

Lecture 19: The Domestic Financial System

I. OVERVIEW

- In the last lecture, we looked at the monetary system in more detail. In particular, we looked at the structure of the U.S. Federal Reserve System, how it changes the money supply and how changes in the money supply affect interest rates.
- We also looked at the role played by banks in the domestic financial system: small changes in open market operations can lead to more substantial changes in deposits in the economy.
- Today's lecture will take a closer look at the remaining components of the domestic financial system: in particular the bond market and the stock market. We will discuss some of the basic features of these markets and also discuss the role they play in the economy.

II. THE BOND MARKET

- A bond is a financial instrument that guarantees the holder a fixed sum of money at a pre-specified date in the future as well as a stream of fixed interest payments in the meantime.
- There are three different types of bonds: bonds issued by the U.S. government, bonds issued by various state and local governments, and bonds issued by corporations.
- Bonds issued by the U.S. government fall into three categories: Treasury Bills, Treasury Notes, and Treasury Bonds. Treasury Bills, or T-Bills as they are popularly known, have durations of 13 weeks, 26 weeks, and 52 weeks. Treasury Notes come in durations of 2 years, 5 years, and 10 years. Treasury bonds have a 30-year term.
- Most bonds have a face value, or par value, which is the amount that the holder of the bond is entitled to at the end of the period. The bond also has a coupon rate, which is the amount of money a person will receive in a year divided by the face value of the bond.
- If you buy a 30-year Treasury bond with a face value of \$1000 and a coupon rate of 5% then you will be holding an instrument that pays you \$1000 after 30 years and also pays you \$50 year in the interim period.
- All these bonds are traded on a bond market. You can buy bonds directly from the issuer: the U.S. government, for example, holds auctions in which they sell bonds, or on a secondary bond market.
- What affects the price of bonds?
 - The worst enemy of bond investors is inflation. Higher inflation reduces the face value and the value of the stream of interest payments of the bond. So the price of bonds will start falling. The fall in the price of bonds is linked to the general rise in interest rates that take place in the presence of rising inflation.
 - So rising interest rates in the rest of the economy tend to reduce demand for, and the price of, bonds. Reductions in interest rates tend to raise demand for, and the price of, bonds.
 - The continuously changing price of the bond makes it important to calculate the "yield" of the bond, which can differ from the coupon rate of the bond.

- . If for example we purchased the \$1000 bond with an interest rate of 5% for \$975, then the actual interest rate, the yield, earned by the owner of the bond is in fact higher than 5%. Since the owner is making \$50 a year on a \$975 investment, she is actually earning 5.13%.
- Similarly if the price of the bond was \$1050, then the yield of the bond is only 4.65%. So the price of the bond and the yield of the bond move in opposite directions. Furthermore the interest rate in the overall economy and bond yields tend to move together.
- How reliable are bonds?
 - Since buying a bond means exchanging money today in exchange for nothing more than a written promise for future payments, one has to always worry about the reliability of the issuer.
 - Government bonds issued by the Federal Government are assumed to be safe while bonds issued by state and local governments vary dramatically in quality. Similarly, bonds issued by GM are very different from bonds issued by Mushy Peas-R-Us in terms of how reliable the issuer is.
 - As a result, there are several services that rate the reliability of bonds, much like your credit report assesses your creditworthiness. The most well-known of these ratings services are Moody's and Standard and Poor's.
 - Standard and Poor's rates its bonds AAA, AA, A, BBB, BB, B, CCC, CC with + and – for extra differentiation. Moody's uses a ratings system Aaa, Aa, A, Baa, Ba, B, Caa, and C. The AAA category generally consists of the super safe blue chip companies.
 - Typically, the lower your bond rating, the higher the interest rate you have to offer in order to compensate people for holding a more risky bond. So companies with a AAA rating are able to borrow money a lot cheaper than a company with a CCC rating can.

II. THE STOCK MARKET

- Firms can choose to expand or finance new investment in several ways. It can borrow money from a bank, it can use its own earnings, it can issue bonds or it can issue more stock.
- A share of stock is a claim on the ownership of the firm. The owner of a group of shares in a company owns a portion of the firm that is equivalent to her stake divided by the number of total shares issued by the company.
- Shareholders, as owners of stock are called, are therefore entitled to vote at company meetings and decide who should run the company. The extent of one's clout within the firm is proportional to the number of shares one holds: Bill Gates has more of a say in Microsoft than someone who holds 3 shares of Microsoft stock does.
- What is the stock market?
 - Shares in a company are listed on various markets: firms, individuals, and institutions can buy or sell shares in these companies on what are known as market exchanges.
 - The most common exchanges are the New York Stock Exchange (NYSE), and the American Stock Exchange (AMEX) composed of regional stock exchanges in Boston, Philadelphia, Chicago and San Francisco and now merged with the NASDAQ.

- The price of the stock is determined by the demand and supply for shares that prevails in the market. In general, the stocks of companies that are expected to do well in the future increase in price, while the stocks of companies for which we have or anticipate bad news will be less in demand decrease in price.
 - Companies are allowed to “split” their stocks: issue two stocks for 1 or 3 stocks for 2, from time to time for various reasons. They are also allowed to issue more stock when they choose to do so with some advance notification. As a result, the price of a share does not reflect anything about the value of the company.
 - For example, if GE is selling at \$75 a share and Alta Vista is selling at \$100 it does not mean that Alta Vista is a more valuable company than GE. To calculate the “market value” of a company we need to calculate the price times the number of shares that have been issued.
- How can we make money on the stock market?
 - The answer is easy: buy low and sell high! How do we know whether a particular share is going to increase or decrease in value? We need information about what the company’s future prospects in order to understand whether demand is likely to increase or decrease in the future.
 - As a result, the stock market becomes one of world’s most amazing repositories of information and “news”. Every day many thousands of people look at millions of pieces of information in order to determine whether they should buy or sell certain stocks.
 - In order to really make money in a consistent fashion, then we need to have access to as much information as quickly as possible. Therefore, it is unlikely for any individual to be able to make money in a sustained fashion on the stock market because there are many other investment firms, mutual funds and brokers who have access to more information than we do.
 - This doesn’t mean that individuals can’t become rich by buying stocks, it’s just that they can’t do this in a sustained, consistent fashion.
 - Some people may have been lucky and/or smart and been among the first to buy companies like Microsoft, SUN, Dell, Yahoo or Amazon.com and make millions of dollars that eliminates the need to be successful consistently because they make so much money on that single transaction.
 - For most of us though, the best thing to do may be to entrust out money to people who have more information than we do: mutual funds, stock brokers or investment advisors.
- What’s an index?
 - Most people think of the Dow Jones Industrial Average when they say the “market went up” or the “market went down”. The DJIA along with the NASDAQ Composite, the S & P 500, the Russell 2000, the Wilshire 5000 are all collections of stocks whose combined value is put into the form of an index, i.e. a reference to some base year.
 - The Dow Jones Industrial Average is computed by adding the stock prices of 30 major corporations in the U.S. Since the list is occasionally changed: recently Microsoft and Intel were added to the Dow replacing Union Carbide and Sears, there is a complicated weighting formula used to add up the prices of the stocks.
 - So an increase in the Dow Jones Industrial Average does not necessarily mean that all or even most of the firms in the country saw their share prices rise. It just means that the 30 stocks that form the DJIA saw their value rise as a whole.

- Nevertheless, it remains an index that can be compared to the past to judge how some of the biggest companies in the United States are performing.
- The S&P 500, the Wilshire 5000 etc. are all broader measures of the stock market: encompassing many stocks and designed to give a better indication of how the market as a whole is doing.
- What's a mutual fund?
 - A mutual fund is a way of pooling money from different investors and entrusting it into the care of a mutual fund manager who then invests the money into various stocks in the economy. The value of the mutual fund changes along with the value of the stocks held by the fund.
 - The people who put money into the fund are allocated shares in the fund in proportion to their stake. As the value of the stocks owned by the fund increases, the value of the shares in the mutual fund increase as well.
 - There is an indescribably vast array of mutual funds today varying according to the types of stocks that they buy: some of them hold only large companies, others hold only small companies; some hold Argentinian companies, others hold Japanese small companies etc.
 - Mutual funds do not buy stocks exclusively either. You can also choose from a vast array of bond funds that buy different types of bonds ranging from government securities to super high-risk junk bonds.