of variables. In this research note we take a look at the variables that affect Treasury yields, including market expectations; supply and demand; the size of the debt, the cost of servicing it, and the distribution of assets and liabilities; and structural changes to inflation and the labor market. Other factors (politics not the least of which) could play a role in how high rates will go, but we judge these to be some of the most important. Our conclusion is that benchmark ten-year US Treasury yields will be hard pressed to go above 3.5% to 4.0% in this cycle, on current inflation expectations, with meaningful implications for investors.



Market Expectations

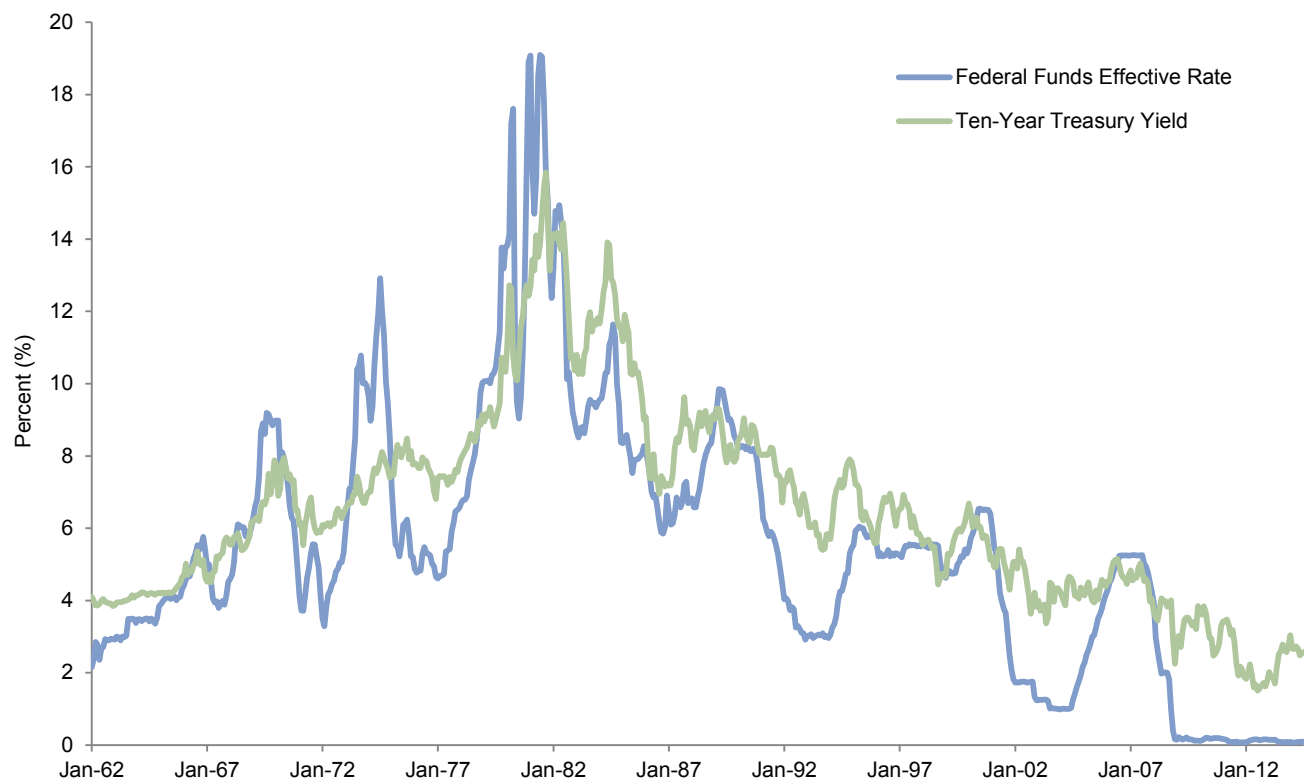
Fed Funds Rate: Long-Term Expectations.

Since 1982, each market cycle has ended with policy rates and bond yields peaking at a lower high (Figure 1). Most private forecasts for the new long-term equilibrium rate for the Fed funds policy rate range from around 2% (PIMCO) to around 3.75% (Tudor), implying the next top in rates (and bond yields) will be lower than the previous cycle high, consistent with the past three decades.

The Fed tacitly acknowledged the “new normal” of future economic growth undershooting the historical average of around 3% when it revised its real growth projections for 2014 and for the long term down to 2.2%. The Fed also revised the median expectation for the Fed funds rate over the long term down to 3.75% from 4%.

So the Fed and the market’s expectations for the Fed funds rate are fully consistent with the trend of ever lower rate peaks that has held since then—chairman Paul Volcker ramped up short rates to 20% in 1980 to slay the inflationary dragon.

Figure 1. US Economic Rates
January 31, 1962 – July 31, 2014



Fed Funds Rate: Short-Term Expectations.

Over a shorter time horizon, the Fed projects inflation remaining below its target of 2% every year until and including 2016, dismissing the latest print of 2.0% for CPI as simply “noise.” The Fed expects unemployment to edge down to 5.1% to 5.5% and the the Fed funds rate to gently rise to 2.50% by the end of 2016.

Perhaps surprisingly, the market is feeling even more dovish than the Fed, expecting the key rate to be only 0.685% at the end of 2015 compared to the Fed’s 1.2% projection, and still only 1.67% by December 2016 (Figure 2). Similarly, closely related three-month Eurodollar futures currently discount three-month deposit rates of only 3.83% by December 2023, considerably below the previous peak over 5% in 2007.

Where Do These Variables Place Yields?

Even though US employment is back to 2007 levels and monthly job gains are averaging over 200,000, the market remains sanguine regarding the next rate cycle. As a consequence, the implied ten-year Treasury yield is only 2.97% at the end of 2015, rising gently to 3.20% one year later and 3.43% in June 2019. This level of yields is hardly consistent with the Fed’s projections of the median long-term Fed funds rate at 3.75%, given yields are typically higher than the Fed’s policy rate (except in a recessionary environment).

In our own analysis we’ve determined that the nominal yield on the ten-year Treasury has tracked nominal ten-year trailing GDP growth quite closely over time (Figure 3). On the basis

Figure 2. Federal Funds Rate Futures and Implied Ten-Year US Treasury Rates
July 31, 2014 – June 30, 2019

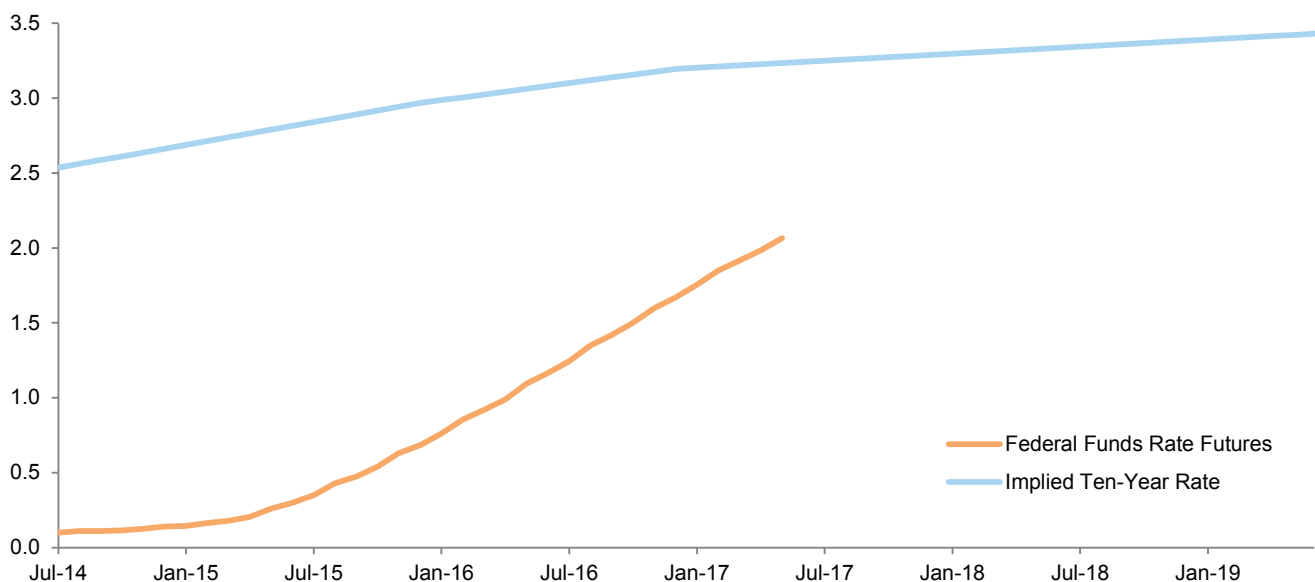
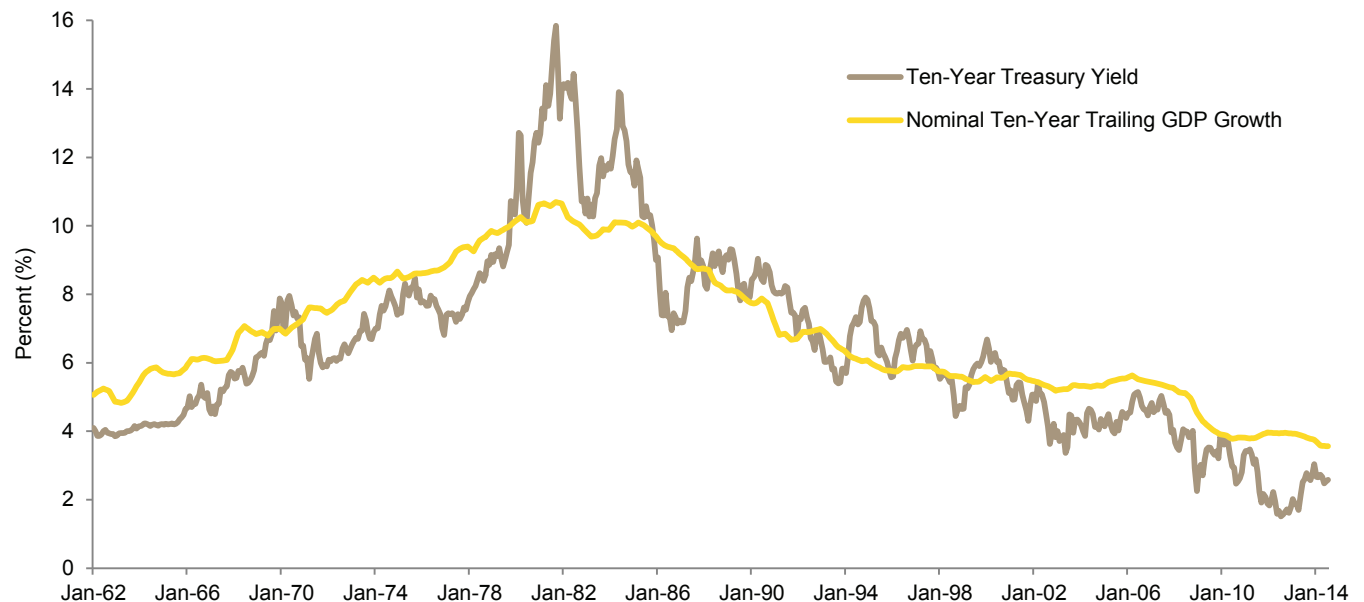


Figure 3. US Ten-Year Yields and GDP Growth
January 31, 1962 – July 31, 2014



of this model, we expect the real yield on bonds to approximate the real growth rate of the economy. If the Fed's projection for long-term real growth of 2.2% is correct and inflation remains contained around 2.0%, that suggests a nominal benchmark yield of slightly over 4.0%. Even using the market's slightly higher expectations for inflation around 2.3% over the next ten years (using the breakeven inflation rate), yields would be expected to top out around 4.5%.

Looking at the question from a historical perspective, the Fed's projected increase in short rates from 0.25% today to 2.5% by the end of 2016 and 3.75% in the long term is not out of line. Neither is the expected rise in bond yields. The notorious tightening of 1994 that

is etched into bond investors' collective psyche saw a doubling of 300 bps in the Fed funds rate, which went from 3% to 6%. Ten-year Treasury yields rose 286 bps, from 5.2% to 8.1%, between October 1993 and November 1994, as markets were taken by surprise. Over 2003–07, the Fed funds rate actually rose more, from 1% to 5.25%, but the curve flattened sharply as benchmark bond yields rose only about 213 bps over these four years to 5.26%. This is comparable to what the market is currently implying for bonds over the next five years relative to the trough in yields of around 1.4%, in which case yields would top out around 3.6%. Since 1981, during periods of rising yields, the ten-year US Treasury yield has risen on average 193 bps from its starting level.

Demand and Supply

Some argue that certain structural changes in the demand/supply relationship for Treasuries have effectively placed a ceiling over Treasury yields. Demographic change (retiring baby boomers) and the growing pools of institutional savings such as sovereign wealth funds are believed to have created a consistent bid for Treasuries because of their need for “safe assets.” However, even if these changes mean an underlying structural bid for US Treasuries, their marginal effect will most likely play out over many years, while cyclical pressures could well move the market in the opposite direction over shorter time periods.

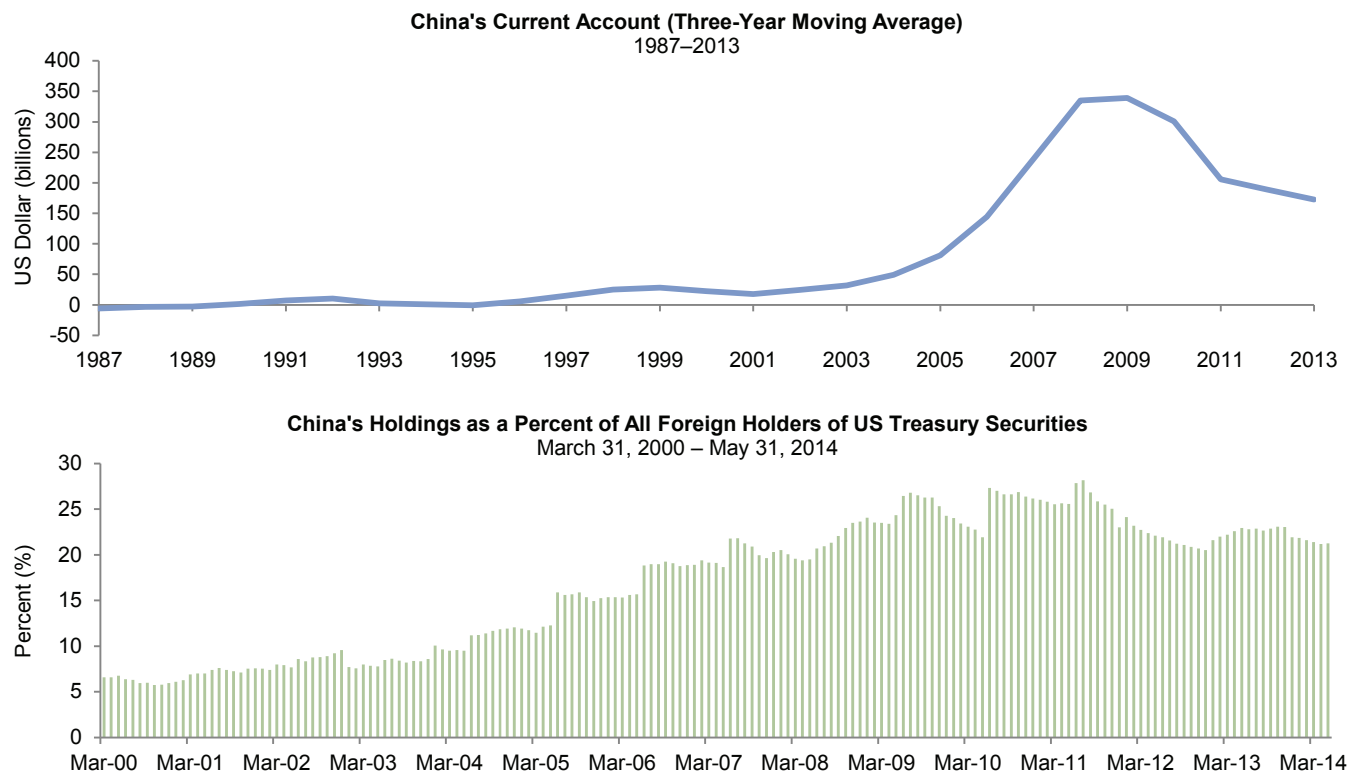
Growing Demand? The retiring boomer generation probably will gradually reduce its aggregate exposure to equities as it dis-saves. Boomers may also rebalance their allocation away from risky assets needed to drive growth in portfolios toward liquid, less volatile assets that provide more steady income-oriented returns. Additionally, it is safe to assume that boomers will adjust their asset allocation decisions partly based on the environment and outlook. Yes, a continuing regime of low growth and low inflation would create a bid for duration to pick up yield, but if these conditions change, the ten year may not be the most attractive purchase, especially on low or negative real rates. Assets such as floating-rate notes or hard assets, including houses for their children or for rental income, could equally well be the principal net beneficiaries.

As for large pools of capital such as sovereign wealth funds, their sheer size does make them captive buyers of US Treasuries to some extent. However, an important consideration is the *rate or flow* of future accumulation of liquidity, not the stock. By definition, the growth rate of these large funds reflects imbalances of one kind or another—their accumulation of capital from chronic surpluses has to mirror the accumulation of liabilities from deficits elsewhere in the global economy. This is a potential recipe for trouble and so such imbalances should shrink over time in the interests of promoting stability. There are some indications that China has recently started to cut back on its rate of accumulation of US government bonds, coinciding with an external surplus that is losing momentum (Figure 4).

Outside of the potential for demand from an aging population and growing sovereign wealth funds, a probable source of demand for US Treasuries comes from the Eurozone. With several peripheral European countries struggling to escape from depression-like conditions under a weight of debt made heavier by austerity and minimal growth, the global economy is missing a source of demand from one of its principal economic blocs. Not only dampening demand for US goods and services in the real economy, the Eurozone “pays” negative interest rates to commercial banks that have funds on deposit at the European Central Bank and has Japanese-style core bond yields below 1.0%. In comparison, US yields look almost attractive, with investors being paid to hedge back to euros. More worryingly, notwithstanding today’s



Figure 4. China's Current Account and Holdings of US Treasuries



optimism, continued austerity in the form of deleveraging superimposed on flat or falling incomes and little or no money supply growth is a recipe for a potential debt deflation spiral in the Eurozone, not to mention the current geopolitical turmoil on its doorstep. It is not too far-fetched to make the case that the Eurozone, and potentially the full European Union, must take more radical monetary policy action soon or risk a resurgence of the tensions that brought it to the brink of breakup two years ago. US Treasuries would be the prime beneficiaries of such a worst case scenario.

Improving Supply? The Treasury supply side of the ledger has many unknowns. Given promises by successive governments (the funding of retirement and health care benefits), the reappearance of large deficits is an important consideration. Nevertheless, the countercyclical supply of government bonds is helpful; bond supply increases in deflationary times when the demand for bonds is high and decreases in high-growth environments, thus naturally helping to balance changes in demand. And the very-near-term picture has probably improved more than expected (Figure 5).

Figure 5. Actual and Estimated Net Issuance of US Treasuries
2000–19 • US Dollar (billions)



Where Do These Variables Place Yields?

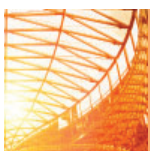
Extrapolating trends is always a dangerous game. Political, demographic, or technological change can easily undermine any trend. To take just one example, Saudi Arabia's booming population growth likely means an exponential growth in its demand for energy for air conditioning, which could potentially create a dramatic shrinkage in its surplus oil production available for export over the medium term and so its demand for Treasuries.

Keeping the challenges of extrapolating current trends in mind, we may be in the midst of a global savings glut, not only due to imbalances that may be corrected, but because of a dearth of productive re-investment opportunities for capital. Capital expenditures in developed countries are low. Firms are not re-investing in much new plant and machinery because capacity is

adequate and they do not see much underlying growth in demand.

Cyclical or structural reasons could be driving firms' lack of investment. Cyclical underinvestment could turn a vicious circle into a virtuous one if end demand picks up, though a move up in wages and purchasing power is probably necessary for this to take place. On the other hand, an ongoing savings glut due to structural change in the economy could mean lower growth, lower rates, and lower returns for longer. We examine this theme later in the Economic Factors section.

On balance, and for reasons we elaborate on below, we are skeptical about a move up in wages triggering a capital expenditure surge, so this would nudge us back to the lower end of the likely yield range below 4%.



Debt: Size, Servicing Costs, and Composition

A key consideration in determining how high rates can rise is the degree to which the economy's fragility has been reduced over the past six years as multiple sectors de-levered, and how much of the economy's ability to grow has been restored. Leverage had been increasing in the economy for several decades (Figure 6) as falling interest rates from the 1980s onwards enabled borrowers to increase debt for equal servicing costs. Figure 1 showed how sensitive

the economy became to interest rates over this time period, with lower highs in each rate cycle, as a lighter and lighter tap on the brakes brought the economic engine to a halt each time.

Deleveraging at the aggregate level has been modest since the financial crisis, with debt at about 350% of GDP compared to about 375% in 2008. Debt-to-GDP remains much higher than the previous peak, suggesting deleveraging still has a long way to go. Of course, there is no magic number for what is the right level of debt—it depends on the path of rates relative to incomes.

Figure 6. Aggregate Debt as a Percentage of Nominal US GDP
Fourth Quarter 1922 – First Quarter 2014



Household Debt. The good news is that households have gone quite a long way toward more normal historical debt loads. Their debt-to-GDP ratio has shrunk from about 95% at the 2008 peak to about 77% today (Figure 7), mainly through mortgage defaults and write-offs rather than rediscovered thrift. Households are about

halfway to reducing debt to the levels of 30 years ago before rates started to fall. The combination of lower debt and lower rates translates to debt servicing costs that have plummeted to about 10% of disposable income from 13.2% of disposable income in 2008 (Figure 8), and now stand at the lowest level since our data begin in 1980.

Figure 7. Debt-to-GDP by Sector
1960–2013

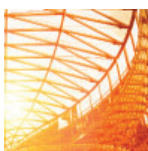
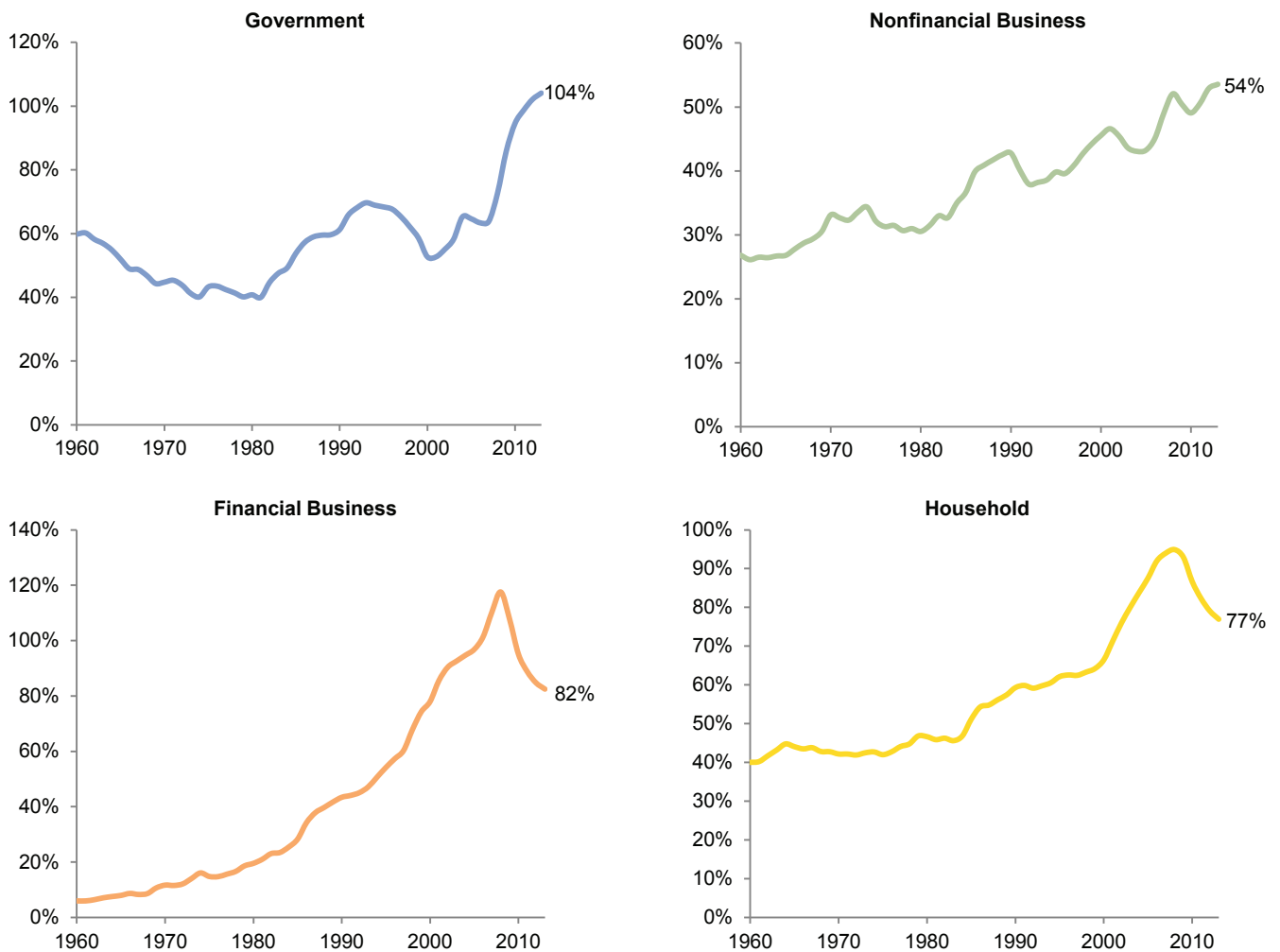


Figure 8. US Household Debt Service Payments as a Percentage of Disposable Personal Income
First Quarter 1980 – First Quarter 2014



This lowering of debt and its servicing costs has greatly aided the recovery of the consumer and so the whole economy. But it also appears to provide quite a lot of headroom for interest rates to rise before reaching dangerous levels once more.

Corporate Debt. Corporate debt is roughly back down to 2002 levels (Figure 9), but has been slowly rising again recently as firms borrow to finance share buybacks or merger & acquisition deals, or in some cases as a substitute for

cash held offshore to pay dividends onshore. Interest costs as a percentage of sales have come down as rates have fallen (Figure 9), which has contributed to profits.

Non-financial interest expense as a percentage of earnings is at a record low of around 17% (as opposed to about 40% in 2003). But again, other things being equal, lower debt loads now may mean more headroom for rates to rise in the future.

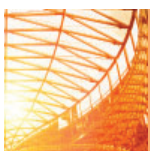
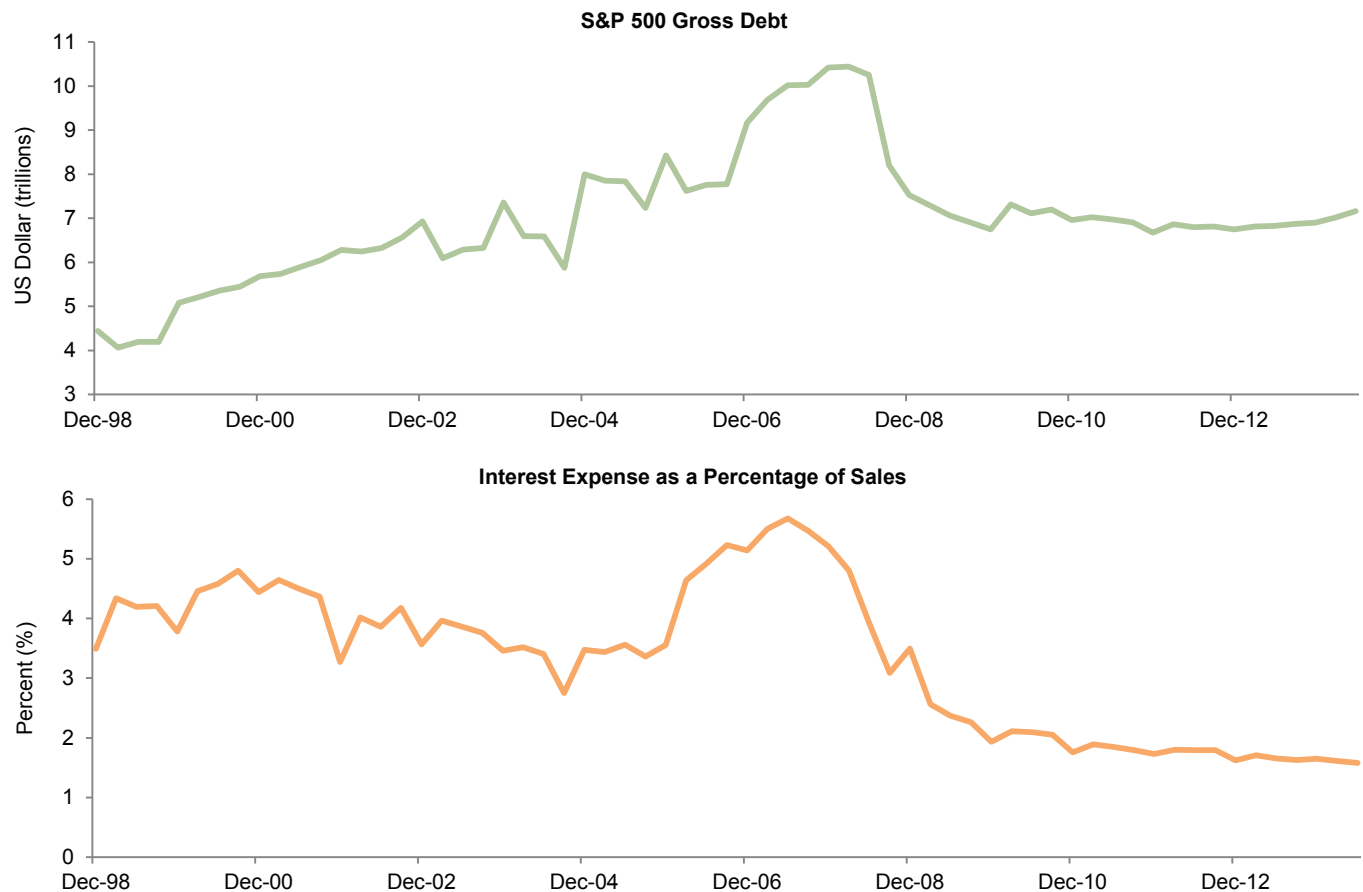


Figure 9. S&P 500 Gross Debt and Interest Expense as a Percentage of Sales
December 31, 1998 – June 30, 2014



Government Debt. One of the swing factors cushioning the downturn during the crisis was the government sector's ability to lever up to balance the depressionary forces of the private sector's deleveraging. Government debt deleveraging could happen in a variety of ways, the most painless being running a cyclically adjusted near-balanced budget and paying a rate of interest on the debt below the nominal growth rate of GDP and tax receipts. As long as someone is willing to

buy the debt at such rates, a rising rate environment does not inherently pose problems for the public purse, especially if this reflects a higher nominal GDP growth rate.

However, as the collapse in Eurozone peripheral debt yields over the last two years demonstrated, it's also all about confidence. A less benign scenario, where the bond market takes fright at rising nominal GDP, yields spike up in anticipa-

tion of further increases, and current holders rush for the exits (\$1.2 trillion has poured into global bond funds over the past five years, compared to only \$132 billion into global equity funds) would mean all bets could be off. In that situation, a vicious circle could quickly undermine public finances. This could force the Fed to face its own “Draghi moment” further down the line and re-enter the fray, potentially at a time with considerably less slack in the economy than today, and so greater inflationary risk.

What Lies Beneath. One could argue that given the lower debt in aggregate and in the private sector in particular, and the reduction of the lowest-quality, most fragile cases (e.g., sub-prime) through restructuring and write-offs, the economy is inherently less vulnerable to rate rises now than last time round. So there is nothing to prevent the three-decade-long trend of lower rate tops from finally breaking. The Fed funds rate and bond yields could move convincingly above the 5% level in the next cycle should nominal GDP growth move up beyond the Fed’s projection. For example, arithmetically, consumer borrowing rates would need to increase approximately 50% to make household debt servicing costs comparable to those that preceded the most recent crisis.¹ That would indeed be a surprise.

¹ Calculation is based on the Fed’s Household Debt Service ratios for both mortgages and consumer borrowing. For mortgages, 83% are fixed rate and therefore their debt service cost should not increase in a rising rate environment. The remaining mortgages and all consumer borrowing are assumed to be floating rate.

One of the principal reasons why rates may not climb to such levels is the distribution of assets and liabilities. For example, in the corporate sector, which in some respects is the most transparent, the distribution of debt among corporates is skewed. Apple has some debt, issued in the United States to pay dividends, but many billions in accumulated cash held abroad, so it is a large net creditor. Just 14 companies held \$479 billion of cash and similar assets offshore. In contrast, many other corporates have substantial net debt. Rates coming down to historic lows has not only facilitated financial engineering, but also bailed out countless business models that would have otherwise collapsed.

The Fed’s success in driving investors to re-embrace risk and reach for yield through its policy of financial repression has resulted in massive investment flows into risky corners of the market such as high-yield debt. Leveraged loan issuance totaled \$162 billion in the first quarter, above the quarterly average in the boom years before 2008, with the amount of leverage in the biggest deals around 5.7 times earnings, not far from the 2007 peak of about 6 times, according to Capital IQ. By definition, the issuers are the “fragile many.” Who knows what a rise in rates will do to their earnings and refinancing possibilities as the debt matures? In the meantime, who knows what mark to market losses on investors’ books will do to solvency ratios and spending rates? So it is not enough to applaud the modest reductions in *average debt ratios*, as debt’s *distribution* matters as well. It is the marginal, not the average, debtor who gets into trouble, and in a world of zero

rates, there are plenty of marginal borrowers. The authorities' determination to avoid a full reset of the system at every burst bubble engenders a new round of ever-lower-cost debt creation even before the excesses of the previous cycle have been mopped up.

True, the authorities have taken steps to bolster the banks and their transparency with slimmer balance sheets, better capital adequacy, tightened regulation and oversight, and an end to proprietary desk trading. But this is small comfort if the risky assets have migrated to a growing "shadow banking" sector of hedge fund, institutional, and pooled retail portfolios that are also increasingly engaged in direct lending. As for the original culprit, banks' residential loan books may be shrinking, but mortgages are simply moving to government-sponsored enterprises. Closing down the banking sector as a source of risk may simply have transferred hidden fragility to other corners of the financial system.

Where Do These Variables Place Yields?

High debt ratios are still present in many major economies. The math of debt means interest rates must stay low in a non-inflationary environment for the debt burden to be sustainable through real growth, though low inflation is not a consequence of high debt. Indeed, the temptation must be to inflate the debt away through loose monetary policy. Even in a low real income growth world, succumbing to this temptation could lead to nominal rates moving higher than currently expected and even higher than previous peaks. However, the Fed has not so far signaled a willingness to do this, so our view is that the fragile

state of economies as well as the distribution of the debt will make it challenging for Treasury yields to move significantly higher from here. The modest increase in yields of around 100 bps since the trough appears to have contributed to a marked cooling off in the housing market. These variables make us lean more towards the lower end of the wider range of probable outcomes.

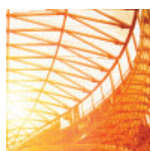
Economic Factors

Structural changes to the economy are another important variable to consider in determining how high rates can go. Some of the arguments for a structural change to lower rates include globalization, better demand/supply balance in energy markets, and the evolution of Fed policy, which PIMCO argues together mean a "secularly lower profile for inflation than in the 1970s and 80s."²

The more pessimistic, such as Paul Krugman or Larry Summers, fear secular stagnation. The reality of US demographics means fewer active workers to support an aging population. The country may have already reaped the big dividend from higher education, more women entering the labor force, and comparatively cheap energy. For professor Robert Gordon of Northwestern University, 2% growth could easily become 1% growth as the transformational innovations of the preceding 120 years fail to further boost output per head.³ If that's the case, then real rates will have to stay low to keep the economy at full output in the future.

² "Assuage Your Fears of Rising Rates with Global Diversification," PIMCO, April 2014.

³ Robin Harding, "US Economy: The Productivity Puzzle," *Financial Times*, June 29, 2014.

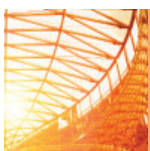
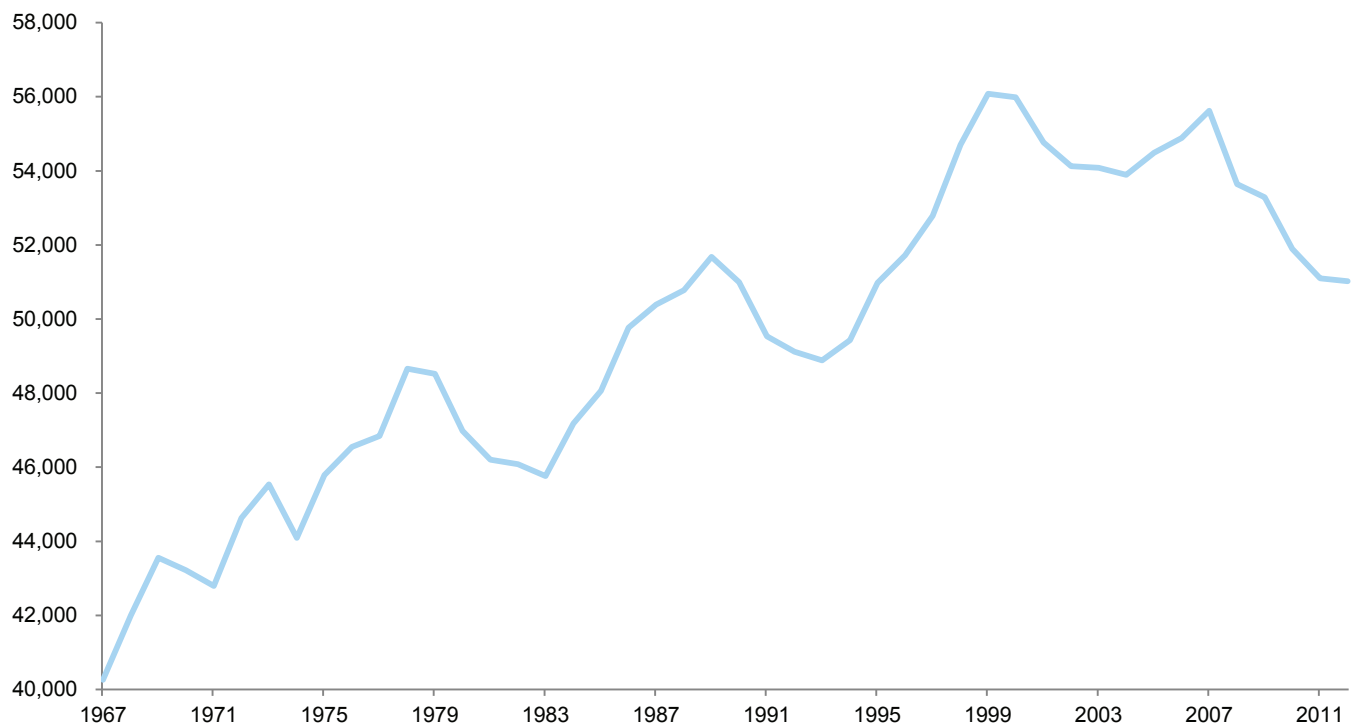


Weak Demand. The developed world has seen an undeniable disconnect between real wages and productivity growth going back several decades. The labor share of income in the United States has been trending lower for some time and there is no reason to expect this trend to moderate anytime soon. Within this declining share, the distribution of income has become increasingly skewed toward the top end. The diminishing propensity to consume as income crosses a certain threshold places downward pressure on aggregate demand and contributes to the “savings glut.” Real median household income has not progressed since 1995 (Figure 10). At

\$51,000 in 2012, the median household income is more than \$4,000 or 8.3% poorer in real terms than it was prior to the recession in 2007. Similar trends hold in other developed countries such as the United Kingdom. And as we all now know, we can also thank a credit-fueled shopping spree for a large part of the growth in the peripheral Eurozone up to the crisis.

The entrenched downtrend in interest rates enabled many households to supplement their stagnant incomes by increasing borrowing. In the United States, over decades, this represented roughly an average rate of debt accumulation of

Figure 10. US Household Median Income
1967–2012 • Real Chained 2011 US Dollars



1% of GDP per year. In other words, increasing leverage probably flattered the underlying historical economic growth rates, which may have been closer to 2% than 3%. The danger now is that if households de-lever at a similar rate going forward, other things being equal, that will translate into a commensurate headwind to growth and an outcome nearer 1% average real growth (perhaps explaining the market's relative pessimism compared to the Fed projections). Hence the "lower than normal" equilibrium rate expectations, unless income growth picks up.

Structural Change and NAIRU. According to the OECD, technological change and the shift to capital-intensive production have caused 80% of the fall in labor's share of global income. Developed markets labor has lost the bargaining power that was a necessary condition for past inflationary cycles. Five years into a recovery, average hourly earnings are rising at a 2% rate, a full 1% less than in the last expansion and barely enough to keep up with (average) prices. If that is true, then real incomes cannot grow fast enough to alleviate the debt burden anytime soon unless rates are kept low or it can be inflated away. The corollary to this is that although unemployment has come down to 6.2% from over 10%, the labor force participation rate of 62.9% is the lowest since 1978 (Figure 11).

Some point to this large reserve pool of potential job seekers as a buffer against wage pressures even if the unemployment rate heads well below 6%. But an unusually low participation rate is the opposite of a spare labor pool if the low

rate is due to a rising number of people without the requisite skills for the modern globalized, digitized economy. Here, the crucial question revolves around what used to be termed the non-accelerating inflation rate of unemployment (NAIRU)—the rate below which inflationary wage pressures manifest themselves. The trouble is that no one knows where this is until it's passed, by which time it may be too late.

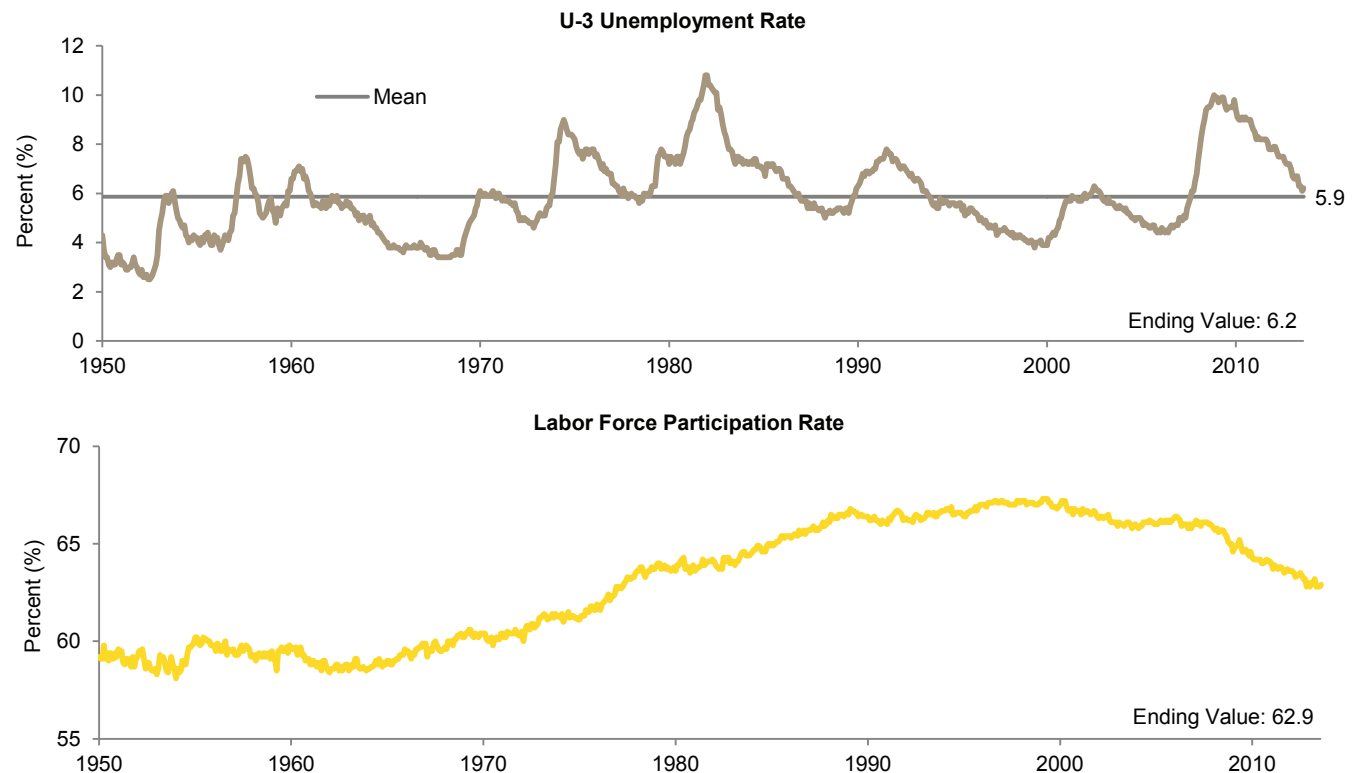
The Yellen Fed interprets the hidden jobless reserve pool as evidence of plenty of spare capacity and a signal to keep policy easy, but above 2% target inflation could appear before the unemployment rate falls back to previous trough levels. Put differently, policymakers risk confusing a structural increase in unemployment with a cyclical rise and applying the wrong medicine for a misdiagnosed ailment. According to Jeffrey Lacker, president of the Federal Reserve Bank of Richmond, labor market data since 2008 reflect a structural rather than cyclical change. Lacker notes that the "unusually large rise in long term unemployment suggests it was caused by an increase in the number of unemployed workers who were less likely to exit unemployment."⁴

The bond market has been willing to give the Fed the benefit of the doubt in this argument. If the Fed turns out to be wrong, then bond market reaction to the surprise would probably be sharp, in turn triggering a much awaited correction in risk assets.

⁴ Jeffrey M. Lacker, "Investing in People as an Economic Growth Strategy," (speech, Lynchburg, VA, June 26, 2014), <http://www.richmondfed.org>.



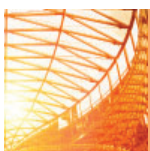
Figure 11. US Unemployment Statistics
December 31, 1950 – July 31, 2014



Where Do These Variables Place Bond Yields? The complexity of the economic machine prevents us from concluding too quickly that nominal rates will remain low for longer as there are simply too many moving parts. The actual path of rates will depend on the sensitivity of the economy, which in turn depends on the degree of leverage in the system, its distribution, and the rate of growth and distribution of nominal incomes and earnings to support the leverage.

Attempts to boost cyclical growth may bump up against structural changes and trends, leading to a more inflation-prone environment than we currently have, with the labor market acting as prime suspect. However, a widespread and structural lack of growth in real incomes, for whatever reasons, would make no amount of pump priming sufficient to alleviate this condition and cause real rates to remain lower than historically.

On balance, the challenges of the current economic situation are negative for how high bond yields could go, again bringing down our estimate.



Summary: How High Can Yields Go?

For now, we assume the Fed is sensitive to current economic conditions and understands it should not try to force a return to 3% growth. Further, we believe the Fed is aware of the underlying fragility of Western economies given their debt burden. Our view is that benchmark ten-year Treasury yields are likely to once again top out below the previous cycle peak in a 3.5% to 4% range given current inflationary expectations and the impact of the variables we've discussed.

Where Could We Be Wrong?

Our estimate, which is in the same ball park as the Fed's projections and what is discounted by the market, could be too high or too low depending on certain risk factors.

Our Estimate Is Too High. Clearly, an escalation of geopolitical tensions in Eastern Europe, the Middle East, or the South China Sea into full blown crises could derail the global economic recovery, postpone any talk of rate rises, and drag bond yields lower. Political instability in the Eurozone could do so as well, if anti-EU/euro populist platforms gain critical mass, resurrecting the specter of Eurozone or even EU breakup (if the United Kingdom votes to leave). These are not the likely scenarios at the moment, but we will be watching the trends closely.

On the economic front, in spite of the deleveraging that has taken place, the distribution of debt and its structure (household, corporate, high yield, and leveraged loans) could act as a brake on growth at a lower rate and yield level

than expected. In other words, the economy could be more sensitive to rates than the market is discounting. This becomes more likely if average wage rates fail to accelerate from here and vice versa.

Our Estimate Is Too Low. A policy mistake by the Fed is a possibility. The Fed could overestimate the slack in the labor market and spare capacity, and wait too long to normalize rates. The economy could pass a tipping point where capital expenditures grow, wage rates break out on the upside, final demand accelerates, and commodity prices move up. The monetary authorities would then face the uncomfortable dilemma of either playing catch-up and raising nominal rates faster than the increase in prices, or allowing the Fed policy rate to lag the move up with incomes and prices, thereby bringing to a close the three-decade disinflationary trend.

Implications for Investors

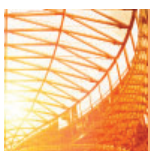
Outside of a scenario in which the worst geopolitical risks come to fruition, investors can maintain below target exposure to duration in their deflation-hedging allocations and could hold some cash for at least part of the allocation until ten-year US Treasury yields approach 3.5%. Investors with lower tolerance for risk or higher appetite for reliable income may consider topping up on Treasuries to target before that level.⁵

⁵ Our Chief Investment Strategist has recently recommended moving back into Treasuries at an even lower level of yields on the belief that rates might not even get as high as 3%. Please see the Third Quarter 2014 edition of *VantagePoint* for more information.

Investors should closely monitor the trends in CPI and the GDP deflator as well as in key wage measures such as average hourly earnings for any sign of upside breakout above 2.5% for all of these indicators (the top of their range). If the Fed is falling behind the curve, this would argue for postponing the restoration of a target bond allocation beyond 3.5% yields.

For equities, a normalization of rates roughly consistent with current expectations does not pose any obvious threat. Indeed, even a slightly behind-the-curve Fed could argue for moving more out of bonds and into equities, as the latter may provide some protection against mild inflation, were it not for the fact that US equity valuations are not cheap and a considerable weight of leveraged money is already long the market and may cut and run if momentum turns.

In the end, the main damper on rising yields could simply be the return of volatility to the equity markets as rates actually begin to rise. ■



Contributors

Stephen Saint-Leger, Managing Director
Urosh Milojkovic, Investment Associate

Exhibit Notes

US Economic Rates

Sources: Federal Reserve and Thomson Reuters Datastream.

Federal Funds Rate Futures and Implied Ten-Year US Treasury Rates

Source: Bloomberg L.P.

US Ten-Year Yields and GDP Growth

Source: Thomson Reuters Datastream.

China's Current Account and Holdings of US Treasuries

Sources: Department of the Treasury, Federal Reserve Board, and Thomson Reuters Datastream.

Actual and Estimated Net Issuance of US Treasuries

Sources: SIFMA and the White House Office of Management and Budget.

Note: Blue bars represent estimates, beginning in 2014.

Aggregate Debt as a Percentage of Nominal US GDP

Sources: Federal Reserve and Thomson Reuters Datastream.

Notes: Graph represents quarterly data. Aggregate debt consists of debt securities, mortgages, bank loans, commercial paper, consumer credit, US government loans, and other loans and advances; it excludes trade debt, loans for the purpose of carrying securities, and funds raised from equity sources.

Debt-to-GDP by Sector

Sources: OECD and Thomson Reuters Datastream.

Note: Data are annual.

US Household Debt Service Payments as a Percentage of Disposable Personal Income

Sources: Federal Reserve and Global Financial Data, Inc.

Note: Data are quarterly.

S&P 500 Gross Debt and Interest Expense as a Percentage of Sales

Source: FactSet Research Systems.

US Household Median Income

Source: Bloomberg L.P.

US Unemployment Statistics

Sources: Thomson Reuters Datastream and US Department of Labor - Bureau of Labor Statistics.

Notes: The U-3 rate is the official unemployment rate and represents those without jobs who have looked for employment in the last four weeks. All data are seasonally adjusted.



Copyright © 2014 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in part, by any means, without written permission from Cambridge Associates LLC ("CA"). Copying of this publication is a violation of US and global copyright laws (e.g., 17 U.S.C. 101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages. The information and material published in this report is nontransferable. Therefore, recipients may not disclose any information or material derived from this report to third parties, or use information or material from this report, without prior written authorization. This report is provided for informational purposes only. The information presented is not intended to be investment advice. Any references to specific investments are for illustrative purposes only. The information herein does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction. Some of the data contained herein or on which the research is based is current public information that CA considers reliable, but CA does not represent it as accurate or complete, and it should not be relied on as such. Nothing contained in this report should be construed as the provision of tax or legal advice. Past performance is not indicative of future performance. Any information or opinions provided in this report are as of the date of the report, and CA is under no obligation to update the information or communicate that any updates have been made. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified.

Cambridge Associates, LLC is a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; and Menlo Park, CA. Cambridge Associates Fiduciary Trust, LLC is a New Hampshire limited liability company chartered to serve as a non-depository trust company, and is a wholly-owned subsidiary of Cambridge Associates, LLC. Cambridge Associates Limited is registered as a limited company in England and Wales No. 06135829 and is authorized and regulated by the Financial Conduct Authority in the conduct of Investment Business. Cambridge Associates Limited, LLC is a Massachusetts limited liability company with a branch office in Sydney, Australia (ARBN 109 366 654). Cambridge Associates Asia Pte Ltd is a Singapore corporation (Registration No. 200101063G). Cambridge Associates Investment Consultancy (Beijing) Ltd is a wholly owned subsidiary of Cambridge Associates, LLC and is registered with the Beijing Administration for Industry and Commerce (Registration No. 110000450174972).