

Rising Rates: The Best Defense is a Good Offense

Adam Pennacchio
Fixed Income Research Associate

EvaluationAssociates
A Milliman Company

WITH INTEREST RATES AT HISTORICALLY LOW LEVELS AND THE FED'S SECOND ROUND OF QUANTITATIVE EASING NEARING COMPLETION, INVESTORS NEED TO GO ON THE OFFENSE, REVIEWING STRATEGIC ALLOCATIONS WITH A VIEW TOWARDS REDUCING FIXED INCOME EXPOSURE. FOR ASSETS REMAINING COMMITTED TO FIXED INCOME, PROTECTING PORTFOLIOS AGAINST RISING RATES CALLS FOR IDENTIFYING BOND SUB-ASSET CLASSES THAT MAY OFFER THE BEST DEFENSE.

BACKGROUND

Despite a moderate rise in yields that began during the fourth quarter of 2010, interest rates remain well below historical averages. As economic data has improved and investors' appetite for riskier assets has increased, yields have backed up modestly. The Fed has kept its target Federal Funds rate anchored at 0-0.25% and has engaged in Treasury purchases totaling over \$400 billion since the second round of quantitative easing began in November of 2010. From that point until the end of January, the Fed bought nearly 70% of the annualized new issuance of Treasuries, suppressing yields in an effort to stimulate economic activity and hold down long-term borrowing rates.¹ As a result, long-term real yields (represented by 10-year US TIPS) sit at 0.97% as of 3/31/11, versus a monthly average of 2.72% since 1962 and a peak of 9.64% in June of 1984.² The current 10-year nominal Treasury yield of 3.47% (as of 3/31/11) is just over one-half its monthly average of 6.79% since 1962 and is well below the 15.84% peak in September of 1981.² To illustrate just how rare the current rate environment is: since 1962, monthly 10-year real yields have been below 1% only 14.2% of the time.²

In addition, while coming off very low levels, inflation expectations have risen along with commodity prices and consumer sentiment indicators, signaling higher anticipated inflation, with breakeven spreads on 10-year US TIPS widening over the past few months, from 155 basis points at the end of August 2010 to 251 bps as of 3/31/11.² With the Fed's second round of Treasury purchases set to end in June, real rates at historical lows, the economy continuing to show incipient signs of recovery, and increases in commodity prices and inflation expectations, many indications point to a rise in yields at some point during the latter half of 2011.

As a result, we believe investors need to allocate a portion of their fixed income portfolio to sectors that are best positioned to withstand a rise in market rates. Sectors that have traditionally performed well during

periods of rising rates, and that we believe are currently well positioned to outperform, include bank loans, short duration high yield, convertible bonds and local emerging market debt and currencies. In addition, short and ultrashort duration funds, as well as absolute return strategies, provide additional options to hedge potential interest rate risk, while at the same time offering added portfolio diversification.

BANK LOANS

During the roughly twenty year history of the asset class, bank loans have become an increasingly important allocation for institutional investors looking to hedge against rising interest rates, generate stable cash flow and enhance the diversification of their portfolio. As the institutional bank loan market has grown from roughly \$150 billion in 2002 to over \$700 billion as of 6/30/10, so too has the liquidity of the market and the ability of institutional investors to access it.³

While traditional bonds pay a fixed rate of interest, bank loans utilize a floating rate coupon that typically resets every three months based on a reference rate (usually three month LIBOR) plus a spread which reflects demand in the primary market, as well as credit risk. Therefore, loans have an interest rate duration that is virtually zero, as opposed to fixed rate securities that incur interest rate risk depending on their coupon rate and maturity length. This floating rate aspect provides benefits in the event of rising short-term or long-term rates, as investors would receive higher income if short-term rates were to rise and would limit the downside in their portfolios if long-term rates were to increase, since bank loans would likely outperform interest rate-sensitive fixed rate securities. On the following page, Chart 1 illustrates the cumulative total return of the Credit Suisse Leveraged Loan Index, a commonly used proxy for bank loans, versus other fixed income sectors during periods of rising monthly 10-year Treasury yields since 1992, which are detailed in Table 1 on the following page.

¹ PIMCO: March 2011 Investment Outlook

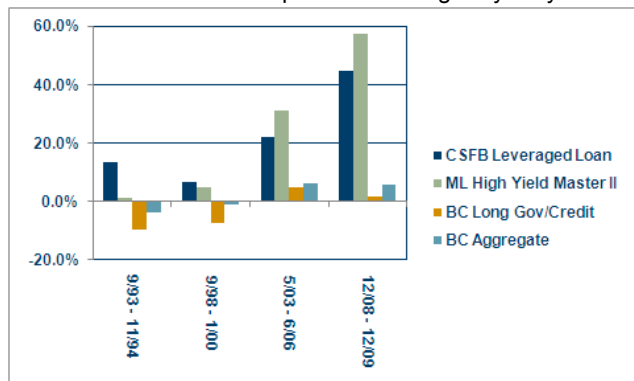
² Bloomberg

³ Credit Suisse

Table 1: Rising monthly 10-year Yields since 1992²

Time Period	Increase in 10-Year Yield
9/93-11/94	5.4% - 7.9%
9/98-1/00	4.4% - 6.7%
5/03-6/06	3.4% - 5.1%
12/08-12/09	2.2% - 3.8%

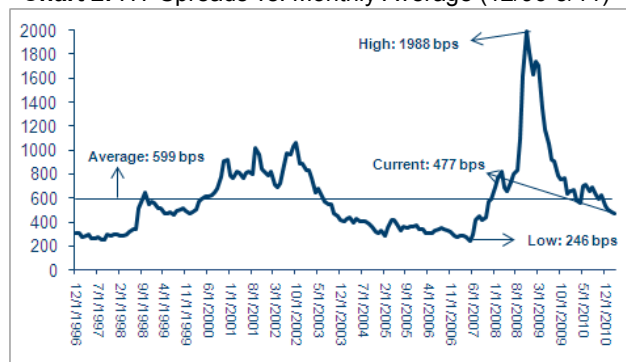
Chart 1: Performance in periods of rising 10-year yields⁴



In addition to highlighting the strong performance of bank loans in rising rate environments, Chart 1 shows that intermediate duration high yield has also outperformed during periods of rising interest rates. This is due to its higher coupon and resultant lower duration relative to investment grade fixed income, as well as the fact that credit trends drive performance in the segment.

Further, rising rates typically signal an improving economy, with high yield issuers generally benefitting as defaults decline and risk premiums narrow. However, spreads of intermediate high yield debt to Treasuries are currently at historically narrow levels. As of 3/31/11, the option-adjusted spread on the Merrill Lynch High Yield Master II Index stood at 477 bps, well below the monthly average of 599 bps since 1996, as evidenced in Chart 2. As a result, we believe much of the upside has been realized, leaving limited room for further yield spread tightening. In addition, the absolute level of yields on the index is very low at 7.17% (as of 3/31/11) versus a monthly average of 11.14% since September of 1986 and a peak of 21.81% in November of 2008.⁵

Chart 2: HY Spreads vs. Monthly Average (12/96-3/11)⁵



Though generally issued by the same sub-investment grade companies that populate the high yield bond market, bank loans sit atop the capital structure and are collateralized via a lien on firm assets, as opposed to high yield debt, which is typically an unsecured obligation. As a result, while the historical long-term average default rate for bank loans of 3.9% is slightly above the 3.7% long-term historical average for high yield credit, post-bankruptcy recovery rates since 1982 on first-lien senior secured loans average 66% versus 37% for senior unsecured high yield bonds.⁶ Therefore, the historical average credit loss on loans is slightly more than one-half that of high yield bonds, offering investors a more cautious way to participate in the sub-investment grade space.

In addition, the health of the bank loan market, including its depth, liquidity and the quality of loan structures, has improved as the market has evolved. Despite shrinking somewhat from its peak of roughly \$850 billion in 2009, the institutional bank loan market as of 6/30/10 is still over quadruple its size from 2002.³ Further, liquidity has significantly improved, as secondary market activity more than tripled between 2002 and 2009, as institutional mutual funds became more active participants.⁷ Concurrently, the structure of loans brought to the primary market now offers more protection for investors than has historically been the case. Many issues brought to market now carry LIBOR floors (which establish a lower limit on the floating rate of interest that investors can receive), as well as call protection for the first year of issuance. Most importantly with regards to improvements in loan structure has been the declining percentage of covenant-lite loans issued. In the third quarter of 2010, these types of loans, which place limited restrictions on borrowers and thus offer less protection for investors, represented only 5% of new loans issued, compared with 25% in 2007.⁸ This is reflected in the CSFB Leveraged

⁴ Index Providers: Credit Suisse, Barclays, S&P, Merrill Lynch, MSCI, JP Morgan
⁵ Bank of America Merrill Lynch

⁶ JP Morgan
⁷ S&P Leveraged Commentary & Data, Reuters
⁸ ibld

Loan Index, of which 14.3% of the market value was represented by covenant-lite loans as of 3/31/11, compared to a peak of 20.3% in July of 2007.³ However, the issuance trend in covenant-lite loans bears watching, as there has been a recent uptick in their use.

Bank loans, through their unique structure, offer a return stream with a low or negative correlation to other asset classes (as evidenced in Table 2 below), with Treasuries having an especially weak relationship, illustrating the attractiveness of the asset class in periods of rising rates. This affords investors an opportunity to enhance the risk-adjusted returns of their portfolio over time, while concurrently providing protection against rising yields.

Table 2: Leveraged Loan Correlations (1/94-3/11)⁴

BC US Treasury	S&P 500	BC Aggregate	ML HY Master II	MSCI EM	JP Morgan EMBIG
-0.31	0.41	-0.03	0.75	0.41	0.24

As with any asset class, there are risks associated with investing in bank loans, some of which differ from investing in traditional fixed income securities. For one, while bank loans are largely immune from the negative effects of rising interest rates, they are still exposed to the risk of falling interest rates, as income decreases as rates reset at lower levels. In addition, they are exposed to credit risk, as they are typically issued by sub-investment grade companies with higher levels of debt. Further, bank loans tend to underperform in periods of risk aversion or tightening credit markets, as the inability of issuers to access credit markets may result in higher levels of default since these companies experience difficulty paying down maturing debt. For instance, in 2008, the CSFB Leveraged Loan Index fell 28.8% as risk appetite declined markedly and credit markets seized up. Consequently, the following year (2009), the default rate for the index was 9.6% (vs. 10.2% for high yield), well above the long-term historical average.^{3,5,6}

While investors must remain mindful of the risks involved with investing in bank loans, we believe the current environment, which includes historically low interest rates, the end of the Fed's second quantitative easing program and slowly improving economic conditions, favors the outperformance of bank loans over traditional fixed income sectors. Further, bank loans have a historically low or negative correlation to other traditional asset classes. As a result, we believe bank loans have a place in investors' portfolios as a portion of the fixed income allocation, both to protect against the possibility of rising interest rates as well as to further diversify holdings in order to improve risk-adjusted returns over time. We favor active managers that can effectively price risk and

minimize defaults, thereby providing additional protection for portfolios.

As of 3/31/11, the Credit Suisse Leveraged Loan Index had a weighted average maturity of 4.14 years, with a coupon of 4.28%, a current yield of 4.42% and a coupon spread of 351 bps (versus the monthly average of 267 bps since 1992).³

SHORT DURATION HIGH YIELD

While the broad high yield market appears close to fully valued at current levels, short duration high yield appears attractive. Though also trading at spreads that are below historical averages (549 bps for the Merrill Lynch 1-5 Year US High Yield Constrained Index as of 3/31/11 versus the historical monthly average of 685 bps since December 1996), short duration high yield offers a yield that is in line with its intermediate counterpart (6.97% vs. 7.17% for the Master II Index). This provides investors with a comparable yield at a lower level of interest rate risk, as evidenced in Table 3.

Table 3: High Yield Characteristics (as of 3/31/11)⁵

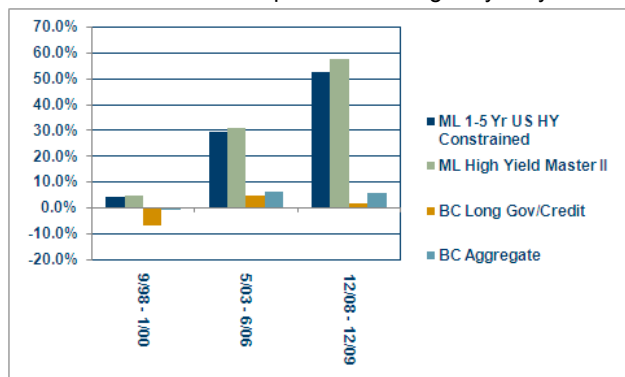
Index	Effective Yield (%)	Modified Duration to Worst (Years)
ML 1-5 Yr US HY Unconstrained	6.97	2.12
ML Master II HY	7.17	3.87

Unlike bank loans, which have a duration of virtually zero due to their floating-rate coupon structure, short duration high yield issues provide a hedge against interest rate risk via their shorter duration. As a result, they are less volatile and generate greater risk-adjusted returns (as shown in Table 4). Although they do not eliminate interest risk, short duration issues do offer greater protection against rising rates. Therefore, short duration high yield has historically performed well during periods of rising interest rates, as shown in Chart 3.

Table 4: High Yield Risk-Adjusted Returns (1/97-3/11)⁵

Index	Annualized Returns (%)	Annualized Volatility (%)	Sharpe Ratio
ML 1-5 Yr US HY Unconstrained	7.85	7.98	0.59
ML Master II HY	7.19	9.98	0.43

Chart 3: Performance in periods of rising 10-year yields⁴



While the performance of the Merrill Lynch 1-5 Year US High Yield Constrained Index since its inception in 1997 has slightly lagged that of the Merrill US HY Master II Index during periods of rising rates, risk-adjusted returns are favorable, and we believe that current valuations favor short duration high yield over intermediate broad market high yield. Based on monthly returns since its inception in 1997, the 1-5 Year Index has generated a more attractive risk-adjusted return than the High Yield Master II Index, with a Sharpe ratio of 0.59 versus 0.43 for the Master II. In addition, as summarized in Table 5, short duration high yield offers low or negative correlations to most other traditional asset classes, offering investors another option for minimizing portfolio volatility, leading to the potential for higher risk-adjusted returns over time while offering protection against rising interest rates.

Table 5: Short Duration HY Correlations (1/97-3/11)⁴

BC US Treasury	S&P 500	BC Aggregate	BC Long G/C	MSCI EM	JP Morgan EMBIG	BC 1-3 G/C
-0.19	0.54	0.17	0.18	0.59	0.53	-0.02

While interest rate risk is mitigated to some degree by investing in short duration high yield debt, the sector is still subject to credit risk, as these bonds are issued by sub-investment grade companies with high levels of leverage and, unlike bank loans, do not sit at the top of the capital structure, therefore exposing investors to additional credit loss relative to loans in the event of issuer default. While the early stages of rising interest rate periods typically signal improving economic conditions which are generally supportive of high yield, rising rates can also present investors with the risk that certain issuers may have difficulty refinancing maturing debt at higher interest rates, therefore exposing those issuers to a greater risk of default. Further, as with bank loans, high yield debt is susceptible to a flight to quality in periods of risk aversion and spikes in default rates. This

was on display in 2008, as the 1-5 Year US High Yield Unconstrained Index fell 21.7%.

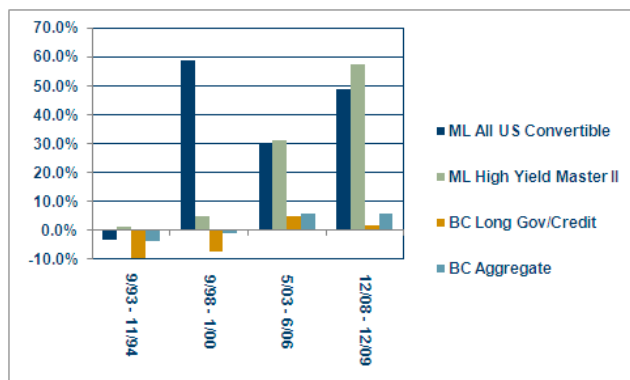
However, given the low current forecasted default rate and reasonable absolute yield level on the sector, which is comparable to intermediate duration high yield debt, we view short duration high yield credit as a way for investors to complement and diversify their other traditional fixed income holdings while providing protection against rising interest rates. The strong historical performance of the sector during periods of rising rates, as well as its robust risk-adjusted returns overall, offer investors a compelling risk/return proposition given the current environment. As with bank loans, we favor active managers that can effectively price risk and minimize defaults.

CONVERTIBLE BONDS

An additional way to protect portfolios against rising interest rates is through convertible bonds, which offer a hybrid structure that allows investors to participate in the upside of an issuer's equity, while also providing downside protection in the form of lower duration versus other fixed income sectors. This is beneficial to investors, as equities typically perform well in rising rate environments as growth accelerates, and are generally an effective hedge for inflation. While traditional convertible bonds have certain features that are similar to traditional, fixed rate bonds, such as a coupon rate, par value and maturity date, they are also structured with an embedded equity call option for the bondholder. This allows an investor to convert the bond to a fixed number of equity shares based on a predetermined conversion ratio. As the price of the underlying equity rises and the embedded option becomes more valuable, the convertible bond will trade very closely to the equity, reflecting the bond's conversion value. Conversely, as the price of the equity falls, the bond will trade in line with its straight, or option-free, value which reflects the diminishing value of the embedded option.

Convertible bonds generally move in line with the economy, and have historically performed well during periods of rising interest rates, which typically reflect positive economic momentum. As rates rise, the negative impact on the bond component of convertible bonds is typically more than offset by the usually positive effect of the equity component. This is reflected in Chart 4, which shows the strong performance of the Merrill Lynch All US Convertibles Index during periods of rising long-term yields, with the exception of 9/93-11/94, which saw the Fed abruptly raise the target Fed Funds rate by 300 bps in a 12-month period in an effort to combat inflation, thus negatively impacting the performance of riskier assets, as the S&P 500 rose only 2.16%.

Chart 4: Performance in periods of rising 10-year yields⁴



Convertibles, though more highly correlated to equities and high yield, are also an asset class with a low or negative correlation to other fixed income securities (as evidenced in Table 6), allowing investors to further diversify portfolios.

Table 6: Convertible Bond Correlations (1/92-3/11)⁴

BC US Treasury	S&P 500	BC Aggregate	ML HY Master II	BC Long Gov/Credit	BC 1-3 Gov/Credit
-0.12	0.82	0.11	0.73	0.13	0.00

While convertible bonds have historically performed well in rising rate environments, investing in convertible bonds presents a unique set of risks. For one, there is credit risk, as the bonds are junior in the capital structure. Further, convertible bonds are highly positively correlated to equity markets, and can therefore be more volatile than other traditional fixed income sectors. The market is also small (with the US convertible universe at \$237.5 billion as of 3/31/11 and the global universe at over \$400 billion) and is used by hedge funds in convertible arbitrage, which can cause unexpectedly high levels of volatility.⁵

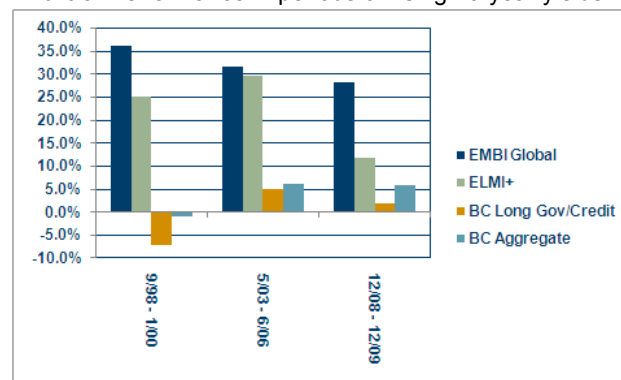
Given these risks, we advocate an actively managed allocation to convertible bonds, as a skilled active manager can position portfolios to minimize credit risk, as well as invest in bonds with optimal structures. Further, managers with deep research capabilities can identify attractive issues with a catalyst for equity appreciation, while providing for downside protection. Issues for clients include where to place convertible bonds within investment policy asset classes in a balanced portfolio, due to their equity-like nature.

EMERGING MARKET DEBT AND CURRENCIES

With the potential for a rise in US yields, two other sectors with the ability to provide an effective hedge are emerging

market debt and emerging market currencies. With respect to emerging market debt, we currently favor local emerging market debt over USD-denominated bonds, which we think are fully valued. Emerging markets have relatively higher interest rates (which should allow for continued currency appreciation over the intermediate-term) and record levels of foreign currency reserves, which have allowed foreign central banks to manage the steady appreciation of their currencies, thus reducing the risk of destabilizing exports and jeopardizing growth. Chart 5 illustrates the strong performance of emerging market debt (represented by the EMBI Global Index) and currencies (represented by the ELMI+ Index) during periods of rising interest rates. With respect to emerging market currencies, as rising yields typically signal accelerating global growth, this can act as a catalyst for emerging market currency appreciation. Chart 5 includes the EMBI Global Index of USD-denominated sovereign and quasi-sovereign bonds, as its history goes back further than the GBI-EM Index of local currency emerging market government bonds. However, the GBI-EM, which has performance dating back to 2002, did well during both the 2003-2006 and 2008-2009 periods of rising US yields, returning 31.0% and 16.6%, respectively.⁶

Chart 5: Performance in periods of rising 10-year yields⁴



Not surprisingly, emerging market debt offers a low correlation to many traditional asset classes, as detailed in our December 2010 whitepaper, “Emerging Market Debt: Improving Credit Quality.” However, emerging market currencies are also lowly correlated to other traditional asset classes (as evidenced in Table 7), providing an opportunity for additional portfolio diversification.

Table 7: EM Currency Correlations (2/94-3/11)⁴

BC US Treasury	S&P 500	BC Aggregate	ML HY Master II	BC Long G/C	ML All US Convertible	CSFB Leveraged Loan
-0.03	0.57	0.10	0.44	0.12	0.54	0.30

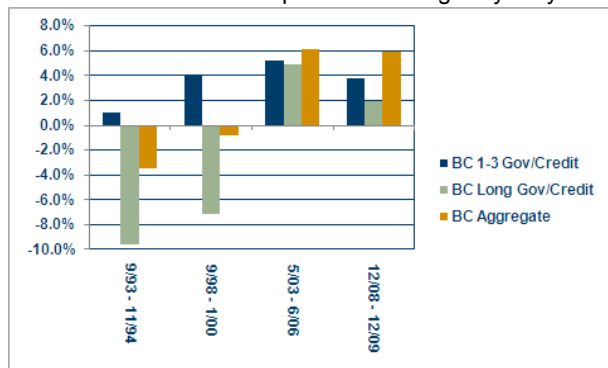
Of course, investors should be aware of the credit risk associated with all emerging market debt, as local emerging market debt and currency investors are more exposed to the potential for excessive state interference and government intervention than investors in USD-denominated emerging market bonds. For example, central banks may be inclined to devalue their currencies in order to protect exports and maintain strong growth. In addition, higher rates of inflation, which have traditionally been the case in emerging markets, erode the value of interest payments on local debt and can weaken currency values. However, we believe the strong historical performance in periods of rising rates, added diversification benefits and the strong secular outlook for emerging economies collectively warrant an allocation to emerging market debt in investor portfolios.

In addition to emerging markets, we also advocate the use of a more expansive opportunity set in fixed income, including non-USD broad bond markets, allowing managers with the appropriate resources to seek alpha in up to 100 different bond and currency markets around the globe representing countries that may have different growth outlooks and rate regimes.

SHORT AND ULTRASHORT DURATION FUNDS

Short duration funds typically invest in securities with maturities between 1-3 years, while ultrashort duration funds trade in debt that generally matures or resets in less than 12 months. Short and ultrashort duration funds have historically performed relatively well in periods of rising rates versus intermediate and long duration bonds, as shown in Chart 6, with short duration represented by the Barclays 1-3 Year Government/Credit Index.

Chart 6: Performance in periods of rising 10-year yields⁴



In addition, over the long-term, short duration funds have generated risk-adjusted returns in excess of most other asset classes. This is highlighted in Table 8, which shows the Barclays 1-3 Year Gov/Credit Index's long-term risk-

adjusted return, while Table 9 displays the correlation of the index versus other asset classes.

Table 8: Short Duration Risk-Adj. Return (1/94-3/11)⁴

Asset Class	Annualized Return %	Annualized Volatility %	Sharpe Ratio
BC 1-3 Yr G/C	4.87	1.63	0.86
BC Aggregate	6.12	3.80	0.68
JP Morgan EMBIG	10.13	13.93	0.52
ML HY Master II	7.65	9.24	0.47
S&P 500	8.28	15.62	0.37
MSCI EM	7.09	24.40	0.26

While short and ultrashort duration funds can be used to reduce the negative effect of rising interest rates on a fixed income portfolio, aside from government-only funds these vehicles have exposure to credit and spread risk, as some will invest in a wide range of securities, including corporate debt, MBS and ABS. In 2008, many short and ultrashort duration funds were significantly negatively impacted by defaults and downgrades, as well as exposure to securitized products (including non-agency MBS), whose issuance was often in adjustable-rate structures with low interest rate risk but subject to credit and spread risk. As a result, many funds generated steeply negative returns due to problems in the sub-prime and Alt-A mortgage markets.

Table 9: Short Duration Correlations (1/94-3/11)⁴

BC US Treasury	S&P 500	BC Aggregate	ML HY Master II	MSCI EM	JP Morgan EMBIG	CSFB Leveraged Loan
0.83	-0.06	0.86	0.06	-0.13	0.20	-0.14

Further, despite having effective durations that are in line with their short duration benchmark, some funds will invest in long-term securities, using derivatives to then reduce overall duration. This brings exposure to the additional credit and interest rate risk associated with longer-term securities. As a result, in 2008, the funds that generated the worst performance in the space were those with longer average maturity credit holdings.⁹ Further, while short duration funds generally have low or negative correlations to many major asset classes, they do tend to have a highly positive correlation to US Treasuries as well as to broad intermediate fixed income, as evidenced by the correlations displayed in Table 9.

⁹Wall Street Journal: A Place For Ultrashort? 3/8/11

Despite the aforementioned risks associated with short and ultrashort duration funds, many of these vehicles do offer investors an additional way to protect their portfolios against rising rates, while adding an allocation that has a low or negative correlation to most other asset classes as well as strong risk-adjusted returns over time. This should allow investors to reduce volatility in their portfolios, leading to higher risk-adjusted returns over the long-term. We advocate high quality, diversified active managers with lower average maturity lengths in their portfolios. While we anticipate that returns will be muted or even modestly negative as rates rise (particularly given the very low level of rates at the short end of the curve), we would also expect short and ultrashort duration funds to outperform intermediate and long duration fixed income holdings and therefore to provide investors with an opportunity to protect their portfolios by reducing overall interest rate risk.

ABSOLUTE RETURN BOND STRATEGIES

While the aforementioned sectors provide varying degrees of protection from interest rate risk, absolute return strategies provide managers with a high degree of flexibility in structuring portfolios to protect against rising interest rates. These strategies utilize a wide variety of markets and tools to generate alpha, including flexible duration bands (with the ability to use negative duration positioning), investment across global bond markets, short positions (using credit default swaps and CDX indices) and hedging using derivatives in order to take full advantage of opportunities in a number of fixed income sectors as well as in currencies. Within this available opportunity set, derivatives provide a more direct vehicle for hedging interest rate exposure. Managers can choose from a number of different instruments, including both standardized (exchange traded) derivatives such as futures, and customized instruments in the form of forwards, swaps and swaptions in order to express a view on rates.

For example, interest rate futures are standardized contracts, traded on exchanges, which are marked to market at the end of each trading day. Examples of interest rate futures are Treasury and Eurodollar futures, both of which allow managers to express a view on interest rates by taking either a long or short position. For those wishing to hedge against rising US interest rates, a short position in a Treasury future effectively acts as a long position on interest rates. If rates rise high enough to push the price of the bond below the price agreed upon in the futures contract, a manager with a short position in a Treasury future can buy the bond in the open market, deliver it at the previously agreed upon futures price, and capture the difference as profit. At expiration, futures can be either deliverable (obligating both sides of the

transaction to exchange the underlying asset) or non-deliverable (settled in cash with one side paying the other the value of the contract). Managers can also provide themselves with additional flexibility, securing the right, but not the obligation, to enter into a futures contract at a later date by using an option on an interest rate future.

While interest rate futures are standardized, exchange-traded contracts, forwards are over-the-counter agreements between counterparties. This provides the opportunity to create highly customized contracts that can be tailored to meet the needs of each side. As with futures, forwards can be either deliverable or settled in cash.

Similar to forwards, swaps are customized instruments; however, unlike forwards, they provide for periodic settlement between counterparties. Interest rate swaps allow each side to exchange one series of cash flows for another. In the case of a plain-vanilla interest rate swap, a fixed rate of interest would be exchanged for a floating rate of interest (generally referencing a benchmark rate such as LIBOR), with both based on an agreed upon notional principal amount and settled at periodic intervals (eg. quarterly). When combined with ownership of a fixed rate security, this creates a synthetic floating rate asset, thereby working to decrease interest rate risk in a portfolio. Managers can also utilize swaptions, which provide the right, but not the obligation, to enter into a swap transaction at a future date.

Derivatives, while a useful tool, also present an idiosyncratic set of risks of which investors must be aware. Customized (as opposed to standardized, exchange traded) instruments are all subject to counterparty risk, as investors are exposed to the possibility that the other side of the trade could default on its obligation. In addition, investors may be exposed to basis risk, as derivatives often do not perfectly hedge exposure to fixed income securities, thereby not completely offsetting exposure to interest rate risk.

As derivatives require only a small initial outlay for margin, exposures need to be carefully managed to avoid financial leverage in a portfolio, in addition to managing collateral and collateral postings. We believe derivatives are essential to the management of absolute return strategies. They allow a skilled manager to adjust duration in a meaningful way, to take exposure in local yield curves and currencies where they are most attractive and to establish short positions in securities most likely to be negatively impacted by a rise in US interest rates.

CONCLUSION

With real US interest rates at generational lows, economic momentum and inflation expectations rising, and the second round of quantitative easing set to end, investors need to be prepared for a rise in yields and should protect their portfolios as a result. We view bank loans, short duration high yield credit, convertible bonds and emerging market local bonds and currencies to be the most attractive ways to do so, with short and ultrashort duration funds and absolute return strategies being additional options for investors. Combining allocations such as these with a portfolio of traditional fixed income sectors and equities will provide investors with a well diversified portfolio that is better protected against rising interest rates.

About the author:

Adam Pennacchio is a Fixed Income Research Associate at Evaluation Associates.

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