PRUDENTIAL
FIXED INCOME

Perspectives

September 2013

Robert Tipp, CFA
Managing Director,
Chief Investment Strategist,
Head of Global Bonds
and Foreign Exchange

For our prior views on interest rates, please visit www.prudentialfixedincome.com or click the icons below.

2003 Rate Forecast

PRUDENTIAL FIXED INCOME
Perspectives

Economic Recovery Creates Opportunities in Bonds

2009 Perspectives

PRUDENTIAL FIXED INCOME
Perspectives

Economic Recovery: No Death Knell for Bonds

2011 Perspectives

PRUDENTIAL FIXED INCOME
Perspectives

What Went Up, Came Down

The Low Ranger

With the Federal Reserve's days of asset purchases presumably numbered, many investors fear that the recent surge in interest rates signals the onset of the mother of all bond bear markets. But we don't think so.

- *From a long-term secular perspective, we believe that most of the decline in yields over the last thirty years is unlikely to be reversed.*
- *Past experience suggests sharp sell-offs driven by economic recoveries and fears of Fed tightening, or in this case the Fed's "Taper," often represent attractive buying opportunities.*
- *Finally, after considering historical trends and the current economic backdrop, we've revised down our long-term yield forecast for the 10-year Treasury to 3.0% from our prior forecast of 3.5%, which we originally published in a 2003 paper.*[1]
- *Over the near- to medium-term, however, we expect rates to remain below 3%.*

Investment Implications

- Although both bond yields and returns are likely to remain below those of the past thirty years, we believe fixed income will generally continue to:
  1) provide significantly higher returns than cash, and
  2) provide the benefits of diversification to investment portfolios relative to higher volatility sectors, including equities, commodities, and real estate.
- In particular, we expect solid performance from the higher yielding, credit sensitive fixed income products, such as high yield, emerging markets, structured products, as well as long term investment grade corporate and medium grade municipal bonds.
- The recent increase in rates is likely to stimulate buying from U.S. pension plans and insurance companies.

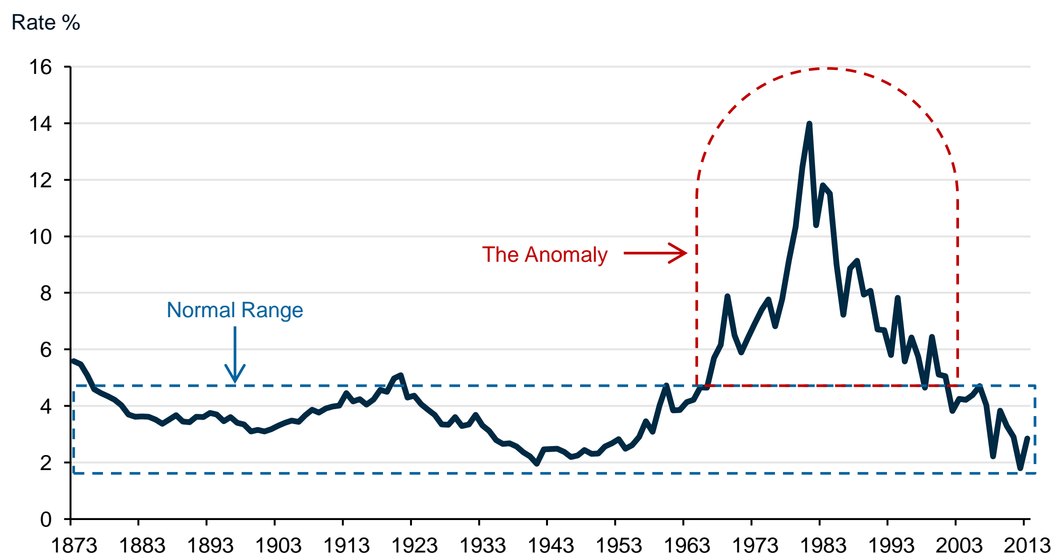
[1] *A previous white paper by Robert Tipp, entitled "Economic Recovery Creates Opportunity in Bonds," was published in December 2003 and is available to view via the link in the left margin.*

Rates Return to Normal Levels

Although the last several years have been characterized as a low-rate environment, from a truly long-term perspective, the recent experience represents a return to the sub-4% yields that persisted for nearly a century prior to the 1960s in the U.S. and for more than two centuries in the U.K.[2] While these levels may be surprising when viewed through the prism of the last several decades, the historical precedence of low rates on government debt reflects investors' consistent need for high-quality, liquid, income producing assets.

THE ESTABLISHED HISTORY OF LOW LONG-TERM U.S. TREASURY RATES

1873 to September 2013



Sources: 1871-1961, Robert Shiller, Yale; 1962-Present, Bloomberg.

The Big Round Trip

After the aforementioned "good old days" period from 1925-1965 in the U.S. (as described in the following table, which was first published with our 2003 forecast) rates rose during the "inflation mayhem" period of 1965-1979, due to a number of factors, including structural rigidities in the economy, the oil crisis, and—primarily—the resultant rise in inflation. During the "shock therapy" period that followed from 1980-1989, Federal Reserve Chairman Paul Volcker focused monetary policy on reversing inflation's prior ascent during the 1960s and 1970s. During the "continued tight policy" period of 1990-2003, the Fed took a more balanced approach and focused on achieving price stability while simultaneously smoothing the economic cycle.

When we created this table in late 2003, we noted that inflation had been declining, on average, not only during the "shock therapy" period, but also right through the "continued tight policy" period. While the average 10-year Treasury yield of 10.6% during the "shock therapy" period was clearly restrictive, the continued decline in inflation from 5.6% to 2.9% during the 1990-2003 period suggested that even a 6.2% nominal Treasury yield, or a 3.3% average real rate, remained quite restrictive.

---

[2] *This is despite the fact that long-term U.K. government bonds were perpetuals (i.e., fixed coupon annuities with no stated maturity) that were callable at par. Arguably, if they had been non-callable bonds with 10 to 30-year stated maturities, their yields would have been even lower.*

Against this background, in 2003 we forecasted that, on average, rates would fall further in order to stop the ongoing trend of disinflation. Our projection was for rates to average 3.5%, with real rates and inflation forecasted to average around 2.0% and 1.5%, respectively.

THE PROGRESSION THAT PRECIPITATED OUR PRIOR 10-YEAR TREASURY FORECAST

Despite the drop in rates…

	Good Old Days	Inflation Mayhem	Shock Therapy	Continued Tight Policy	'Normal' Projection
Time Period	1925-1965	1965-1979	1980-1989	1990-2003	2004+
Real Yield (%)	1.3	0.8	5.0	3.3	2.0
10-year Treasury Nominal Yield (%)	2.9	7.0	10.6	6.2	3.5
Inflation (%)	1.6	6.2	5.6	2.9	1.5

…inflation continued to decline

Source: Bloomberg and Prudential Fixed Income

Forecast Update: Central Tendency Declines to 3%, All Else Equal …

In our updated forecast table that follows, we've added: 1) rows to show core inflation and the rate of GDP growth, 2) the actual data since 2003 in the column labeled "still disinflationary" for the period of 2004 – present, 3) The actual data covering just the period of economic recovery since mid-2009, during which the Fed has run an extremely accommodative monetary policy, and 4) our updated projection.

Looking at the "still disinflationary" column, we can see that yields on average did indeed decline to 3.5% since 2003, and since mid-2009, they have taken another leg down to 2.6%. Core inflation and real GDP, however, continued to decelerate, suggesting that even an average yield of 3.5% was restrictive.

It is only during the "2009 – present" period, when the Fed has arguably forced rates to sub-3% levels, that growth has accelerated, albeit to the still moderate rate of 2.2%. Nonetheless, disinflation has continued, as evidenced by the decline in the core consumer price index to 1.7% for the 12-months that ended in July 2013.

Based on the progression of these sequential periods and the factors that are specific to the current environment, we reduced our 10-year yield forecast to 3.0%, thus resembling the "good old days." All things being equal, lower rates are probably necessary in order to allow economic growth to stabilize, or accelerate, and—perhaps just as important at this point—to avoid further disinflation.

THE CONTINUED DECLINE IN INFLATION SUGGESTS THAT RATES NEED TO BE BELOW 3.5%, ON AVERAGE, TO SUPPORT GROWTH AND STOP DISINFLATION

	Continued Tight Policy	Still Disinflationary	Extremely Accommodative	Updated Projection
Time Period	1990-2003	2004-Present	June 2009-Present	2013-
Implied Real Rate	3.3	1.0	0.7	1.0
Inflation	2.9 →	2.5 →	1.9	2.0
Core Inflation	2.9 →	1.9 →	1.6	
10-Year Treasury Nominal Yield	6.1	3.5%	2.6	3.0%
Real GDP % QoQ Change	3.1 →	1.6 →	2.2	
Nominal GDP % QoQ Change	5.3 →	3.7 →	3.8	

With inflation still declining… …and growth still middling… …rates of 3.5% may still be too high.

Source: Bloomberg and Prudential Fixed Income.

But All Else Is Not Equal…So Rates Likely to Average Less Than 3.0% in the Quarters Ahead

Given the factors in the current economic landscape that might continue to depress growth, inflation, and the demand for credit, the 10-year Treasury yield may remain lower than 3.0% over a medium-term horizon. Of these factors, first and foremost is the deleveraging effect.

The decline in interest rates over the past 30 years fueled a surge in consumer borrowing and household debt levels, which reached potentially untenable heights in the run up to the 2008 financial crisis. While some of this debt has now been extinguished—mostly through default—and the cost of carrying this debt has declined significantly, households now have a decreased ability, or willingness, to borrow. Hand-in-hand with consumers' diminished capacity to take on debt is the financial sector's need to increase capital ratios, which, all else equal, also decreases its ability to lend. This combination will likely restrain economic growth, especially in comparison to past recoveries.

Another perhaps diminishing headwind for the economy is fiscal consolidation. The 2008 crisis kicked off a ski-slope steep rise in the U.S. debt-to-GDP ratio that has yet to crest. While the budget deficit has declined substantially, the economy is likely to experience some drag from further fiscal consolidation in the quarters and years ahead.

Although the specifics vary from country to country, the U.S. is not alone in facing economic headwinds emanating from high consumer debt, financial sector deleveraging, and fiscal retrenchment. When combined with excess capacity, these factors suggest that the global economic backdrop may remain subpar relative to previous recoveries—with commensurately lower inflation and interest rates.

Rates are Rising—Time to Run?

At this point, we've described a "good old days" scenario for low rates based on the progression of economic data in recent years, further supported by the subdued outlook for growth and inflation.

But what about the Fed's Taper, investors' great rotation from bonds into stocks, and the recent surge in rates that has taken the 10-year Treasury yield from 1.6% in May 2013 to about 3.0% only months later—do these factors indicate that it is time for bondholders to head for the hills?

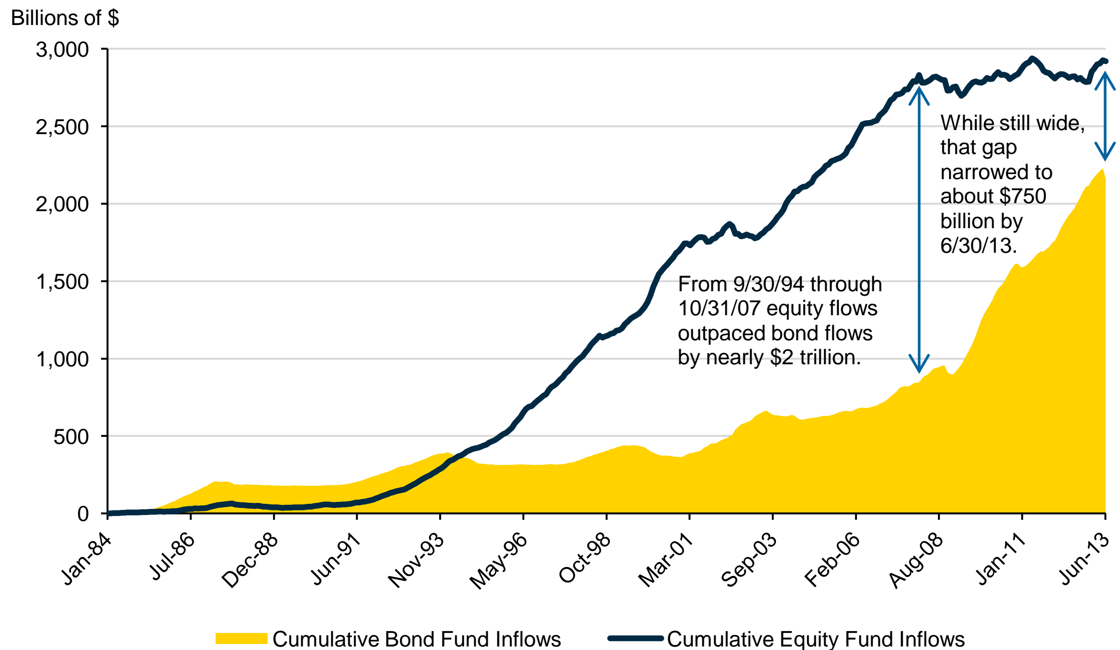
While perhaps ironic, we would argue, as we did in 2003 and 2009,[3] that economic recoveries create buying opportunities in the bond market. As recoveries gain traction, investors tend to overreact to a brightening economic picture and potential changes in Fed policy, and we've recently witnessed this tendency amid the mini-stampede out of bonds that occurred in mid-2013.

Should We Fear the Great Rotation?

Perhaps the biggest, or at least most visible, source of potential sellers in this cycle is the retail mutual fund investor. According to the Investment Company Institute, over a trillion dollars flowed into fixed income mutual funds over the past few years as retail investors flocked to bond funds in search of yield and low volatility. Did these inflows represent a bond mania on the part of investors? More plausibly, the rapid flow into bond funds represented, in no small measure, a catch up to equity inflows, which had vastly outstripped those for bond funds from 1991 – 2007 as seen in the chart below.

BOND FLOW INFLUX: JUST CLOSING THE GAP WITH EQUITIES?

January 1984 to June 2013



Source: Investment Company Institute (ICI).

[3] *"Economic Recovery: No Death Knell for Bonds," Prudential Fixed Income, October 2009.*

Bond Allocations Do Not Appear to be High

Merely observing the trend in flows misses a few salient points about the retail investor, however. While flows into fixed income funds in recent years have vastly outstripped those into equity funds, the recovery in the stock market has provided a significant boost to the value of retail investors' equity holdings. As a result of the recent gains, households' equity allocations increased, leaving their allocations of cash, stocks, *and* bonds near the average levels of the past 10 or 20 year periods, as seen in the table below.

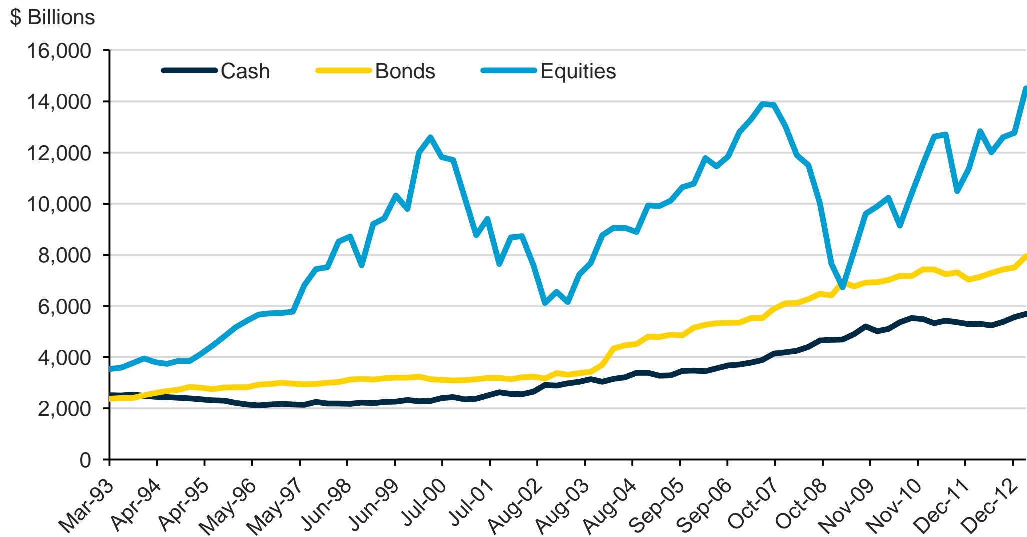
HOUSEHOLD PORTFOLIO ALLOCATIONS REMAIN SIMILAR TO THOSE OF THE PAST 10 OR 20 YEARS

	Cash	Bonds	Equities
Current	**20.2%**	**28.2%**	**51.6%**
Average over last 10 yrs	20.5%	28.3%	51.2%
Average over last 20 yrs	20.2%	26.5%	53.3%

Data are as of 3/31/13 and are from Federal Flow of Funds Household and Non-profit balance sheet (includes cash and cash equivalent assets, direct holdings of bonds and stocks, and indirect holdings through mutual funds). Does not exclude consumer loans from cash balance.

In view of the equity markets' high level of volatility in recent years, evident in the chart below, and the aging demographic among U.S. savers, investors may actually desire an above average allocation to bonds at this point in their life cycles.

HOUSEHOLDS' EQUITY HOLDINGS REMAIN WELL IN EXCESS OF CASH AND BONDS



Data are as of 3/31/13 and are from Federal Flow of Funds Household and Non-profit balance sheet (includes cash and cash equivalent assets, direct holdings of bonds and stocks, and indirect holdings through mutual funds). Does not exclude consumer loans from cash balance.

Retail Won't Take Zero for an Answer

While there are concerns that the outflows from fixed income mutual funds could continue, there are already signs that outflows from some fund categories have already begun to abate. Our expectation would be that near-zero cash rates—which will likely accompany us for at least the next year or two—will motivate investors to continue to seek higher yields out the yield curve for at least the next few quarters, if not longer.

Pensions and Insurers Step Up

Additionally, there are indications that corporate pension plans will counter those outflows to some extent by increasing their allocations to long-term fixed income, especially corporate bonds. Many of these plans have experienced significant improvement in their funded ratios due to the equity rally, which boosted the value of their assets, and the recent increase in interest rates, which decreased the present value of their liabilities. With this improvement in hand, plans may increasingly look to reduce their asset/liability duration mismatch by increasing the duration of their fixed income portfolios.

Insurance company appetite for bonds is also likely to rise as a result of the recent increase in bond yields.

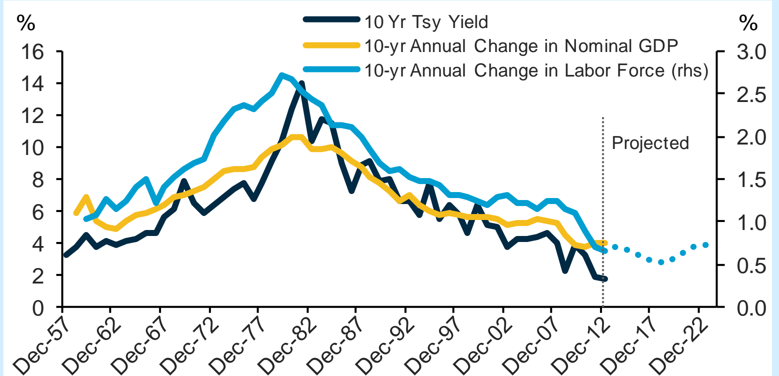
Temper the Taper

While the Fed's pending taper of its large scale asset purchases represents a new tack in its policy approach, the bond market has a contrarian precedent when it comes to changes in the Fed's QE programs, as seen in the following chart. With most analysts expecting the taper to commence in mid-September 2013, the recent pattern suggests that the pending adjustment to QE3 might also coincide with a peak in long-term rates, particularly with the economy already showing its sensitivity to the rate increases to date.

DEMOGRAPHICS EFFECT ON INTEREST RATES

The evolving demographics of the U.S. population over the last half century have been an influential factor in determining the level of interest rates. The post-World War II baby boom caused a subsequent bulge in the number of workers and household formations in the 1960s and 1970s. This not only contributed to an increase in economic activity, but also increased the demand for credit, thus contributing to the massive rise in rates, literally, of that generation.

10-YEAR U.S. TREASURY YIELDS, GDP & LABOR FORCE
December 1957 to December 2012

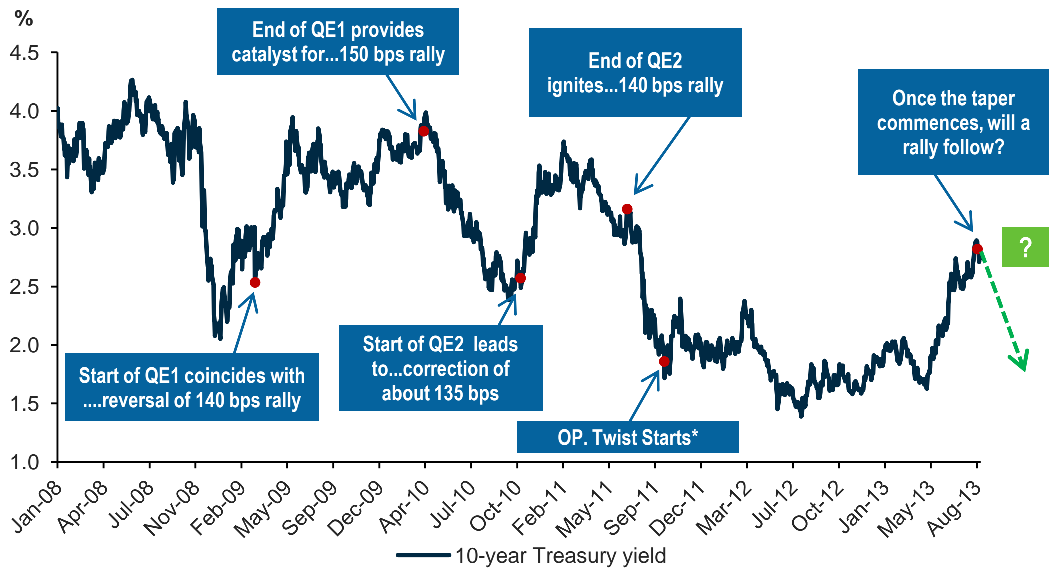


Source: Bloomberg and Prudential Fixed Income.

Just as the baby boomers entering the workforce played a role in the rise in rates in the 1960s and 1970s, the opposite was likely true during the subsequent decades as decelerating growth in the labor force consequently resulted in both slower economic growth and less demand for credit, thus putting downward pressure on interest rates.

Another aspect of demographics is its potential to impact investment allocations. At present, the aging of the population should lead to higher demand for bonds as retirees and those approaching retirement seek low volatility income producing investments. This is another factor which has likely contributed to the secular decline in rates.

THE 10-YEAR'S CONTRARIAN REACTION TO QE



*Source: Bloomberg. *Operation Twist was subsequently modified into an outright asset purchase program, referred to as QE3*

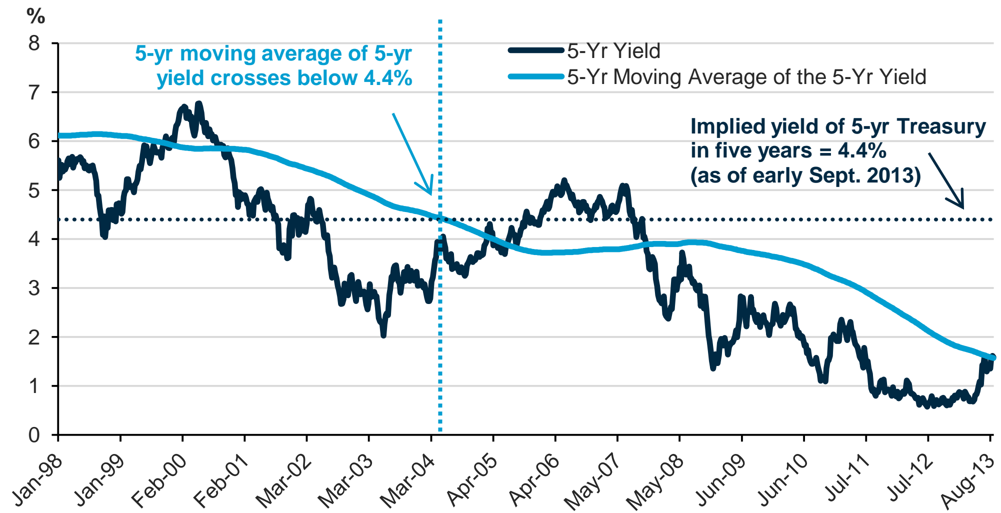
What's Priced into the Market?

While yields on U.S. Treasuries are not strikingly high, a bit of quantitative analysis of the yield curve and a review of market history reveals that a fair dose of economic optimism—perhaps too much—is already priced into the yield curve. Specifically, by analyzing the first ten years of the Treasury yield curve, one can calculate that the implied yield on a five-year Treasury note five years into the future, is about 4.4%. As a point of reference, the following chart shows the course of the actual five-year U.S. Treasury yield over the last fifteen years, along with a five-year moving average. Looking back, one can see that the five year moving average hasn't been around 4.4% since early 2004.

At the end of the first quarter of 2004, GDP over the trailing 10 years averaged 3.4%—more than 1% higher than the rate of growth during the current economic recovery. The 4.4% five-year forward yield on the five-year note, therefore, implies that the bond market is pricing in an environment where a base case for growth could be well over 3%. While that is certainly a plausible scenario, it strikes us as quite optimistic given the tepid economic outlook and the gradual rate of GDP growth. In our view the expected path for the Fed funds rate, long term Treasury yields, and implied forward rates are all likely to fall in the months and quarters ahead to levels that are consistent with a more realistic and moderate economic growth outlook.

FIVE-YEAR TREASURY YIELD

January 1998 to August 2013



Source: Bloomberg

Although our base case envisions a scenario in which short, intermediate, and long-term factors turn out to be supportive of fixed income, no forecast is without risks. In our view, an unanticipated acceleration in U.S. and/or global growth represents the greatest threat to our positive bond market outlook. However, recent economic data releases—such as the weaker-than-expected July figures for durable goods and new home sales and the subdued August payroll report—could be the first signs that higher interest rates are dampening optimism and economic activity, which in turn, would support our case for lower rates.

Conclusion

- U.S. interest rates have returned to the low levels that existed prior to the unusually high inflation period of the 1960s, 70s, and 80s. Therefore, in our view, most of the decline in rates since the 1980s will be sustained going forward. Specifically, we have revised our long-term central tendency for the 10-year Treasury down to 3.0%.
- However, features of the current economic landscape, such as high household debt and fiscal consolidation, will serve to keep growth and inflation abnormally low, which is likely to keep rates below 3.0% on average in the months and quarters ahead.
- In terms of the market cycle, we find that the point in an economic recovery when investors' fear of Fed tightening flares-up often represents a good point to add to fixed income exposure. In the current cycle, mutual fund outflows appear to have caused yields and spreads to overshoot fair value, creating value in a number of sectors.
- Although both bond yields and returns will be in a lower range when compared to the past thirty years, we believe that bonds will, on average, continue to:

  1) provide significantly higher returns than cash, and

  2) provide the benefits of diversification to investment portfolios relative to higher volatility sectors, such as equities, commodities, and real estate.
- In particular, we expect solid performance from the higher-yielding, credit sensitive fixed income products, including high yield, emerging markets, structured products, as well as long term investment grade corporate and medium grade municipal bonds.
- The recent rate increase is likely to stimulate buying from U.S. pension plans and insurance companies.

Notice Page

Prudential Fixed Income is a unit of Prudential Investment Management, Inc. ("PIM"), a registered investment adviser and a Prudential Financial company. Prudential, the Prudential logo and the Rock symbol are service marks of Prudential Financial, Inc. and its related entities, registered in many jurisdictions worldwide.

These materials represent the views, opinions and recommendations of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of Prudential Fixed Income is prohibited. Certain information contained herein has been obtained from sources that Prudential Fixed Income believes to be reliable as of the date presented; however, Prudential Fixed Income cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. Prudential Fixed Income has no obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. **These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services and should not be used as the basis for any investment decision. Past performance is not a guarantee or a reliable indicator of future results.** No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. Prudential Fixed Income and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of Prudential Fixed Income or its affiliates.

The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients or prospects. No determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects. For any securities or financial instruments mentioned herein, the recipient(s) of this report must make its own independent decisions.

Conflicts of Interest: Prudential Fixed Income and its affiliates may have investment advisory or other business relationships with the issuers of securities referenced herein. Prudential Fixed Income and its affiliates, officers, directors and employees may from time to time have long or short positions in and buy or sell securities or financial instruments referenced herein. Prudential Fixed Income affiliates may develop and publish research that is independent of, and different than, the recommendations contained herein. Prudential Fixed Income personnel other than the author(s), such as sales, marketing and trading personnel, may provide oral or written market commentary or ideas to Prudential Fixed Income's clients or prospects or proprietary investment ideas that differ from the views expressed herein. Additional information regarding actual and potential conflicts of interest is available in Part 2A of PIM's Form ADV.

2013-2089

Prudential
Bring Your Challenges®