White Paper No. 33

Much Ado About Bonds

Greycourt

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For some time now, a large number of market watchers, Greycourt included, have been proclaiming loudly that interest rates are poised to rise. Reacting to such forecasts, many investors have expressed alarm over the impact that rising rates would have on their existing bond portfolios. Investors are asking what strategies or alternatives can be recommended to help them avoid, or at least mitigate, the looming bond market train wreck. While a number of alternatives to traditional bond investments certainly do exist, investors should ask several important questions before considering any of them.

First, exactly how much risk exists within the current bond portfolio? Does the magnitude of this risk require immediate action or is it sufficiently small to warrant little or no concern?

In order to answer these questions, we sought to measure the risks to bond investors by using several different approaches. In the first approach, we employed a technique called “horizon shock analysis” to gauge how much value bond portfolios might lose should interest rates instantly rise by 0.50%, by 1.0% or by 1.5%. The table below examines the projected total return over a one-year time horizon that investors in Treasury notes ranging in maturity from 2 years to 10 years would realize following such instantaneous rate increases.

	Treasury	Treasury	Interest Rate Shock			
Maturity	**Yield**	**Duration**	**0.0%**	**0.5%**	**1.0%**	**1.5%**
2	1.60%	1.9	1.60%	0.66%	-0.27%	-1.18%
3	2.14%	2.9	2.14%	0.72%	-0.67%	-2.04%
5	2.97%	4.6	2.97%	0.71%	-1.50%	-3.65%
7	3.49%	5.9	3.49%	0.58%	-2.23%	-4.94%
10	4.01%	8.1	4.01%	0.03%	-3.77%	-7.38%

As can be seen, total bond market returns following a significant 1.50% rate shock range from -1.18% for short duration (2 year) bonds to -7.38% for long duration (10 year) bonds. While none of the outcomes are particularly attractive, the projected losses fall far short of those experienced by equity investors during the recent bear market.

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Another way to measure bond risk is to examine how different types of bond portfolios actually fared in 1994 when, seeking to stem the tide of rising inflation, the Fed raised its targeted short term borrowing rate *six times*.

Bond Category	1994
Taxable Bonds:	
Merrill Lynch Treasuries 1-3yr	0.57%
Merrill Lynch Treasuries 1-10yr	-1.70%
Lehman US Government/Credit Intermediate	-1.93%
Lehman US Aggregate Bond Index	-2.92%
Merrill Lynch High Yield BB-rated	-2.16%
Citigroup Currency-Hedged Non-US World Govt Bond Ten-Market	-3.72%
Tax-Exempt Bonds:	
Merrill Lynch Municipals 1-3yr.	1.31%
Merrill Lynch Municipals 3-7yr.	-1.72%
Merrill Lynch Municipals 7-12yr.	-3.59%

These empirical results are consistent – indeed, less severe – than the results forecasted using the horizon shock analysis outlined in the first table.

Finally, we used the observed 10-year standard deviations of different types of bond investments to evaluate the magnitude of statistical worst-case scenarios.

Index	Yield	Std Dev	-1 Std Dev Returns	-2 Std Dev Returns
Taxable Bonds:				
Lehman Aggregate	3.9%	3.9	0.0%	-3.9%
Lehman Int G/C	3.0%	3.3	-0.3%	-3.6%
Tax-Exempt Bonds:				
Merrill Muni 1-3yr.	1.3%	1.2	0.2%	-1.0%
Merrill Muni 3-7yr.	2.2%	3.3	-1.1%	-4.4%
Merrill Muni 7-12yr.	3.1%	4.8	-1.7%	-6.6%

As can be seen, all three methods of risk analysis indicate that bonds have, can and likely will lose value during periods of rising rates. Reassuringly, however, under most of the likely scenarios the magnitude of the predicted losses remains modest.

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Next, what are the primary roles that bonds play in a diversified portfolio and how do various alternative investment strategies satisfy those characteristics?

Nearly all bond investors look to the predictable *interest income* generated by bonds to serve as a stable source of cash flow needed to fund ordinary living (or operating) expenses. Others look to bonds as a ready *source of liquidity*. Still others look to bonds as vehicles to *preserve capital* when other, more risky, forms of investments decline in value – a role made painfully clear during the 2000 to 2002 bear market. Finally, some investors look to bonds as *protection against deflation*.

Any investor seeking to minimize the risks of rising interest rates by employing alternative strategies to traditional bonds must first determine which characteristic(s) of bonds are most important to them and how each strategy under consideration addresses those features. Although by no means comprehensive, outlined below are summaries of several bond alternatives we have considered for our clients and a brief assessment of how each addresses the four important bond characteristics.

- *Shorten Duration.* The easiest and most common means of protecting a bond portfolio against the possibility of an interest rate increase is to shorten its duration. For separately managed bond accounts this can be achieved by instructing a manager to change its target benchmark. For clients invested in bond mutual funds or other commingled vehicles, switching into a similarly managed but shorter duration fund is a simple solution – although one that may incur the realization of some capital gains. Since this strategy fully maintains an investor's position in traditional bonds, all four of the key benefits of bonds are preserved. Given today's very steeply sloped yield curve, however, shortening duration can materially reduce the level of income generated by the bond portfolio. For example, as of March 1, 2004, shortening the target maturity of a $10 million taxable bond portfolio from five years to three years would result in income dropping from $297,000/year to $214,000/year.
- *Inflation Protected Bonds.* Shifting into Treasury Inflation Protected Securities ("TIPS") may be a viable solution for some investors. These securities yield a variable rate of interest that fluctuates with the rate of inflation. Current 10-year TIPS offer a yield of about 1.7% over the prevailing rate of inflation. With inflation currently running at approximately 1.4%, this implies a total effective yield of 3.1%. In order to generate the same or higher yield as a traditional 10-year Treasury note (currently yielding 4.1%), inflation would need to average 2.4% or more over the next decade. This would seem to be very probable given that inflation has historically averaged between 3% and 4%. Unfortunately, for taxable investors TIPS are not a good solution since the inflation component of the bonds annual yield is not paid until maturity but generates phantom income that is taxed currently. For non-taxable investors, TIPS address the income, liquidity and capital preservation characteristics of traditional bonds. They will not, however, perform as well as traditional bonds in a deflationary environment.

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- *Non-Directional Hedge Funds.* Some clients have expressed interest in reducing bond exposure in favor of low volatility (so-called "non-directional") hedge funds. While this may be an appropriate strategy for some, it presents distinct risks for others. First, hedge funds do not generate distributable income. Second, most hedge funds offer only annual liquidity. (A few hedge funds or funds of funds offer quarterly or even monthly liquidity but these are increasingly rare.) Third, sharply rising interest rates and/or global liquidity crises such as those experienced in 1994 and 1998 can hurt even fully hedged strategies. In sum, while we think that hedge funds are a powerful asset class that can significantly improve the risk/return characteristics of many investors' portfolios, they possess certain structural characteristics that, in most instances, make them a poor substitute for bonds.

- *Real Estate Investment Trusts.* During the past decade, REITs have mushroomed in popularity as a means of gaining easy and cost-effective exposure to an important income producing asset class. These vehicles currently offer attractive yields of about 5%, can be purchased in relatively small increments, are highly liquid and should perform well in an inflationary environment as the value of the underlying real estate assets comprising the REIT increase in nominal value. Any investor considering REITs as a substitute for bonds, however, should understand that REIT volatility is closer to that of stocks than it is to that of bonds. As a result, bonds' role as a portfolio's "anchor to windward" in difficult market environments may not be achieved by REITs. Additionally, should economic conditions deteriorate and deflation becomes a concern, it is likely that REITs will perform poorly relative to traditional fixed income securities.

- *Commodities* – As global economic activity has accelerated and as populous nations such as China and India have become true economic powerhouses, demand for raw materials such as oil, grains and base metals has soared. Over the past 18 months, investors in commodity funds have earned equity-like returns of 25%. Some investors have asked whether investing a portion of bond assets into commodities may represent a viable strategy, guarding against the risks of inflation and subsequent increases in interest rates. We agree that commodities are, in fact, an excellent diversifying asset class to consider adding to a portfolio, and we agree that commodities will likely perform well should inflation accelerate. But there are other characteristics of commodity investments that make them poor substitutes for bonds: commodity volatility is very high (23% versus 5% for bonds); investing in commodities is tax inefficient, generating nearly 100% short-term capital gains; commodities generate no income; and commodities will likely perform poorly in a deflationary environment.

In sum, investors are right to be concerned that today's historically low levels of interest rates leaves traditional bond investments susceptible to loss. Concern over the risk of rising rates, however, needs to be tempered by the realization that the magnitude of the possible bond losses is modest when measured against the risks inherent in other types of investments. Any defensive or alternative bond strategy being considered must take into

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account how it might affect the four key bond characteristics of income, liquidity, capital preservation and deflation protection.

Like all other asset classes, bonds serve a long-term strategic role in most client portfolios. Adjusting the manner or magnitude of bond exposure to address purely tactical views should be undertaken only after understanding which bond characteristics are most important to the portfolio and how alternative strategies address those important characteristics.

We will be happy to discuss this paper at your convenience.

GREYCOURT & CO., INC.
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Disclosure

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