



Sigma Summaries

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Fixed Income Investing

If equity investing is like shopping for a new car, then fixed income investing is like shopping for tires. It isn't exciting or glamorous. It isn't going to provide extra horsepower to your portfolio. It isn't something you are going to talk about with others at a cocktail party. However, it may improve the safety of your portfolio. It may smooth out the ride when you hit those rough spots. It will likely minimize the chances of a blowout.

While shopping for tires seems on the surface to be a simple enough task, the myriad of choices can make it confusing and difficult to ensure you are getting the right treads to fit your needs. Do you need the deep treads for poor weather, or are you more concerned with gas mileage and smooth driving? Do you change the tires for each season, or go with the all-season tires? Are performance tires really necessary commuting to work? There are costs and benefits to each strategy, but the optimal choice may vary with each driver. The same can be said for fixed income investing.

The most familiar fixed income security is a certificate of deposit (CD). Issued by banks, CD's pay a specific amount of interest on a regular schedule throughout the life of the investment. At maturity, you receive your original investment plus

all of the interest that has accumulated during your holding period. As most CD's are not actively traded and are held to maturity, the value of the CD is often believed to be constant and appears, on the surface, to be a virtually risk-free investment. This is in contrast to common stocks where the value of the security fluctuates daily and there is no guarantee on what the value of the investment will be at anytime in the future.

However, fixed income investments are not without risk. Just as understanding the risks and driving conditions of the road in front of you will help you choose what type of tires are appropriate for your car, the same holds true in selecting the appropriate blend of fixed income securities for your portfolio.

There are two main risks to consider with fixed income investments: default risk and interest rate risk. Default risk is simply the risk that the entity you invested your money with can no longer pay you back. All fixed income investments (and stocks for that matter) have this risk, but obviously, some entities are safer than others.

Rating agencies, such as Moody's, Standard and Poor's, and Fitch, assist investors by categorizing the amount

of default risk that may be present within a particular fixed income investment. For example, using Standard and Poor's scoring system, an AAA rated bond offers investors the highest degree of safety. In descending order, the next level of high-grade bonds includes the ranking of AA+, AA and AA-. Upper medium grade bonds are ranked, in descending order, as either A+, A or A- whereas lower investment grade bonds carry rankings of BBB+, BBB or BBB-. A rating of BB+ or lower denotes a non-investment grade rating, otherwise known as "junk". A "junk" bond rating does not mean that the company is in imminent danger of defaulting on its outstanding bonds. It does suggest, however, that the company is facing financial difficulties and "buyer beware."

For a greater perspective on risk, the following chart provides a historical multi-year probability that a class of bonds with a specific bond rating will default over multiple time horizons. For example, less than one percent of AAA rated bonds ever default, even over a 10-year time horizon. BB junk bonds have a 1.5% incident of default in the first year yet a 14% chance of default over a five-year period. As one would expect, B and CCC rated bonds have substantially higher incidences of default given their lower quality.

Cumulative Default Probabilities (%)										
	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9	Yr. 10
AAA	0.00	0.00	0.04	0.07	0.12	0.21	0.31	0.49	0.56	0.63
AA	0.01	0.04	0.11	0.20	0.33	0.48	0.68	0.85	1.00	1.18
A	0.05	0.15	0.30	0.50	0.75	1.01	1.29	1.55	1.88	2.20
BBB	0.37	1.06	1.80	2.84	3.84	4.83	5.66	6.42	7.11	8.00
BB	1.45	4.38	7.98	11.39	14.45	17.64	20.23	22.51	24.88	26.72
B	6.59	15.03	22.46	28.47	33.02	36.91	40.44	43.73	45.93	48.30
CCC/C	34.14	44.07	50.54	55.65	61.35	63.93	64.94	65.58	68.78	71.46

Source: Ernst & Young - April 26-27, 2004 Enterprise Risk management Symposium

The second major type of risk, interest rate risk, is a bit more complicated. It is essentially the opportunity cost of the investment you hold versus what you could get today. For example, if you bought a bond a year ago that had a yield to maturity of 5%, but today, the interest rate has moved up to 6%, you lost the opportunity to earn a 1% higher return by holding that bond. Assuming no default, you will get your 5% yield to maturity, but you could have gotten more. Your statement will show that your bond fell in value. It fell in value because someone buying that bond from you today would demand a discount so he or she could earn the prevailing interest rate of the day of 6%. Thus, interest rate risk includes both the possible decline in value of a fixed income investment as interest rates rise as well as the lost opportunity of participating in a rising interest rate environment if rates are locked up at a lower level.

In a rising interest rate environment, an investor faces a dilemma. On the one hand, there may be a desire to defer investing in a bond given the expectation that by waiting, one will

be rewarded by a higher rate in the future. On the other hand, the current rate offered by money market funds may not be compelling. So, do you park the funds and wait for higher rates or do you invest in a bond to improve your yield? While there is no clear cut answer that fits every circumstance, recent articles on the subject suggest that it is often wise to invest in short duration bonds to pick up a small amount of incremental return with the expectation that once these bonds mature, rates will be sufficiently higher to extend one's duration. Stated differently, it is often not wise to park these funds in a low yielding money market fund in anticipation of higher rates sometime in the future. The reasoning is that it may be difficult to improve the future yield of the portfolio by an amount to offset the loss of income while waiting for interest rates to improve.

In addition to understanding the inherent risk of a bond portfolio, it is also important to appreciate the wide variety of bonds that exist. In a very broad context, there are three principal issuers of fixed income securities. They include the U.S

Treasury, corporations and municipalities. Generally speaking, U.S. government bonds are AAA rated and provide the benchmark yield by which all other bonds are compared.

Municipal bonds, on the other hand, are unique in that the interest income is often tax-exempt at the federal level and may be tax-exempt on the state level. As a result, municipal bonds typically provide a lower yield than corporate bonds with similar maturities and ratings. However, for investors in high tax brackets, the after-tax equivalent yield of a municipal bond may be superior.

The most basic type of a municipal bond is called a general obligation bond (GO). The taxing authority of the municipality backs these bonds. In contrast, revenue bonds are backed by the revenue stream of a specific project, such as a water system, a hospital, or a sports stadium. It is widely believed that general obligation bonds are more secure than revenue bonds as it is often easier to raise taxes than to increase "gate receipts" to support a project that is facing financial difficulties.

Oftentimes, municipalities issue long-term debt to fund the construction of an asset with a long life span. To entice investors to buy this debt, municipalities may buy insurance thereby offloading the default risk to a third party. In this manner, an A or AA rated bond issue can be priced as if it were, in fact, an AAA rated security.

Corporate bonds are issued by a corporation and backed by the cash flow of that entity. Typically, but not always, this is the sector of the market where one is most likely to find default risk. A very vivid example of this is the recent rating downgrade for General Motors and The Ford Motor Company. Investors must now decide whether the high yields offered by these two companies' bonds are attractive in light of the growing financial difficulties each company faces.

Fixed income investments are not only differentiated by the borrower and risk rating, they are also differentiated by unique characteristics of the security. For example, some bonds will appreciate in value based on the rate of change in the core rate of inflation. The government bonds with this characteristic are called TIPS or Treasury Inflation Protected Securities. A step-up bond, on the other hand, increases the interest coupon rate on a pre-determined schedule. Convertible bonds will convert into common stock under certain circumstances. Preferred stock sounds like an equity-like investment but, in fact, are typically long-term bonds and oftentimes, have no conversion feature. Another important characteristic of a bond is whether it has a call or put provision. A call provision allows the issuer to

buy back the security prior to maturity whereas a put provision allows the owner to sell the bond back to the issuer under certain conditions.

As you can see from this brief introduction into fixed income investments, there are many choices of bonds from which to choose. Deciding which are appropriate depends on what role you want the bonds to play in your portfolio. If the goal is to maximize income, one might choose high coupon bonds with intermediate or longer-term maturities and low credit scores. However, if capital preservation were the overriding goal, higher-grade bonds with short maturities might be a better fit.

For many of our clients, the primary goal may not be to maximize income or preserve capital, but instead to provide a steady source of liquidity to fund future liabilities. As an example, one might buy a bond that matures at the end of each year to fund required minimum distributions from an IRA or to pay for college tuition. This strategy uses a technique known as a bond ladder. Ladders come in all shapes and sizes and are customized to the unique income goals and liquidity needs of our clients. Bond ladders are an excellent strategy for dollar cost averaging into the bond market, particularly in a rising interest rate environment.

Unfortunately, defining a fixed income strategy is not the last hurdle to overcome as buying a bond is not as straight forward as buying common stocks. Unlike stocks, bonds do not trade on a central exchange and there is often less turnover in a given bond than what is typically found with common stocks. In addition, bond brokers have unique

inventories of bonds and there is no guarantee that the bond you want is available from any of the brokers you deal with.

To use an analogy, fixed income investing is like buying a house. As you drive around a neighborhood, you know the characteristics that you are looking for, such as an attached garage, two stories, three bedrooms and big backyard. Rarely does the buyer seek a specific house on a specific street, but rather is content looking at multiple homes over a broad geographic area. Also, a home with the exact characteristics highlighted above may not be on the market in the middle of December but multiple houses may be available during the spring and summer months. In addition, the price for the house can vary greatly based on the competitive conditions that exist at the time of the purchase or sale.

The same holds true for bonds. One may be interested in a corporate bond that is maturing in five years, has a rating of A or better, is yielding 4.5% and is trading close to par value. When this order is placed out for bid, there may be no bonds from which to choose from on Monday but by Friday, there may be several issues from which to select. Moreover, different brokers may offer this bond at different prices.

Reflecting the inefficiencies of the market, Sigma recently enhanced our fixed income trading platform. For example, we expanded the number of relationships we have with outside brokers such that we can view an ever-increasing inventory of bonds. We also look for opportunities to make bulk purchases by pooling trades of multiple clients who are seeking similar bonds. Typically this

lowers the price that we pay for the bond thereby increasing the yield.

When we must sell a bond, we often ask numerous brokers to submit a bid. We have found that the price differential from competing bond houses can be quite large. In fact, in a recent bid, we encountered a differential in price of 3%. Particularly in today's low interest rate environment, execution and pricing is critical.

While maintaining strong personal relationships with trusted bond

dealers is critical, investing in specialized software that assists in analyzing our fixed income portfolios, identifies relative values of different bonds and improves the efficiency of trading is also important. This improves the management of our clients' fixed income portfolios in a cost-effective manner.

Our philosophy for fixed income investing is similar to buying the right tires for your car: try to optimize performance and safety. While shopping for fixed income

investments and tires aren't glamorous, they are worthwhile activities in that they provide peace of mind and a smoother ride over life's bumpy roads.

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Your financial situation and investment objectives should be reviewed periodically to ensure applicability to your current situation. Please remember to contact Sigma Investment Counselors if there are any changes.

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