

# MONTHLY

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## THE YIELD CURVE AND BOND RETURNS

### Introduction

The extreme market volatility of the past several years has reinforced the notion that bonds are a critical component of a well diversified portfolio. Investors who held a meaningful allocation to investment grade bonds benefited from their muted return volatility and relatively low correlation with equities, which helped dampen the effects of the 2008 and early 2009 market turmoil.

As markets return to normal and policy makers across the globe start to look toward removing the ultra-low cash rates that helped to stabilize

the financial system, many investors are concerned about the implications for bond returns. In this *Monthly*, we will analyze how the level of rates and the steepness of the yield curve can affect prospective returns, and provide perspective on the current rate environment.

### Drivers of Return

Since bonds offer a contractual return of principal at maturity, over time their return is largely a function of the coupon interest that is paid to investors. Although with fixed rate bonds this income is stable, returns can be materially affected by

changes in interest rates, which determine the market prices of bond investments. An increase in rates will drive bond prices lower, while a drop in rates will have the opposite effect.

It is important to remember that bonds with different maturities can produce significantly different return results. This is not only a function of rate sensitivity, but also the fact that interest rates do not move to the same degree across the yield curve. Variations in yield changes and their effect on prices are important when estimating the future total

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### CURRENT TOPIC

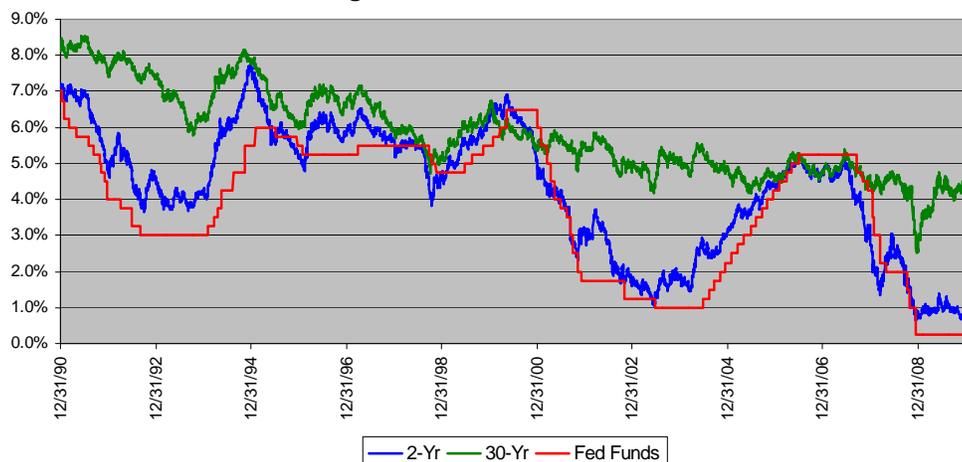
#### *The Yield Curve and Bond Returns*

- *Introduction*
- *Drivers of Return*
- *Term Structure*
- *Current Market*
- *Conclusion*

#### *Strategy*

- *There were no strategy changes during the month of February*
- *Portfolio strategies remain overweight developed equity markets*

**Figure 1: Select Interest Rates**



“INTEREST RATES DO NOT MOVE TO THE SAME DEGREE ACROSS THE MATURITY SPECTRUM. VARIATIONS IN YIELD CHANGES ARE IMPORTANT WHEN ESTIMATING THE FUTURE TOTAL RETURN OF BONDS”

# THE YIELD CURVE AND BOND RETURNS - CONT'D

return of bonds.

Even in an environment where market yields are expected to rise, bonds can offer attractive returns if yields more than offset the anticipated price deterioration.

### Term Structure

The relationship between the yields of bonds with different maturities is defined as the yield curve or the term structure of interest rates. We believe that two fundamental factors can be employed to explain a significant portion

of the term structure of interest rates. These factors are the expectations of future cash rates (rate expectations) and an investor preference for the lower risk of shorter maturity bonds.

Rate expectations affect the yields of all bonds, because investors require compensation for the cash rates that they believe will accrue over the life of the bond being purchased. Investors have the option of leaving their money in cash and earning the average cash rate, without taking on the market risk of

owning bonds. For this reason, expected future cash rates play a major role in determining the shape of the yield curve.

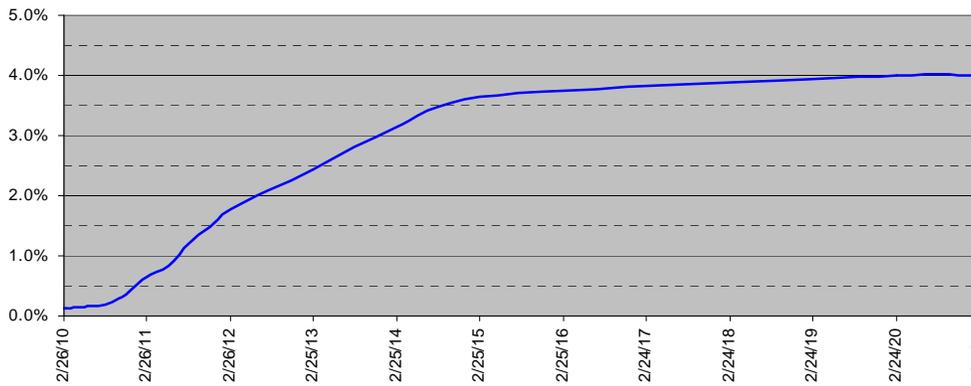
Cash rates, which are largely controlled by the Federal Reserve Bank (the Fed), have averaged about 4% over the past 20 years. However, cash rates can diverge from this equilibrium level for extended periods of time. When the Fed changes the level of the Fed Funds rate, in an effort to influence economic activity, it can have a dramatic effect on the yield

curve. Generally, the yield curve steepens when cash rates are lowered and flattens when cash rates are raised.

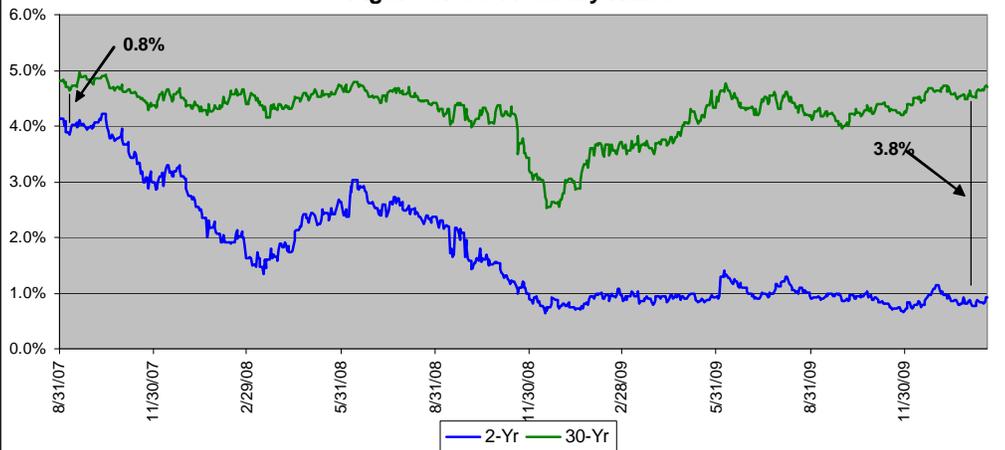
Figure 1 shows the relationship between the Fed Funds rate and short and long-term US Treasury yields. As one can see, short-term Treasury yields are greatly influenced by changes in the Fed Funds rate. As a contrast, the relationship between Fed Funds and long-term Treasury yields is much less pronounced. This is because the market, when pricing longer-

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**Figure 2: Market Implied Fed Funds Rate**



**Figure 3: US Treasury Rates**



“IF THE ECONOMIC RECOVERY CONTINUES AND INTEREST RATES NORMALIZE, IT IS OUR EXPECTATION THAT THE SPREAD BETWEEN LONG AND SHORT TREASURY DEBT WILL REVERT BACK TO ITS EQUILIBRIUM LEVEL. THIS WOULD RESULT IN A MORE SEVERE RATE BACK UP IN SHORT-TERM BONDS”

### About Stairway Partners, LLC

Stairway Partners was formed to provide our clients (starting with ourselves) with an effective and comprehensive solution for managing their wealth. Our disciplined and rigorous approach comes from our collective knowledge in serving large institutional clients over many years.

Our core investment belief is that asset allocation is the single most important determinant of success in any investment plan. The dominant amount of risk and return comes not from your choice of individual investments but from your asset class mix. Stairway Partners focuses our resources on risk management and asset allocation. This includes building your custom blueprint (investment policy and benchmark) and aligning your portfolio with our investment strategy utilizing the global capital markets.

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term rates, looks beyond current Fed policy.

Figure 2 shows the implied path of the Fed Funds rate that is currently priced into the market, with the current rate at 0.1% and a terminal rate of 4.0% being reached in 10 years. Using this path, the average cash rate that would be used as an input to price 2-year bonds would be 0.8% and the average rate for 30-year bonds would be 3.7%.

The second factor which affects the shape of the yield curve is the premium that investors require to take on the market risk of longer dated bonds. Since bonds with longer maturities have more risk, the yield curve usually has a positive slope. Although risk premiums can

change due to market forces, they tend to be fairly stable over time. In normal times, we estimate the yield premium between 2 year and 30-year Treasury bonds should be roughly 0.8%.

#### Current Market

Due to the current low level of cash rates, Treasury yields are below historical averages and our estimates of fair value. However, all sectors of the yield curve have not been affected equally by the financial crisis of the past several years and the Fed's monetary policy response. Figure 3 shows the path of long and short Treasury yields from before the beginning of the recent financial crisis (Sept 1, 2007). Before the crisis, the difference in yield between 2 and 30-year Treasury bonds was roughly equal to our long-term esti-

mate of 0.8%. Today, that spread is closer to 3.8%, the highest level ever recorded for the series. (see Figure 2)

If the economic recovery continues and interest rates normalize, it is our expectation that the spread between long and short Treasury debt will revert back to its equilibrium level. This would result in a more severe rate back-up for short-term bonds. Within the Treasury market, we believe that longer maturities will produce the best returns, as higher yields and less extreme overvaluation protect investors from an eventual increase in cash rates. Figure 4 shows our return expectations for US Treasury bonds, along with their current and estimated horizon yields. These expected returns for US Treasuries are low by historical standards, but cash

alternatives are also lower than they have been in any of our lifetimes.

#### Conclusion

Over time, yield is the largest component of return for bond investments. The current state of monetary policy, with the Fed Funds rate close to zero, has led to unprecedented steepness in the yield curve. As the economy recovers, we expect the Fed will eventually raise cash rates back to a more normal level. When this occurs, the general level of interest rates will almost certainly rise. We believe that shorter maturity bond yields will experience the most dramatic back-up, and that 30 year bonds will produce the best returns within the Treasury market due to their higher current yield and proximity to fair value.

**Figure 4: Estimated Return for Treasury Bonds  
( 3-year investment horizon )**

<u>Maturity</u>	<u>Current Yield</u>	<u>Horizon Yield</u>	<u>Expected Yield Change</u>	<u>Expected Total Return</u>
<b>2 Year</b>	<b>1.0%</b>	<b>4.3%</b>	<b>+3.3%</b>	<b>0.6%</b>
<b>10 Year</b>	<b>3.7%</b>	<b>4.9%</b>	<b>+1.2%</b>	<b>1.5%</b>
<b>30 Year</b>	<b>4.6%</b>	<b>5.1%</b>	<b>+0.5%</b>	<b>2.0%</b>

“WITHIN THE TREASURY MARKET, WE BELIEVE THAT LONGER MATURITIES WILL PRODUCE THE BEST RETURNS”

## Strategy

Asset Class	Expected Return	Hurdle Return	Strategy Exposure	Comment
<b>Equities</b>				
US	17.1%	5.8%	over	Exposure above benchmark weight due to attractive pricing
Non-US Developed			over	Asset class remains attractive
Eurozone	22.6%	5.8%		
Japan	15.5%	4.4%		
UK	15.5%	6.1%		
Emerging	4.5%	10.3%	neutral	Asset class is close to fair value
<b>Fixed Income</b>				
US Treasury Bonds			under	Treasuries expensive, but non-Treasury sectors are more attractive
2-Year	0.6%	2.7%		
5-Year	0.7%	3.6%		
10-Year	1.5%	4.4%		
30-Year	2.0%	4.9%		
US Municipal Bonds			under	In most maturities, municipal bonds are overpriced
2-Year	0.5%	2.0%		
5-Year	0.6%	2.6%		
10-Year	1.7%	3.3%		
30-Year	5.9%	4.2%		
US High Yield	4.0%	4.3%	over	Sector is close to fair, but attractive relative to other fixed income
Non-US Government Bonds			under	Yields remain below fair levels
Euro 10-Year	0.7%	4.0%		
Japan 10-Year	-0.4%	1.9%		
UK 10-Year	2.1%	4.7%		
Emerging Markets Debt	2.6%	4.6%	under	Other asset classes offer better value
Cash	2.6%	---	minimal	
			10-Year	
		Equity	Bond Return	
		Return with	with	
		Currency	Currency	
<b>Currencies</b>				
Euro	-5.3%	17.3%	-4.6%	Euro is moderately overvalued
Japanese yen	-2.1%	13.4%	-2.5%	Yen is near fair value
UK pound	2.1%	17.6%	4.2%	Pound is near fair value

**Notes:**
**As of: February 28, 2010**

The expected return is our estimate of the annualized return likely to be generated over a 3-year horizon.

The expected returns are expressed in local currencies (e.g., Japanese equity return is stated in yen terms).

The hurdle rate represents the annualized return that an asset needs to generate in order to cover its risk.

Equity Return with Currency (in Currencies section) is the annual return we would expect a US dollar investor to earn from holding foreign equity markets.

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