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Preparing Your Fixed Income Portfolio for Rising Interest Rates

SUMMARY

Since 2008, the Federal Reserve Board's (the Fed) Open Market Committee has pursued an expansionary monetary policy by keeping the range for the Federal Funds rate — its short-term target interest rate — between 0 and 0.25%.¹ The Fed also kept long-term rates low with quantitative easing, buying longer term financial assets from commercial banks.

With interest rates forecasted to rise, however, prices of fixed income securities — individual bonds and those held in funds — are expected to fall. Significantly reducing your portfolio's bond allocation in response to this outlook may be misguided and ignores the diversification benefits of the asset class. Investors should instead consider products and strategies that may mitigate the risk of rising rates. We discuss several of the available choices in the following pages.

What can fixed income investors expect when interest rates rise?

- Buy and hold investors of high quality bonds will likely have their principal returned to them at maturity.
- Investors who sell before their bonds mature could end up with loss of principal, depending on how much they paid for their securities.
- Fund investors could see steep declines in net asset values — total fund assets divided by total shares outstanding — particularly if portfolio managers are forced to sell securities to meet investor redemptions.

¹ Source: Federal Open Markets Committee of The Federal Reserve

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Bond Fundamentals

Interest Rates and Bond Pricing

There is an inverse relationship between interest rates and a fixed income security's price. As interest rates fall, bond prices rise, and as interest rates rise, bond prices fall. Here's why:

Assume you bought a bond with a face value (par) of \$1,000, maturing in 10 years and paying annual interest at a rate of 4% (coupon). You will earn \$40 of income each year that you own the bond (\$1,000 X 4%). If, however, you need to sell your 4% bond and prevailing interest rates have risen to 5%, investors can earn \$50 annually on current \$1,000 par bonds. The price of your \$1,000 par bond paying 4% would have to be discounted in order to generate a yield equivalent to the 5% an investor could get by buying newly issued securities.

Conversely, if interest rates dropped and the new issue coupon rate is now 3%, your 4% coupon bond becomes more valuable because investors can earn more interest income from your security than from a new issue (see example on page 5). A buyer may be willing to pay you more than \$1,000 (a premium) to earn the higher interest rate from your 4% coupon bond.

The Importance of Duration

The decline in the value of a bond due to rising interest rates is known as interest rate risk, and all bonds are subject to it. But bonds with similar

coupons are not equally affected when rates change. Generally, the longer a bond's maturity, the more sensitive it is to interest rate changes. Duration, a measure of a bond's interest rate risk or price sensitivity, allows investors to compare bonds of different issue, maturity dates, coupon rates and yields to maturity. It is expressed in years, and it can tell you approximately how much your bond or portfolio will change in price due to interest rate movements.

For example, the price of a fixed income security or portfolio with a duration measure of three years will fall about 3% for each 1% percent increase in interest rates. Likewise, a bond or portfolio with a duration of five years will experience a drop in price of about 5% when interest rates increase 1%. The converse is also true; the price of a bond or portfolio with a duration of 10 years will increase about 10% for each 1% decrease in interest rates. ■

How Interest Rate Changes Affect Returns

We ran three different hypothetical rate scenarios to see how various taxable fixed income asset classes would perform over a 12-month investment horizon—first with no change in rates, and then with 50- and 100-basis-point parallel shifts along the yield curve. We broke each asset class into short and long duration buckets. For example, the one-to-five year Treasury bucket is a sample portfolio of Treasury bonds maturing between one and five years, while the 10-plus year bucket is a sample of securities maturing between 10 and 30 years.

If interest rates remain unchanged over the 12-month period, our analysis shows long duration outperforms short duration in every asset class. However, in the case of both interest rate increases, shorter duration then outperforms longer duration across the board.

12-MONTH TOTAL RETURN FOR A GIVEN PARALLEL SHIFT IN THE YIELD CURVE

Asset Class	0 Bps*	50 Bps	100 Bps
US Treasury			
One-to-Five Years	0.83	0.01	-0.79
10+ Years	4.00	-4.06	-11.27
Government Sponsored			
One-to-Five Years	0.97	0.11	-0.75
10+ Years	3.79	-1.79	-6.96
Credit			
One-to-Five Years	1.80	0.83	-0.12
10+ Years	5.30	-0.95	-6.62
High Yield			
One-to-Five Years	6.17	5.27	4.36
10+ Years	7.32	3.02	-1.05

*A basis point is a unit of measure that describes the percentage change in a financial instrument. One basis point equals 0.01% of a percentage point. Source: The Yield Book, Morgan Stanley Wealth Management as of June 14, 2013. This is a hypothetical example and does not represent the performance of any specific investment.

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While interest rate risk is unavoidable, there are several fixed income products and strategies available to you to help manage its effect.

Floating Rate Securities

Floating rate securities or “floaters,” are bonds with a coupon rate that adjusts (“floats”) periodically, based upon a reference rate, for example the London Interbank Offer Rate (LIBOR) or the Constant Maturity Treasury rate (CMT).

A floater may offer protection against interest rate risk because its coupon resets periodically with changes in the bond’s reference index. For example, if interest rates rise, coupon payments will increase by the percentage change in the benchmark rate. Conversely, a decline in the reference rate will result in a lower interest payment to the holder.

Most floater coupon rates generally reset more than once a year at predetermined intervals (quarterly or semiannually), and their yield at issuance is usually lower than a fixed rate bond. Corporations are a major issuer of floaters.

Step-up Bonds

A step-up bond is a callable fixed income security with a coupon that increases, or “steps,” according to a preset schedule, until it is called or matures. During periods of rising rates,

Products to Hedge Rising Interest Rates

the bond’s rising coupon may reduce interest rate risk and preserve purchasing power.

A step-up bond’s initial coupon rate is typically lower than that of a fixed rate security, but as it approaches maturity —

and assuming it isn’t called (redeemed) by the issuer — the interest income it pays eventually surpasses that of a conventional bond issued at the same time. An investor in step-up bonds sacrifices income today for potentially higher yield over the life of the investment,

and accepts the risk that the bond may be called. Major US corporations, government agencies and municipalities issue step-up bonds.

Fixed to Floating Preferred Securities

A fixed to floating preferred security is issued with a fixed rate coupon which changes to one that floats. The coupon rate resets based on the movements of a reference rate, such as one- or three-month LIBOR. As a result, these

securities are typically less sensitive to changes in interest rates than fixed-rate preferreds.

Treasury Inflation Protected Securities

Treasury Inflation Protected Securities (TIPS) are designed to preserve the purchasing power of interest income and maturing bond principal during inflationary periods. The bonds’ principal is adjusted semiannually for inflation based on changes to the Consumer Price Index-Urban Consumers (CPI-U), a widely used measure of inflation. The US Treasury guarantees return of principal if the bonds are held to maturity.

TIPS’ interest payments are calculated based on the revised principal and will increase proportionately. However, if rates spike in the absence of inflation, TIPS returns will likely trail those of bond sectors that have historically outperformed when interest rates rise in response to Fed activity.

The initial coupon rate on TIPS may be lower than that of a conventional Treasury note of the same maturity to reflect the likelihood that investors may receive additional income due to inflation. However, there is no assurance that these increases will occur. ►

In a rising rate environment, consider products and strategies that may mitigate interest rate risk, instead of indiscriminately reducing your fixed income allocation.

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► Interest Rate Linked Structured Investments

Interest rate linked structured investments provide investors with an opportunity to express a view on a specific benchmark interest rate, with the possibility of earning above market returns relative to traditional fixed income securities of comparable maturity. For example, investors may accept the risk of a variable return and even no return at maturity, in exchange for the opportunity to earn a potentially higher return.

Interest rate linked structured investments involve a higher degree of risk than traditional fixed income securities because they are typically long dated and may not pay interest for substantial periods of time, depending on the performance of the underlying asset. In some cases, they may not provide for the return of all or any principal at maturity.

Bank Loans

Available generally to institutional investors because of the high minimum investment — typically \$5 million — individuals may gain access to bank loans through mutual funds, closed-end funds and exchange-traded funds (ETF). Also known as leveraged loans, these bank borrowings by below investment grade companies are secured by assets, and thus rank higher in the capital structure than high yield bonds, which are unsecured. The interest rate on bank loans is usually set at a fixed spread over a reference rate, such as LIBOR, and it will typically reset, every 30 to 60 days, which may mitigate interest rate risk and preserve purchasing power.

Leveraged loans' average maturity is in the five- to 10-year range, which is similar to high yield bonds. However, the loans generally have a much shorter call window, resulting in a lower duration profile than high yield securities. ■

Strategies to Mitigate the Effect of Rising Rates

Here are steps you can take now to prepare for the possibility of rising interest rates.

Swap Bonds to Shorten Maturity and Duration

Shorter term bonds are less sensitive to changes in interest rates and may fluctuate less in value in a rising rate environment. A swap, which entails selling a block of long-term bonds and purchasing shorter term securities of similar market value, is an efficient way to shorten maturity and duration.

Although shorter duration bonds would certainly mitigate the effects of rising rates, their yields are lower than longer maturity fixed income securi-

ties of similar credit quality. You can, however pick up additional return and shorten duration by buying investment grade bonds of slightly lower credit quality, or by adding a small allocation to high yield debt. This strategy could be especially effective if rates rise without an increase in defaults in lower credit quality bonds.

Create a Bond Ladder

Laddering a portfolio is a bond diversification strategy that can be applied during periods of rising or falling interest rates. Depending on your age, current and future cash flow needs and stage of life, you would create a bond ladder by buying equal amounts of securities

AVOID A WASH SALE

The Internal Revenue Service requires a taxpayer to defer any tax loss generated from the sale and purchase of substantially identical securities if the transactions occur within 30 days of each other (regardless of whether the sale is before or after the purchase). This is commonly referred to as a "wash sale." Generally, securities are not considered identical when they have different issuers, or, for fixed income securities, when there are substantial differences in either maturity date or coupon rate. You should consult your own tax advisor before making any swap decision to determine whether a sale will be considered a wash sale.

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with maturities of, for example, two, four, six, eight and 10 years.

If rates rise, the proceeds from your bonds maturing in two years would be reinvested at the prevailing rate, which reduces your portfolio's interest rate

risk and increases your interest income. Subsequent two-year periods would provide additional opportunities to reinvest at higher interest rates.

There are a variety of laddering strategies that can be applied to a portfolio,

for example, shortening the sequential maturity intervals to allow for more frequent reinvestment in a period of sharply rising interest rates.

Buy Premium Bonds

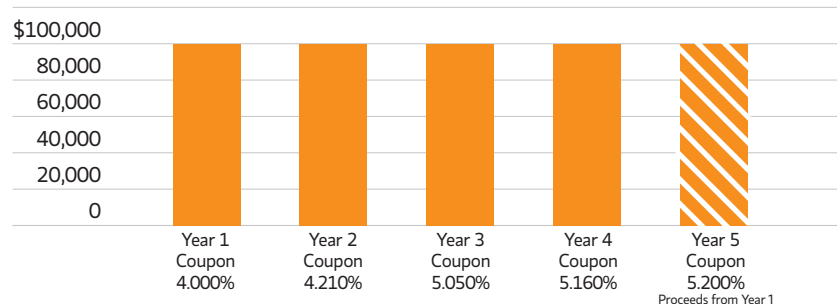
A premium bond is a fixed income security with a coupon rate that is higher than the prevailing market interest rate and they typically trade for more than 100% of their par value. Depending on your income needs, you may want to consider buying premium bonds. In a period of rising rates, the higher coupon may provide a cushion against price declines because the premium bond's cash flow will be higher than that of par and discount bonds.

Choose Short Duration or Flexible Mandate Funds

If mutual funds, closed-end funds or ETFs are your investment vehicle of choice, you should research and invest in those that target a short duration. Most fund companies, as well as the research firms that monitor and rate fund performance, readily provide information about a specific vehicle's average duration.

Likewise, choose a fund whose portfolio manager has the discretion to alter duration and shift sectors when conditions warrant. This flexibility may mitigate investor redemptions in the event of a fall in bond prices and a related decline in the fund's net asset value (NAV). Similarly, ETFs that hold bonds until maturity, use bond ladders or that have a short duration target may also provide protection against interest rate risk. ■

Sample Portfolio Ladder



This is a hypothetical example and does not represent the performance of any specific investment.

Increasing Cash Flow With Premium Bonds

	Premium Bond	Par Bond
Coupon	5.00%	3.00%
\$ @ Maturity	\$100	\$100
Yield To Maturity	3.43%	3.00%
Purchase Price	118.25	100.00
Cost	\$118,250.00	\$100,000.00
Principal @ Maturity	\$100,000.00	\$100,000.00
Interest (30 semiannual payment)	\$75,000.00	\$45,000.00
Net Cash Flow	\$56,750.00	\$45,000.00
Additional Cash Flow on Premium Bond	\$11,750.00	

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Investment Considerations

Interest Rate Risk

Interest rate risk is the risk that the market value of securities in a portfolio will fluctuate due to changes in prevailing interest rates. Generally, fixed income securities are sensitive to fluctuations in interest rates; all else being equal, if interest rates rise, bond prices will fall and vice versa. Duration measures a bond's price sensitivity to changes in interest rates. The longer the bond's duration, the more sensitive its market value is to changes in interest rates.

Credit Risk

The possibility that the issuer might be unable to pay interest and/or principal on a timely basis is known as credit risk. Widely recognized rating agencies, such as Moody's, Standard & Poor's and Fitch Ratings evaluate quantitative and qualitative factors to come up with a credit rating, which is a measure of an issuer's creditworthiness.

Call Risk

Many fixed income securities are callable, allowing the issuer to redeem securities prior to maturity. If the security is called, the investor bears

the risk of reinvesting the proceeds at a potentially lower rate of return. To compensate investors for this potential early redemption, bonds typically offer the following: higher yields than their noncallable counterparts; a call protection period (usually five years from issuance) during which time the issuer cannot redeem the securities; and, in certain cases, a call premium, which pays the holder of a called security a price greater than their par value.

Secondary Market Risk

If a security is sold in the secondary market prior to maturity (or call date), the price received may be more or less than the face value or the original purchase price, depending on market conditions at the time of the sale. For example, a ratings change or a rise in market interest rates will cause bond prices to fall, and if you have to sell in this environment, you may sustain a loss. The risk of such a loss diminishes as the time to maturity lessens. While Morgan Stanley currently makes a secondary market in most bond sectors, it is not obligated to do so, and may discontinue doing so at any time and without providing notice. ■

Fixed Income Investing With Morgan Stanley

We understand that each investor is unique, which is why we don't take a one size fits all approach when recommending investments to our clients. Morgan Stanley Financial Advisors take the time to listen to your situation so that we can help you create an investment portfolio that addresses your specific needs and financial goals.

As a complimentary service, we can perform a Fixed Income Portfolio Review, a detailed analysis of your taxable and tax-exempt fixed income holdings.² As part of the evaluation, our analysts examine your portfolio to review its duration, the range of bond maturities, the ratings and sector distribution of the securities and the real and projected cash flows to determine if your holdings are aligned with your objectives.

Morgan Stanley Wealth Management's Fixed Income Strategy Group also publishes a range of publications which may provide support to your investment decisions. These include:

- Basis Points
- Of Interest
- Municipal Bond Monthly
- The Credit Report

A Program Centered on You

Please contact your Morgan Stanley Financial Advisor to learn more about products and strategies that may help mitigate the effect of rising interest rates on your fixed income investments.

Morgan Stanley Wealth Management is focused on providing you with diverse product offerings, objective advice and a high level of service to help you protect, manage and grow your wealth.

² Reviews are subject to portfolio size minimums.

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Mutual Funds and ETFs are sold by prospectus. Investors should carefully read the prospectus which includes information on the investment objectives, risks, charges and expenses with other information before investing. To obtain a prospectus, please contact your Financial Advisor. Please read the prospectus carefully before investing.

Closed-end funds, unlike open-end funds, are not continuously offered. There is a one time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Net asset value (NAV) is total assets less total liabilities divided by the number of share outstanding. At the time of sale, your shares may have a market price that is above or below NAV. There is no assurance that the fund will achieve its investment objective. The fund is subject to investment risks, including possible loss of principal.

An investment in an exchange-traded fund involves risks similar to those of investing in a broadly based portfolio of equity securities traded on exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock prices. The investment return and principal value of ETF investments will fluctuate, so that an investor's ETF shares, if or when sold, may be worth more or less than the original cost.

An investment in Structured Investments involves risks. These risks can include, but are not limited, to: fluctuations in the price, level or yield of underlying instruments; interest rates, currency values and credit quality; substantial loss of principal; limits on participation in appreciation of underlying instrument; limited liquidity; credit risk of the issuer; and conflicts of interest.

Preferred securities are subject to market value and credit quality fluctuation. If sold prior to maturity, price and yield may vary. Preferred securities are subject to risks, which include interest rate sensitivity, illiquidity, special redemptions and call provisions.

An Interest-Only LIBOR loan is not for everyone. Your interest rate can increase and monthly payments can increase every one or six months, depending on the index you choose. Additionally, your monthly payments will generally increase when the interest-only period ends because you will be repaying principal and interest over the remaining loan term. On a six-month LIBOR, if you prepay principal during the first ten years, your required monthly payment may include some principal until your next six-month adjustment.

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