

Demystifying the Investment World

The investment map that we will develop in this book works so well because it is rooted in fundamental economics. These fundamentals will be our first screen for identifying the major tops and bottoms in the stock market.

We need to start with two major facets of economics: the supply-demand trade-off, and interest rates. These two subjects come together in that snapshot of U.S. Treasury securities prices called the yield curve. This curve tells us what investors think, and it will demystify the investment world for us.

Fundamental economics, or the study of supply and demand, works because people bid prices up or down according to the supply of goods and services. The inverse relationship between price and supply drives everything from the price of apples to the price of stocks and is particularly important in the bond market.

SUPPLY AND DEMAND

To use a simple example, if people buy a lot of apples, farmers raise their prices to allocate their scarce supply of the fruit. As apple prices increase, so do farmers' profits and earnings. Wall Street likes earnings, so investors bid up the prices of farm stocks. Apple farmers like earnings, too, so they plant apple trees from fence post to fence post.

The following year there are more apples than anyone can eat and they rot on supermarket shelves, which causes apple prices to decline.

Investors translate rotting apples into declining earnings for farmers, so they sell farm stocks. The farmers need fewer bushel baskets, and the basket makers suffer. Soon the whole economy declines into a recession, which causes investors to sell even more stocks.

Apples were expensive when they were scarce; but their price declined when there were too many of them. There is an inverse relationship between price and supply. The other thing that happened when there were too many apples was that we could not use all of them and the apple business slowed down. Investors watching these prices anticipated the recession by selling stocks in apple farms.

Investors buy stocks that they think will have increasing earnings. When investors expect a recession in the near future, they expect earnings to decline and they sell stocks. Conversely, they buy stocks when they expect a strong economy.

Similarly, the price of money, or interest rates, reflects the supply and demand for money. Since everyone uses money, interest rates are important to all of us and can affect the strength of the economy.

IMPORTANCE OF INTEREST RATES

Interest rates determine how much a business can borrow. When rates are low, it can borrow a lot of money and expand its operations. However, when rates are high, it must cut back on production and may even have to fire some of the staff. The economy declines into a recession. Recessions depress the earnings that motivate investors, so they sell stocks when they see an economic slowdown coming.

The level of interest rates affects everyone. Companies borrow money every day to pay salaries, buy supplies for their manufacturing processes, and keep the lights turned on in their stores. If interest rates are low, they can pass these savings on to their customers; otherwise, they have to raise their prices to cover these costs. Not only do we consumers have to pay inflated prices, but the interest rates on our credit cards, student loans, and margin accounts with our stockbrokers also go up.

Mortgage rates are probably the largest influence on our economy. Low mortgage rates allow more people to buy homes and all the furnishings, lawn mowers, and kiddie pools that go with them. New homeowners keep factories humming. Of course, high mortgage rates cause people to keep renting small apartments without room to accumulate manufactured goods. They don't want to paint and repair the landlord's property; and they certainly don't want to upgrade the mechanics or smart-wire for technology. Interest rates, especially mortgages, are one of the major determinants of the strength of our economy.

Because interest rates have such a large impact on the economy, they change direction before the economy does. Investors understand this relationship. They also know the importance of the economy on the stock market, so they use interest rates to forecast major changes in the direction of the stock market.

Interest-bearing loans trade in the marketplace like any other item with economic value. While their prices change according to supply and demand, the underlying contracts continue to specify the required interest rates and payment dates. We use the term *yield* to take all of these variables into consideration and calculate what an investor actually earns given the price he or she paid for the security.

Yields on government securities are particularly important. A graph of them, from the shortest maturity dates to the longest dates, is called the Treasury yield curve. Investors use this yield curve as one of their primary tools for anticipating directional changes in the economy and the stock market.

THE SHAPE OF THE YIELD CURVE IS KEY

The shape of the U.S. Treasury yield curve is the key to our road map because it tells us what investors think will happen to both the economy and the stock market.

As you know, the yield curve is a graph of each Treasury security, from 30-day bills to 30-year bonds, and the return for each investment (see Figure 1.1). You may expect to get an annual rate of 3 percent, for example, if you lend the government your money for 30 days and 6 percent if you lend the money for 30 years. Beyond the intuitive fairness of this arrangement, there are sound economic principles at work.

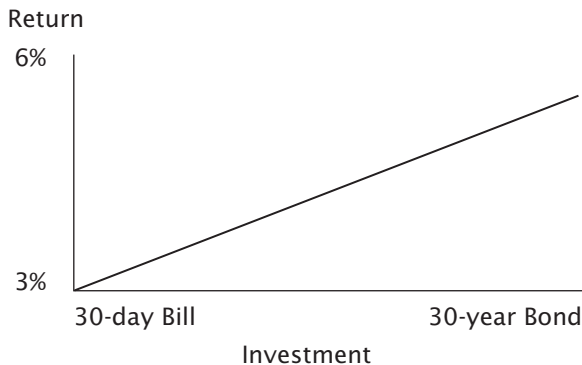


FIGURE 1.1 Basic Yield Curve

Suppose that you want to buy a new Porsche. You can save for it faster by investing in U.S. Treasury securities than you can in your savings account at your local bank. All you have to do is figure out which Treasury security to buy.

You'd like to have your investment earn as much as possible, so you first consider buying a 30-year bond. You will probably reject that option very quickly in favor of alternatives. First of all, you don't want to wait that long to buy your new Porsche. Second, a lot can happen in 30 years. While you expect the U.S. government to be able to repay your loan, the price of your car could go up. If you lend your money for a long period of time, you want to be compensated very well for the risk that prices may increase in the interim.

The other thing that could go up is interest rates. Not only might the price of cars go up, but the price of money may increase. You may prefer to roll over a series of 30-day investments during the time that you save if you think that each one will give you a higher return than the preceding one.

However, if you think that interest rates will *decrease* while you are saving for your car, then you will buy the longer-term security. You will lock in that high interest rate and reinvest those great coupon payments while you save for your car.

How far into the future you lend your money depends on whether you think that interest rates will go up or down during that period of time.

Millions of investors make that decision every day. They decide whether they think interest rates will increase or decrease during the time that they will hold their investment. At the end of the day many newspapers and web sites plot each of those decisions on a graph of the Treasury yield curve.

The yield curve is a picture of all these decisions regarding the future of interest rates. Because these decisions imply a forecast of future interest rates, the yield curve is also a picture of this interest rate forecast. Bond market investors give us a picture of their expectations for future interest rates in a yield curve.

NORMAL YIELD CURVE

For example, the yield curve shown in Figure 1.2 from May 1980 is a typical curve with a normal shape. If you lent your money to the U.S. government for three months, you got a yield of eight percent. You received 10 percent for a 10-year note and 10.5 percent for a 30-year bond. The longer you let the government have your money, the more interest you earned.

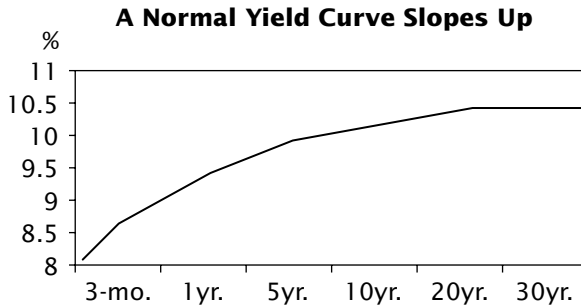


FIGURE 1.2 Normal Yield Curve

There is an inverse relationship between price and yield in the bond market. As with most things we buy, the more you pay for anything, the lower return you can get. You know better than to spend a million dollars on a house in a bad neighborhood because you may lose money on it when you sell it. You understand intuitively that the more you pay for something the less your return will be.

That is most apparent in the bond market because each investment has a stated return, or yield, printed right on the face of the contract. Bond investors are particularly aware of the inverse relationship between price and yield.

On this graph, people preferred to keep their money in short-term investments. They bought so many three-month Treasury bills that the price was high enough to drive the yield down to 8 percent. One reason for their behavior was that they assumed that each time their bills matured, they could buy more bills at a higher rate of return. They expected to be able to replace each maturing bill with another one with a better interest rate. This graph angles upward because investors thought that interest rates would go up in the future.

INVERTED YIELD CURVE

However, sometimes the shape of the yield curve is *not* normal; it's inverted. Figure 1.3 shows that investors had a different view of the market in August 2000. Notice that the highest return was on the shortest investment. Who in his right mind would accept a lower return for 30 years than for 30 days?

Someone who expected interest rates to decline might do so.

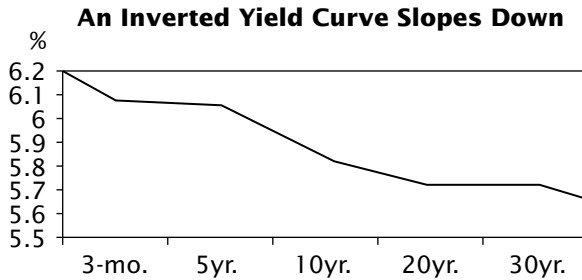


FIGURE 1.3 Inverted Yield Curve

Someone who wanted to lock in what he thought was a good rate on a 30-year bond and who thought that the price of money would decline along with the level of economic activity; someone who saw a recession coming, was selling stocks, and wanted to protect his profits with bonds; someone who thought that money market funds would have a lower return next month and wanted to protect his income stream by owning long-term bonds might accept that lower rate.

Someone who expected bond prices to increase while yields decreased and, therefore, expected bonds to outperform other asset classes.

Who was that “someone” in 2000? One of the biggest players who was driving up the prices of long-term bonds and forcing yields to decline was the U.S. Treasury. The Treasury announced a program to shorten the average maturity of its debt, so it initiated a program to buy back 30-year bonds. It bought so many that the yield dropped below everything else on the curve.

Some people noticed the inverted yield curve and protected themselves from the coming recession and stock market decline. Charles was one of those people.

THE YIELD CURVE PREDICTS

This book has applications beyond Charles and the U.S. Treasury.

Economists consider the yield curve to be a useful tool for predicting the business cycle and the stock market in most industrialized countries. There is a growing body of knowledge, notably the work of Fabio Maneta, suggesting that the yield curve also predicts economic cycles in the euro zone. Investors take his work one step further and use the shape of the yield curve to predict the direction of stock markets in that part of the

world. You can download his work from the Social Science Research Network web site at: <http://ssrn.com/abstract=487474>.

The Chartered Financial Analysts Institute web site at www.cfainstitute.org is an excellent source of scholarly research on all yield curve analysis.

SUMMARY

The investment map that we will develop is based on the fundamental economics of supply and demand. Prices allocate scarce supplies of everything from apples to U.S. Treasury bonds. Higher prices mean lower returns, or yields, on all our purchases whether they are houses, apples, or bonds.

The yields of all Treasury securities from short-term bills to long-term bonds are reflected on the graph called the yield curve. Investors know that the shape of this curve forecasts the direction of both the economy and the stock market in most industrialized nations. A normal, upward-sloping curve suggests a strong economy and stock market, while a negative, downward-sloping curve indicates a coming recession and a bear market.

The shape of the yield curve, or yield curve analysis, and its ability to forecast the stock market is one of the trade secrets that professional money managers discuss around the watercooler.

You deserve to have that secret, too.