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A Beginner's Guide to Corporate Bonds[1]

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Introduction

This document is a quick introduction for those who want a brief background in corporate bonds.

What Are Corporate Bonds?

A corporate bond is simply an "IOU" that certifies we have loaned a certain amount of capital to a corporation for a defined period of time. When this time ends, the corporation will return the par value of the bond to us. During the time we hold the bond, we will receive some guaranteed periodic interest on this par value. Corporations use bond capital for expansions, modernizations, debt payments and, occasionally, operating expenses. Investors lend their money to the corporation to earn interest and, sometimes, to gain appreciation on the price of the bond.

Corporate bonds have varying risk, but most bonds issued by well known corporations are considered to be fairly safe. We know how safe they are by their grade (Table 1). Because they are obviously not as safe as Treasury bonds, they must offer a higher interest rate to attract investors. This interest is taxed just like interest earned in a savings account. Bondholders are usually paid before other investors (e.g., shareholders) if the firm gets into financial difficulty.

Primary and Secondary Markets

We can buy bonds when they are first issued in what is called the primary market. This is essentially a broker-controlled market of underwriters and is mostly listed in media such as *The Wall Street Journal* and *Investors Business Daily*. In the primary market we generally pay par value and the corporation receives our money.

We can buy bonds in the secondary market from people who already own the bond. Here we simply pay money to the previous owner of the bond, not the corporation, and the corporation then pays interest to us. The secondary market is where buyers and sellers transact business, not where issuers sell. For example, the New York Stock Exchange is a secondary market for both stocks and bonds.

Terminology

There are lots of terms associated with corporate bonds. The most common terms include the following:

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1. *Par Value*: This is what the bond is worth at issue and at maturity. Each bond is generally sold in the primary market at issue for $1,000. This $1,000 is the bond's par value, and regardless of what you paid for the bond in the secondary market, you will receive $1,000 when it matures. Par value is also known as face or face value. For traditional reasons, par value and price are listed as units of 100 each, rather than as $1,000. So if the financial press records that a bond was issued at 100 units, its monetary par value is $1,000.

2. *Maturity*: This represents the end of the bond's life. Most bonds run from 10 to 30 years, although some recent ones have been issued for 100 years. At maturity the bond expires, and we will then receive par value from the corporation.

3. *Coupon Rate:* This is the interest rate paid by the corporation to the investor. It is fixed for the life of the bond, unless the bond is floating or callable. This rate is normally paid in six-month intervals. For example, if the coupon is 8%, then we will get 4% every six months. The rate is always on the par value of the bond, not on the price that we paid for the bond. If, for example, we paid $1,100 for a $1,000 bond with an 8% coupon, we would receive 8% of $1,000 (4% semi-annually), not 8% of $1,100. The riskier the bond, the higher the coupon must be to attract investors. So, bonds issued by major corporations have lower coupons than less known or new companies desperate for cash.

4. *Price:* There is considerable confusion about the price of a bond. This is largely because some do not understand the difference between the primary market (where the bond is originally issued) and the secondary market (where most of us buy and sell bonds). Bond prices in the primary market are fixed based on par value, whereas bond prices in the secondary market vary based on demand. Therefore, it is possible in the secondary market to either pay a premium price if lots of investors want that bond or pay a discount price if there are few purchasers in this market. For example, a bond priced at 101 is a premium bond because the price is greater than 100 and actually costs $1,010 (101 x 10), while a bond priced at 98 is a discounted bond because the price is less than 100 and actually costs $980 (98 x 10).

5. *Yield:* This is what we will get if we buy the bond at today's price and hold it until maturity. It is probably the most important number for a bond investor. It is a complicated calculation involving the coupon rate, the price and the time to maturity. Simply accept what the financial press recording of the current yield is and compare this yield with other investment alternatives.

Price and yield vary inversely. If the price goes up, the yield goes down. This is because we always get the par value of the bond at maturity regardless of what we paid for the bond. Thus if we paid 98, we will receive 100 at maturity. We continually receive our 8% coupon on 100 while we hold the bond plus $20 (100 - 98 x 10). At maturity, we get $1,020 and the interest. Since we bought a discounted bond, our yield is greater than the coupon because we also get the $20.

If we bought a premium 8% bond at 103, our yield will be less than the coupon because we only get the $1,000 par value at maturity, although it cost us $1,030. So our total return is reduced by $30. Thus as prices rise, yields fall and vice versa.

Types of Bonds

There are essentially four broad types of corporate bonds: debentures, asset-backed, mortgage-backed, and pre-refunded bonds. The most common and traditional are debentures, which are backed up by the "good name and faith" of the company issuing them. Because of the company's reputation, debentures tend to be low risk, investment grade bonds. In contrast, asset-backed bonds, despite being generally secured by real estate, tend to be rather more risky if the issuer is not a well known company. Many of these bonds result from bundling loans together and transferring some of the loan payments to us.

Mortgage-backed bonds are secured by mortgage pools that are packaged to suit the individual investor, whether small, institutional or corporate.

These bonds are self-amortizing in that we receive both principal and interest from the bond and no lump sum at maturity. A more recent variation that is gradually dominating this type is the Collaterised Mortgage Obligation, or CMO. Pre-refunded bonds have their payments guaranteed by a second bond issue, often Treasuries.

Pre-refunded bonds are often issued with one or more of four conditions. The first condition involves convertible bonds which can be converted to stock in the company. The date and the amount of stock are stated on the bond. Because this feature lowers the risk of adverse changes in interest rates, the coupon is less than with conventional bonds. Convertible bonds were once popular and are now, deservedly, becoming popular again.

The second condition involves floating-rate bonds. These bonds are issued with the possibility of changing the coupon rate if we find we have committed to a low rate and interest rates are rising.

The third condition involves subordinated bonds in which payments are made after other commitments have been settled. For instance, a company may float a senior and a subordinated issue, where the latter will generally have a higher coupon and a shorter maturity. These bonds are obviously higher risk.

The fourth condition involves the callable bond, one that is increasingly popular. The company retains the right to call the bond back before maturity to avoid being locked into paying a high coupon when interest rates are falling. The call time is listed when the bond is issued. Consequently, the investor has to look for new investment opportunities. This is an understandable feature of corporate financing, particularly when forecasting interest rates 30 years away is practically impossible.

In addition, some companies issue zero coupon bonds. These pay no interest, but the interest accrues to the face value at maturity. For example, we can buy a $10,000 zero coupon bond that matures in 18 years for about $3,000 today. However, we must pay tax on the imputed annual gain. Zero coupon bonds are particularly useful for future college expenses. We can ladder these by purchasing one for each of the four years our child is in college. Unfortunately, zero coupon bonds, excellent vehicles though they are, are usually only obtainable from brokers.

There has been considerable ingenuity in designing financial instruments since the early 1990s. Some of them are useful, and some are tricky. For example, the Collateralized Debt Obligations (CDFS) are currently verging towards tricky. They originated in banks that wanted to shift debt and bonds from their balance sheets. They did this by using CDFS as collateral for new securities for investors. Most CDFSs give investors a choice of investing in investment grade to junk slices, or tranches. The problem with CDFSs today is that they were issued in more halcyon times and therefore have underlying assets with risk-and-return ratios that are not properly related. Consequently, nearly 40% of the current nearly half a trillion dollars worth of CDFS are problematic.

Investing in Bonds

It is usually rather difficult and expensive to invest in bonds unless we use a broker. The company bonds and secondary market prices recorded in the bond pages of most newspapers are both incomplete and outdated. This is because the vast majority of bonds are traded over the counter (OTC), meaning that they are traded over phone lines rather than at an exchange. The price of a particular bond is usually negotiated between a broker and the bond dealer. Brokers tend to accumulate bonds which they then sell to clients. Thus mainly only the brokers know the retail prices and have a wide choice of the mark-up they can charge. The mark-up, which is unregulated, is the difference between the buying price and the selling price. Commission is not included in the mark-up.

There are both advantages and disadvantages to corporate bond ownership. One disadvantage is that we need to be wealthy to invest in individual corporate bonds and obtain the diversification that many investors need. Additionally, bonds are usually bundled into packages that are considerably larger than the price of an individual bond (i.e., $1,000). It is generally impossible to buy a series of different bonds for around $1,000 each. The market may demand $20,000 just to buy one bond. Consequently

it can be very expensive to buy bonds. A further drawback is that it is often difficult to invest the interest received from bond investments, and consequently bonds may tend to fit retirees who want the income, rather than the general long-term investor who is more interested in growth. Finally, and significantly for long-term investors, bonds cannot do well under inflation unless we are prepared to switch our portfolio regularly.

There are advantages corporate bond investing. If we plan to buy and hold bonds until maturity, we will know exactly what yield we will earn. We additionally have less volatility than equity investments. Interestingly, it is generally cheaper to own bonds than bond funds because fees are less. Bonds, in some form, should usually be part of any investor's portfolio and should generally increase in proportion as retirement approaches.

Because bonds are expensive, bond mutual funds are often the better choice despite fees. More wealthy investors should consider bonds closely. In general, the longer we plan to hold bonds, the more we should buy individual bonds rather than bond funds.

Grading Bonds

Moody's and Standard & Poor (S&P) grade bonds based on the financial stability of individual companies and the risk associated with purchasing individual bonds. Their grading systems are reliable. For example, they have downgraded Polaroid from BB to D in recent months (mid-2001) to reflect the increasing financial troubles of that company.

All bonds are issued with an assigned grade. Investment grade bonds range from AAA to BBB. These are low risk, and therefore the coupon rate will also be lower. These are probably the only bonds that a small investor should consider. Junk bonds are graded below BBB. They have a high risk but may still be good investments. They are probably misnamed. Table 1 shows how Moody's and S&P grade bonds.

How to Read a Bond

Table 2 illustrates how to read a bond. We will examine item four in Table 2. Reading across the line of item four, we note:

- Column 1: Conseco is the company's name (often abbreviated in bond tables), the coupon rate is 10 1/2, and that it will mature in 2004 (04). If we buy this bond, we will get 10% annually for every $100 face or par value. We will actually earn a little more than 10% because the coupon is paid semi-annually.
- Column 2: The current yield is 10.1%. This means that if we buy this bond today at the current price and hold it until maturity in 2004 (when we receive par value), we will have earned a yield of 10.1%.
- Column 3: Volume represents the amount of trades that were made during that day in thousands of dollars. Thus there were $2,000 worth of these bonds traded during that day (2 = $2,000).
- Column 4: This particular bond closed at $104 and thus trades at a premium (amounts over $100 equals premium price).
- Column 5: The day's net price change was up (+). It therefore closed at $103 the previous day. In other words, the price rose $5 during the day, from $1,035 to $1,040.

Conclusion

This is just an elementary examination of how corporate bonds work. One of the best ways to research bonds is to use the internet/web. For example, www.cnnfn.com is very useful and has a nice corporate bond center that provides some good information. Other web sites such as www.kiplinger.com/basics/investing/bonds.html and www.fool.com also provide some useful basics of investing.

Finally, it would be very educational to follow California's attempt at issuing $12.5 billion in bonds to cover their electricity expenses, even though these are not corporate bonds. It is easily the single largest municipal debt float in U.S. history. Interestingly, and perhaps uniquely, the electricity generators (Pacific Gas and Electric Company, which has filed Chapter 11 bankruptcy) and the traders get paid before the bondholders under the present proposal. And, equally

interestingly, the payments are to come from the California ratepayers. Following this saga will teach a lot about bonds and quite a lot about getting the arithmetic right.

References

Wuman, Richard S., Alan Siegel, and Kenneth M. Morris. *Guide to Understanding Money and Markets*. New York, NY: AccessPress Publications. 1990. pp. 42-61.

http://www.kiplinger.com/basics/investing/bonds.html

http://bonds.yahoo.com/ir_bd7.html

The Wall Street Journal. June 29, 2001. p C-12.

http://cnnfn.com

http://fool.com

Table 2. Bond activity for one day.

		Column 1 **Bonds**		*Column 2* **Current Yield**	*Column 3* **Volume**	*Column 4* **Close**	*Column 5* **Net Change**	
Item	*Bond Name*	*Coupon Rate*	*Year of Maturity*	*Annual Percentage*	*Thousand Dollars*	*Dollar Amount*	*+ / –*	*Percentage*
1.	CoeurDA	7 1/4	05	cv*	831	45 7/8	+	3/8
2.	Coeur	6 3/8	04	cv*	520	46		...
3.	Consec	8 1/8	03	8.1	173	100		...
4.	Conseco	10 1/2	04	10.1	2	104	+	1/2
5.	Conseco	10 1/4	02	10.4	1055	99		...
6.	CrownC	7 1/8	02	11.9	148	60	+	6 1/2
7.	Motria	zr**		...	22	89	+	1
8.	NatData	5 short	03	cv	50	105	+	1 3/4

* cv = convertible bonds
** zr = zero coupon bonds
Source: *The Wall Street Journal*, June 29, 2001, page C-12 of the New York Bond section.