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YOUR INVESTMENT CONSULTANTS

INVESTMENT BASICS

BONDS

What is a bond?

A bond is a loan that the bond purchaser, or bondholder, makes to the bond issuer. Governments and private companies issue bonds when they need capital. If you buy a government bond, you're lending the government money. If you buy a corporate bond, you're lending the company money. Like a loan, a bond pays interest periodically (normally semi-annually) and repays the principal or nominal value of the bond on maturity. If you hold the bond to maturity, you are guaranteed to get your principal back. However, if you sell the bond before it matures, you will have to sell it at the going rate, which may be above or below par value.

Nominal Value, Coupon Rate and Maturity Date

Nominal or Face Value: The nominal value of a bond is the amount that will be returned to the bondholder when the bond reaches "maturity." Normally the nominal or face value is €100.

Coupon: The stated interest rate on a bond when it is issued. This is the amount of interest the bondholder will receive expressed on a yearly basis as a percentage of the nominal value. Normally, companies and Government's pay interest twice yearly. However, some companies pay inteest on their bonds on an annual basis.

Maturity: The maturity date is the date when the bond issuer has to return the principal to the lender and sometimes refers to the amount of time before the bond repayment is due. For example, a bond with a 10-year maturity is repaid by the issuer in the tenth year. Sometimes a company will decide to "call" its bond, meaning that it is giving the lenders their money back before the maturity date of the bond. All corporate bonds specify whether they can be called and how soon they can be called.

How are bond prices quoted?

Bond prices are normally quoted as a percent of the bond's face value. For example, if a bond is quoted at "99%" in the market, the price is €99 for every €100 nominal and the bond is said to be trading at a "discount". If the bond is trading at "101%", it costs €101 for every €100 nominal and the bond is said to be trading at a "premium". If the bond is trading at 100%, it costs €100 for every €100 nominal and is said to be trading at "par". Another term you might hear is "par value", which is simply another way of saying nominal value.

What risks are associated with a bond?

Every bond also carries some risk that the issuer will "default," or fail to fully repay the loan. Default is usually the result of bankruptcy. Independent credit rating agencies (namely, Moody's Investors Service, Standard & Poors and Fitch) assess the default risk of most bond issuers and publish credit ratings. These ratings not only help investors evaluate risk but also help determine the interest rates on individual bonds.

An issuer with a high credit rating will pay a lower interest rate than one with a low credit rating. Again, investors who purchase bonds with low credit ratings can potentially earn higher returns, but they must bear the additional risk of default by the bond issuer.

Credit Ratings: The table below shows credit ratings by Moody's and Standard & Poor's in descending order, from the highest rating to the lowest.

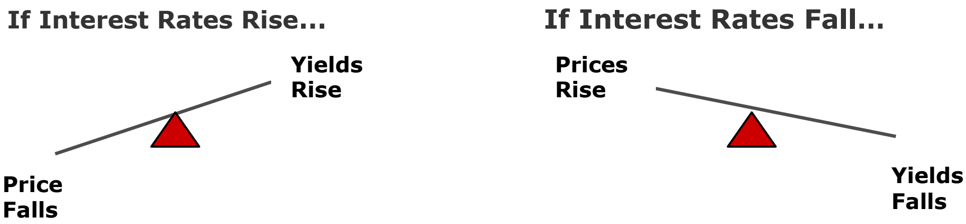
Ratings can be divided into two categories: investment-grade and speculative grade (also known as high-yield or "junk") bonds. Speculative-grade bonds are issued by governments or companies perceived to have a lower level of credit quality and higher default risk compared to more highly rated, investment-grade, issuers. Within these two broad categories, bonds have a wide range of ratings, reflecting the fact that the financial health of issuers can vary significantly.

Speculative-grade bonds tend to be issued by newer companies, companies that are in a particularly competitive or volatile sector, or governments with troubling fundamentals. While a speculative-grade credit rating indicates a higher default probability, higher coupons on these bonds often compensate for the higher risk. Ratings can be downgraded if the credit quality of the issuer deteriorates or upgraded if fundamentals improve.

	Moody's	S&P
Investment Grade	Aaa	AAA
High Grade	Aa1	AA+
Upper Medium Grade	A1	A+
Lower Medium Grade	Baa1	BBB+
Non Investment / Speculative Grade	Ba1	BB+
Highly Speculative	B1	B+
Substantial Risks	Caa1	CCC+
Extremely Speculative	Caa2	CCC
In default with little prospect for recovery	Caa3	CCC-
Imminent Default	Ca	CC
In Default	/	D

What Determines the Price of a Bond on the market?

After bonds are issued, they are then normally traded on the secondary market. When listed on the stock exchange, a bond's price and yield determine its value. Obviously, a bond must have a price at which it can be bought and sold. A bond's yield is the actual annual return an investor can expect if the bond is held to maturity. Yield is therefore based on the purchase price of the bond as well as the coupon.



A bond's price always moves in the opposite direction of its yield, as illustrated above. The key to understanding this critical feature of the bond market is to recognize that a bond's price reflects the value of the income that it provides through its regular coupon interest payments. When prevailing interest rates fall—notably rates on government bonds—older bonds of all types become more valuable because they were sold in a higher interest-rate environment and therefore have higher coupons. Investors holding older bonds can charge a "premium" to sell them in the open market. On the other hand, if interest rates rise, older bonds may become less valuable because their coupons are relatively low, and older bonds therefore trade at a "discount."

Rising interest rates are considered "bad" for bond investors because new bonds will pay investors a higher interest rate than old ones, so old bonds tend to drop in price. Falling interest rates, however, mean that older bonds are paying higher interest rates than new bonds, and therefore older bonds tend to sell at premiums in the market. On a short-term basis, this is true. However, keep in mind the long-term investment picture: as a bondholder, you want to earn the highest yields you can (within your given risk tolerance). Rising interest rates can actually boost a bond portfolio's return over longer time periods, as the money from maturing bonds is reinvested in bonds with higher yields. Conversely, falling interest rates, while helpful to bondholders in the short term, mean that money from maturing bonds may need to be reinvested in new bonds that pay lower rates, potentially lowering longer-term returns.

How to Calculate Bond Yields

The key piece of information to know about a bond in order to compare it with other potential investments is the yield. You can calculate the yield on a bond by dividing the amount of interest it will pay over the course of a year by the current price of the bond.

If a bond that cost €100 pays €7.50 a year in interest, then its current yield is €7.50 divided by €100, or 7.5%. This is known as the current yield.

Because you can buy a bond above or below par value, bond investors often use another kind of yield called "yield to maturity." The yield to maturity includes not only the interest payments you will receive all the way to maturity, but it also assumes that you reinvest that interest payment at the same rate as the current yield on the bond and takes into account any difference between the current par value of the bond and the actual trading price of the bond at that time.

If you buy a bond at par value, then the yield to maturity will be very close to the current yield, which is exactly the same as the coupon rate.

How do I purchase and sell bonds?

Bonds listed on the Malta Stock Exchange are transacted via a licensed stockbroker. These are traded on every business day between 10:45 am and 12:30 noon.

The process is fairly simple as noted hereunder:

- The investor sends the stockbroker written instructions (by letter, fax or email) clearly indicating security required, price at which he/she would wish to trade and MSE account number (if available) apart from the standard personal details;
- When buying bonds, the stockbroker must receive funds for the investment up-front either by means of a cheque or bank draft or directly in his clients' account via Internet banking;
- The stockbroker will then effect the trade at the best possible price (if the request so demands) or place the order in the market at the price established by the client. Malta Government Stocks are the most liquid investment on the Malta Stock Exchange as a result of the market making function provided by the Central Bank of Malta stockbroker who is the buyer of last resort and purchases any stocks on offer at his stated bid price. On the other hand, due to the inexistence of market makers, corporate bonds are more illiquid and prices may be more volatile.
- On execution, the stockbroker sends you a trade confirmation showing transaction details and claiming amount due or advising amount to be settled. In the case of a sale, payment is remitted to client within three working days from trade date.
- The investor will then receive confirmation of this transaction from the Central Securities Depository of the Malta Stock Exchange through the appropriate registration advice.

The Role of Bonds in a Portfolio

Investors have traditionally held bonds in their portfolio for three reasons: income, diversification, and protection against economic weakness or deflation. Let's look at each of these in more detail.

Income: Most bonds provide the investor with "fixed" income. On a set schedule, perhaps quarterly, twice a year or annually, the bond issuer sends the bondholder an interest payment—a check that can be spent or reinvested in other bonds. Stocks might also provide income through dividend payments, but dividends tend to be much smaller than bond coupon payments, and companies make dividend payments at their discretion, while bond issuers are obligated to make coupon payments.

Diversification: Diversification means not "putting all of your eggs in one basket." A stock market investor faces the risk that the stock market will decline and take the portfolio along for the ride.

To offset this risk, investors have long turned to the bond market because the performance of stocks and bonds is often non-correlated: market factors that are likely to have a negative impact on the performance of stocks historically have little to no impact on bonds and in some cases can actually improve bond performance. For example, an investor who purchases a blue-chip stock and a government bond may offset a downward market cycle in either asset class because a drop in a particular company's share price and a government's ability to repay a bond are usually unrelated. Although diversification does not ensure against loss, an investor can diversify a portfolio across different asset classes that perform independently in market cycles to reduce the risk of low, or even negative, returns.

Protection Against Economic Slowdown or Deflation: Bonds can help protect investors against an economic slowdown for several reasons. Recall that the price of a bond depends on how much investors value the income that bonds provide. Most bonds pay a fixed income that doesn't change. When the prices of goods and services are rising, an economic condition known as "inflation," a bond's fixed income becomes less attractive because that income buys fewer goods and services. Inflation is usually caused by faster economic growth, which increases demand for goods and services. On the other hand, slower economic growth usually leads to lower inflation, which makes bond income more attractive. An economic slowdown is also typically bad for corporate profits and stock returns, adding to the attractiveness of bond income as a source of return. If the slowdown becomes bad enough that consumers stop buying things and prices in the economy begin to fall—a dire economic condition known as "deflation"—then bond income becomes even more attractive because you can buy more goods and services (due to their deflated prices) with the same bond income. As demand for bonds increases, so do bond prices and bondholder returns.

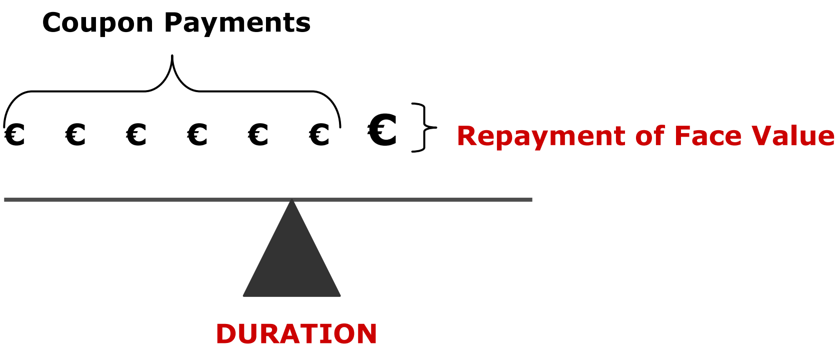
What is a Yield Curve?

The yield curve is a line graph that plots the relationship between yields to maturity and time to maturity for bonds of the same asset class and credit quality. The plotted line begins with the spot interest rate, which is the rate for the shortest maturity, and extends out in time, typically to 30 years.

What Is Duration?

Duration measures a bond's interest rate risk and is expressed in years. The longer the duration of a bond, the more sensitive the bond's price is to changes in interest rates. Duration is a weighted average of the present value of bond's cash flows, which include a series of regular coupon payments followed by a much larger payment at the end when the bond matures and the face value is repaid, as illustrated below.

The end result of the duration calculation, which is unique to each bond, is a risk measure that



allows us to compare bonds with different maturities, coupons and face values on an apples-to-apples basis. Duration tells us the approximate change in price that any given bond will experience in the event of a 100 basis point (1/100 of a percent) change in interest rates. For example, suppose that interest rates fall by one percent, causing yields on every bond in the market to fall by the same amount. In that event, the price of a bond with a duration of two years will rise two percent and the price of a five-year duration bond will rise five percent.