Commentary
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Bond Market Returns: More Than Meets the Eye

- Global bond yields have risen since the U.S. presidential election, but are still comparatively low on a historical basis.
- A bond's total return consists of three primary components: yield, roll-down and yield-curve changes.
- Timing interest-rate changes is difficult, and bonds continue to fulfill an important role in long-term investment portfolios even in a low-yield environment.

Although global bond yields and interest rates have risen significantly since the U.S. presidential election, they remain at historically low levels. In a persistently low, but rising yield environment, investors naturally wonder how fixed-income investments can continue to deliver meaningful positive returns. When determining forward-looking expectations for bond returns, it is important to remember the various drivers that contribute to these returns. We find it useful to consider bond returns in three distinct components: yield, roll-down, and yield-curve changes.

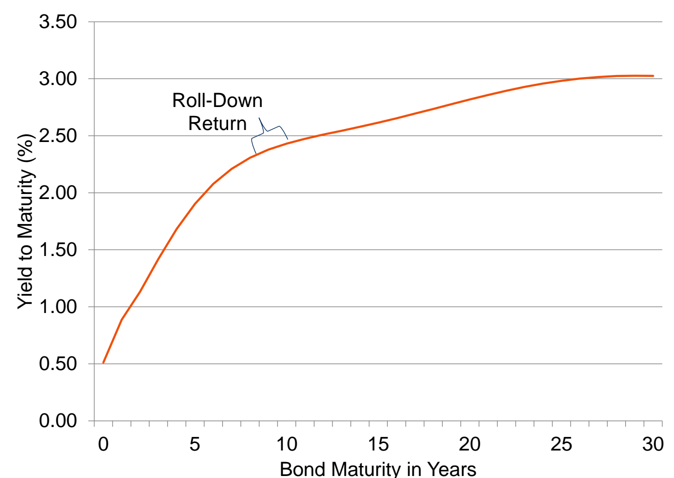
Component 1: Yield

The first component, yield, is the most straightforward and most widely understood portion of return. Ignoring factors like yield-curve shape and reinvestment risk, "yield" can be thought of as the most basic expression of the time value of money. In this setting, if an investor buys a bond at a yield of 2% and that bond still yields 2% after one year, the investor earned a return of 2% over the year. For a par bond, in the most simplistic terms, yield is the coupon payment(s) over one year divided by the price of the bond.

Component 2: Roll-Down

But before assuming that the bond's yield will remain the same after a year, it's important to remember that a 10-year bond, held for one year, becomes a 9-year bond. As is common through time, most yield curves around the globe today are upward-sloping, meaning yields on 9-year bonds are lower than those on 10-year bonds. Thus, if market rates remain unchanged, the investor buying a 2% 10-year bond today will earn more than just the original yield over the course of the year. There will be an additional capital gain resulting from "roll-down return" because the bond has "rolled down the curve" – its yield after one year is the lower 9-year yield, and with the lower yield comes a higher price.

Exhibit 1: Rolling Down the Yield Curve



Source: BofA Merrill Lynch. Data as of 11/30/2016.

Component 3: Yield-Curve Changes

The final component of bond returns consists of capital gains or losses from shifts in the yield curve over the investor's holding period. This portion cannot be known in advance since it depends on the state of future interest rates. If rates fall (rise) over the holding period, returns will be higher (lower) than the original combination of yield and roll-down return.

Return Example

The three components of return can be illustrated via a historical example. As of November 30, 2015, the 10-year bond was yielding roughly 2.29%, corresponding to the "yield" component that an investor buying the bond that day could expect. The curve was upward-sloping, and the yield on the 9-year bond was only 2.21%: if the curve did not change, the 10-year bond's yield would fall from 2.29% to roughly 2.21% over the course of the year as it evolved into a 9-year bond. With this fall in yield would come a roll-down return of roughly

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0.62%. Finally, over the course of the year, the 9-year yield actually rose to 2.38% and the bond's price fell accordingly, producing a "curve changes" component of negative 1.38%. Despite this material rise in rates, the combination of yield and roll-down allowed the 10-year bond to deliver a meaningfully positive return of 1.53% over the year, well outpacing the risk-free rate during that period.

Exhibit 2: Return Example, 11/30/2015 - 11/30/2016

Return Components	Contribution to Return
Component 1: Yield	2.29%
Component 2: Roll-Down	0.62%
Component 3: Yield-Curve Changes	-1.38%
One-year total return	1.53%

Source: BofA Merrill Lynch, SEI. Data as of 11/30/2015 - 11/30/2016.

Conclusion

Timing interest rates, like timing the stock market, is extremely difficult and potentially dangerous. While interest rates are low around the world, bond market math shows us that even low-yield bonds can offer the potential for meaningful excess returns. Even in the event that interest rates rise, it is useful to remember that, all else equal, that shift would imply higher subsequent returns for bonds due to higher yields for newly issued bonds. As always, we believe that a diversified portfolio including an allocation to high-quality bonds is the most reliable way for investors to achieve their long-term goals.

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