

Fixed Income Investment Strategies

Overall Bond Philosophy

At EGI Financial, Inc. we believe the most important role fixed-income assets play in portfolio management is to **reduce risk relative to an all equity portfolio**. Because equity prices and bond prices, generally, are not highly correlated (that is, prices rarely move together in the same way, at the same time) fixed-income investments can help to provide smoother returns and less portfolio volatility. The portion of fixed income in your portfolio will depend on your tolerance for risk and volatility. Fixed-income may make up a large portion of a portfolio for risk averse clients.

Our fixed-income portfolios serve a number of objectives, but primarily, they are constructed with one main goal: **principal preservation**. High quality fixed-income investments generally provide modest returns and relatively stability market values. However, stretching for higher yields can cause needless angst if it results excess volatility, risk of default or actual default. Regardless of the fixed-income strategy we employ, safety of principal is our primary objective. Of course returns are also important, given our clients' financial planning goals and objectives, so we seek to maximize the risk/reward trade-off in our fixed income portfolios. We accomplish this by altering the mix of securities within our portfolios as market conditions present opportunities, as well as searching for specific types of bond structures which allow us to keep credit quality high while adding incremental yield (return) to portfolios. We will examine some of these strategies in this paper.

Introduction to Bond Prices and Interest Rates

Before we examine the construction of fixed-income portfolios, we'll review some fixed-income basics. The most important feature to understand is that **bond prices move in the opposite direction of interest rates**. For instance, when interest rates rise, bond prices fall. This is because the interest rate (or payment) on a bond is fixed. For example: If, on 3/1/12 you purchase \$10,000 of a 10-year bond with a coupon of 3.75% and comparable 10-year interest rates also happen to be 3.75%, you will pay **par** for the bond (which is 100% of the "face amount" or \$10,000 in this example.). The "3.75% coupon" means you receive \$375 per year interest, or 3.75% of the \$10,000 investment. Your total return for the investment, assuming the bond does not default, will be 3.75% per year. You paid \$10,000, and receive \$375 per year in income, then get back \$10,000 upon maturity.

But, the "market price" of the bond will be affected by changes in interest rates between the purchase and maturity date. Suppose that one year after purchase, interest rates move up to 4.75%. Because the coupon on the bond is fixed at 3.75%, no one would be willing to purchase the bond at 100% because the 3.75% coupon is 1% less than where they could buy a new bond (4.75%). The market price of the bond would then be 92.75%, or \$9,275. Likewise, if interest rates fall 1% to 2.75%, the bond would be worth 107.75%, or \$10,775. Notice that the price moved either up or down by about 7.5% with a 1% change in interest rates. **This measure of a bond's price sensitivity to changes in interest rates is**

called duration. The longer a bond's maturity, the higher the duration, hence longer-term bond prices will fluctuate more than shorter term bonds. Keep in mind that although a bond's price may fluctuate while it's in your portfolio, it will eventually come back to par (100%) at maturity. This potential price volatility is referred to as **market price risk**. Longer-term bonds pay higher yields to compensate for this risk but some investors purchase them without being fully aware of the consequences. A 30-year bond has a duration of about 16, meaning the bond's price will drop 16% for every 1% increase in interest rates. Given investors' general need and/or desire for less price volatility in fixed-income investments, longer bonds may not serve those needs well, even given the higher potential yield.

Individual Bonds Vs Bond Funds

For a variety of reasons, we primarily use **individual bonds** for the fixed-income allocation in client accounts. Bond mutual funds may be used when a client does not have at least \$75,000 to \$100,000 to invest in bonds. With less than \$75,000, it is difficult to get proper diversification with an individual bond portfolio. Because mutual funds are well diversified, they are better suited for small investments. Also, because mutual funds can be bought and sold easily, they should be used if liquidity is necessary. Individual bonds may not be as liquid, meaning it may be more expensive should you have to sell them prior to maturity. Additionally, we may use bond mutual funds to gain exposure to fixed income markets outside our area of expertise, such as high-yield, international or mortgage backed securities (although these areas also may not meet our objective minimal risk and preservation of principal.) In most all other cases, it will be beneficial to invest in individual securities rather than funds.

These benefits arise from a few important factors. First, bond funds charge an ongoing management fee. While bonds held with EGI Financial may be in an advisory account with a management fee, our advisory fees are generally less than mutual fund fees. This means that our individual bond portfolios should have a higher yield than similar mutual fund investments. More important, mutual funds do not have a defined maturity date as bonds do. With an individual bond, you know exactly how much you are getting back, and when (assuming no call or default). With a bond fund, you have no way of knowing how much your investment will be worth at any point in the future. From both a financial planning and performance perspective, individual bonds can help optimize one's fixed-income strategy.

Portfolio Construction - Laddered Portfolios

To reduce interest rate risk, we employ a fixed-income strategy called a **Bond Ladder**. As an example we may make bond investments of similar amounts maturing from 2 to 11 years or so. For example, if we were investing \$500,000 in fixed-income in 2011, we would purchase roughly \$50,000 worth of bonds that would be maturing each year (each rung of the ladder) from 2013 to 2022. As the bonds mature, we reinvest the proceeds into new bonds at the next rung of the ladder (2023). We may extend maturities slightly to 12 or 13 years if interest rates are high (so we can lock in higher rates for longer periods of time). Likewise, we may shorten the maximum maturity to 10 or 8 years if rates are historically low (because the portfolio would then have a shorter duration, we can help mitigate price loss as interest rates rise). We do not generally invest in bonds with maturities longer than 12 to 13 years. This is because, over

time, intermediate term bonds tend to exhibit returns that are on par with or slightly higher than long term bonds with about half the volatility. Except for rare occasions, we do not believe longer-term bonds make sense for risk-conscious portfolios.

The laddered bond strategy we employ has distinct advantages. *The primary objective of laddering is to achieve a total return over all interest rate cycles equivalent to the return of a long-term bond but with less price risk and less reinvestment risk* (the risk that interest rates will be lower when you need to reinvest coupon income or proceeds from a bond redemption).

We reduce **price risk** by investing in intermediate term bonds. As short and intermediate term bonds age, their duration decreases at an increasing rate, in a telescoping effect. A single year of aging will shorten the duration of a five-year bond more than a 10-year bond. A 30-year bond's duration hardly shortens at all from a single year of aging. The table below illustrates the impact time has on the duration of various maturities.

| Length of Bond | Initial Duration | Duration after 5 years | Change in Duration | % Change in Duration |
|----------------|------------------|------------------------|--------------------|----------------------|
| 30 Year | 13.8 | 12.9 | 0.9 | 6% |
| 20 Year | 11.6 | 9.8 | 1.8 | 15% |
| 10 Year | 7.4 | 4.3 | 3.1 | 42% |

Secondly, a laddered strategy will help manage **reinvestment risk**. If interest rates are going up, we have money coming due every year that we can reinvest at the higher rates. If rates move down, we have bonds in the 8 to 10 year spot that are earning a higher return and will appreciate in price.

Portfolio Construction – Bond Characteristics

A number of inefficiencies exist in the bond marketplace. Our strategies seek to exploit these for our clients' benefit. Keeping within the framework of principal preservation and a laddered approach, we emphasize the following strategies:

“Odd Lot” Bonds - Most demand in the municipal and taxable bond markets come from institutions and large wirehouse brokers. Because these firms are investing large sums of money, they will typically not purchase bonds in amounts less than \$100,000, or in some cases, even less than \$1MM. Because demand is less for smaller pieces (odd lots of \$5,000 bonds to \$100,000 bonds), we can often buy bonds, on the municipal side, 20 to 40 basis points (.2% to .4%) cheaper than institutions buy the larger blocks. Also, we have developed relationships with niche dealers who handle odd-lot bond trades and provide an excellent source for attractively priced bonds. This is another way we are able to add yield and value relative to bond funds. It sounds counterintuitive, but smaller lot sizes are often cheaper than large ones, given the relative lack of demand for small lots. This same inefficiency exists for taxable bonds, but is not as prevalent as in the muni market.

High Coupon Bonds – If you were to purchase a 10-year bond with a coupon of 4%, and a yield to maturity of 4%, the price for the bond would be par (100% or \$1,000). Assume now that a second bond, also a 10 year maturity, has a coupon of 7% (instead of the 4%). The

market would not price the second bond at par because you would be getting a 7% return when 10-year rates are only at 4%. You would therefore have to pay much higher than par to equate the higher coupon received to the market rate of interest. In other words, for a 7%, \$10,000 face value bond, you would have to pay around \$12,400 if market rates were at 4%.

Some investors might wonder: 10 years from now, I will only be receiving back \$10,000, is this good deal? The answer is, yes. The 7% coupon you are earning over the next 10 or so years will more than make up for the \$2,400 “loss” of principal. Investors who do not understand bond arithmetic often avoid bonds with high coupons that are trading at premiums. Thus, premium bonds have less demand which enables us to earn extra yield. In this example, we could probably buy the premium bond at a 4.25% YTM, vs. 4% for the bond priced at 100. In addition, the premium bond will have a lower duration, thus less volatility, than the 4% bond. These opportunities are present in both the municipal and taxable fixed income markets.

Step Bonds and Floating Rate Bonds - Step bonds are issued with an initial coupon which is set for a definite period (one to five years is most common). After the initial period, the coupon “steps” higher, giving you a higher return if you continue to hold the bond. In return for offering the step provision, the issuer will make the bond callable. Of course if interest rates decline (or even if they stay level) the step bond will likely be called rather than increase to the higher coupon. However, particularly in today’s low interest rate environment, step bonds offer a means to receive an attractive yield now while also providing protection against higher interest rates in the future. Variable rate bonds have similar characteristics as step bonds.

Callable Bonds & Sinking Funds – Many bonds have provisions allowing them to be called prior to the stated maturity date. Callable bonds have a reduced ability to identify their precise maturity date. Because this is a risk to the investor, callable bonds can typically be purchased cheaper than non-callable issues. When buying callable bonds, we seek to avoid longer maturity bonds with shorter call dates, but rather look to build as much “call protection” into the portfolio as possible. While we like callable issues from the yield standpoint we typically limit callable bond exposure in order to maintain control over cash flows. Sinking fund bonds have partial, random calls. Unlike a “regular” call provision as outlined above, whereby the issuer has discretion as to whether or not a bond is called, the sinking fund schedule is set up upon issuance of the bond, so an investor knows how much is being called away, and when. Because most investors don’t understand sinking funds, we can often times purchase them considerably cheaper than non-callable issues.

Credit Quality – Since principal preservation is a primary goal, we rarely purchase bonds other than investment grade issues with a rating of BBB or higher. The vast majority of bonds will be AA or AAA issues, including insured or pre-refunded bonds.

Diversification – It is important to diversify holdings within a bond portfolio as much as possible. On the municipal side, this may include purchasing bonds from different states and cities. Differences in tax treatment of municipal interest in different states often provide opportunity. Since Ohio has a relatively high income tax and a large, liquid municipal market, it is often advantageous to concentrate on Ohio bonds for Ohio clients. For taxable bond portfolios, we try to buy many different types of bonds to add diversification, most of which are outlined in the section below.

Municipal & Taxable Bond Markets

Municipals - The municipal bond market consists of bonds issued by states, cities, and local municipalities. The vast majority of these bonds are federally tax exempt (tax status at the state level varies), making them appropriate vehicles for mid to high tax bracket investors. Historically, the rate of default on municipal bonds has been extremely low (less than 02% for high quality general obligation and essential service revenue bonds). Muni bonds have historically exhibited less volatility in their prices as well, making them a very suitable investment given our desire to dampen volatility. We favor general obligation and essential service revenue municipal bonds.

General obligation bonds are backed by property taxes, while essential services like water and sewer backed revenue bonds are extremely high quality revenue streams. We limit investment in bonds backed by hospital revenues, housing, or other industrial development revenue issues where there is a quasi-private use aspect that may lower comparable credit quality.

The relative attractiveness of municipal bonds as compared to taxable issues varies over time. To determine what makes more sense in taxable accounts, we compare after-tax yields of taxable bonds to municipal yields available at comparable maturities. Typically, a 25% or higher federal tax bracket will favor municipals while a tax bracket less than 20% would often dictate mostly taxable bond investments. This will vary over time depending on the spread between municipal and taxable bonds.

Taxable Bonds - We invest in a variety of taxable fixed-income instruments depending on the relative attractiveness of a particular sector. We will use US Treasuries, US Agency bonds, Agency Mortgage-Backed securities, taxable municipals, corporate bonds, and tradable bank CD's. We vary the weighting of each taxable sector depending on our assessment of the risk/return characteristics at any given time.

US Treasuries – While Treasuries are the safest fixed-income investment (Treasuries are considered a “risk free” investment – and yields on other taxable sectors are based on a “spread” or increased yield over the risk free Treasury rate), we can typically achieve superior risk-adjusted yields/returns by investing in other areas of the taxable fixed-income universe. For this reason, we rarely use Treasuries for client accounts.

US Agency Bonds – We often purchase Agency bonds in our taxable portfolios such as Ginnie Mae (GNMA), Fannie Mae (FNMA), Freddie Mac (FHLMC) and other U.S agencies. Agency bonds are explicitly or implicitly backed by the US Government and often offer excellent value relative to Treasuries. That relative attractiveness will vary over time, such that our allocation to US Agency bonds will vary, typically from between 0% and 20% of a fixed-income portfolio.

Agency Mortgage-Backed Securities & CMOs– Agency MBS & CMOs often offer value on a risk-adjusted basis. Yields over and above Treasuries have ranged typically from around 50 basis points (or .5%) to 1.5% over US Treasuries. They are backed either directly or indirectly by the US Government. The wider yield spreads are due, in part, to the uncertainty of cash flows that is associated with MBS. They do not have a defined maturity date like a typical

bond. They start to pay back principal at some point in the future, and that payback will vary inversely with interest rates. (Should rates decline, the payback rate increases. Should rates rise, the payback decreases.) MBS often have complex structures which, along with their uncertainty over interest repayment, limits our use of MBS in client portfolios.

Taxable Municipal Bonds – Taxable munis are typically created when a municipality raises funds for a semi-private use, such as a sports stadium or airport. They are also used by states and local governments to raise funds for under-funded public pension funds. Taxable munis are quite similar to tax-free municipals in that they are backed by either property taxes (in the case of general obligation bond) or revenues from a variety of sources. Taxable munis can be insured or pre-refunded just like tax-frees. Typically, 5 to 10 year taxable munis will trade at .1% to 1.5% over a comparable Treasury bond. Taxable munis, have become very prevalent recently, especially after the Build America Bond (BAB) program. Taxable munis can offer a superior risk/return profile relative to other taxable bonds.

Corporate Bonds – At times, the corporate debt of high quality companies can offer very attractive yields (1% to 3% over Treasury bonds). Because corporate bonds carry a degree of risk that is not associated with Government backed bonds or AAA insured taxable munis, normally, we only purchase the debt of higher quality companies and take care to ensure adequate diversification. Like US Agencies and MBS, we monitor historical spreads and look to add corporate bond exposure when yields are historically cheap, and either sell or avoid purchasing corporate bonds when those spreads are historically tight. While we take care to diversify our corporate bond positions, we may bias our purchases to a particular sector that looks attractive.

Bank CD's – Tradable bank CD's are a much more versatile investment vehicle than the typical CD's one could purchase at a local bank. These CD's trade like bonds, with no automatic penalties for selling the CD prior to maturity date. We only purchase CD's which are FDIC insured and typically offer yields of .5% to 1.25% over Treasury bonds.

By using a combination of the investments listed above, we are able to create a very high quality fixed income portfolio, maintain a laddered approach, and achieve attractive returns with limited volatility.

Portfolio Maintenance

We review all fixed-income holdings on a quarterly basis, if not more frequently, as the economic landscape dictates. Bonds are reviewed for credit rating changes or changes in the overall health of the company or municipality. Because bonds we purchase are high quality to begin with, it is very rare that a position must be sold due to credit deterioration. While our core strategy is to purchase bonds and hold them to maturity, there may be cases where we might sell a bond prior to maturity. For instance, a particular bond or set of bonds may have performed very well relative to the bond market in general. This out-performance could be captured by selling the bond instead of holding it to term and losing that extra margin of performance.