Class #03: Working with Interest Rates

Agenda:

1. Review: Present value, Yield to Maturity, Total return – Mishkin ch.4.
2. Applications: Total returns on major asset classes.

Much of financial market analysis revolves around a few fundamental concepts: The interest rate, the present value, the yield to maturity, the total return, and a some other less important ones. We will briefly review these principles and then focus on practical applications: How to track returns in the major markets.

The interest rate, in a narrow sense, is the percentage amount added to your investment at the end of a computation period, for investments that promise a fixed amount of interest. In a wider sense, an interest rate is any percentage number that is applied to a dollar amount; the discount rate and the yield to maturity are interest rates in this wider sense.

The present value describes the current value of a series of future payments. It is obtained by taking each payment, reducing it by a "discount" factor to reflect the reduced value of future funds as compared to current funds, and summing up.

The yield to maturity is a particular interest rate that provides a useful measure of bond prices. For each bond, we know the current market price and we know the series of promised payments. Hence, we can answer the question: At what rate do we have to discount the promised payments to obtain a present value equal to the actual market price? The resulting number is called the yield to maturity. It reveals the "average" interest rate to be earned by an investor who holds the bond until maturity.

The return (total return to be precise) on an investment is the percentage gain on an investment over some computation period. For fixed interest securities, it is the same as the interest rate. But the return is a much more general concept because it can be applied to securities with uncertain return, too. Past returns provide a universal measure of investment success; and obtaining high future returns is the goal of most investors.