Lecture 17

Material for lecture 17 will use the following transparencies and Table 1 and Figure 1 of chapter 13 of the textbook
Interest-Rate Forward Markets

**Long position** = agree to buy bonds securities at future date at price fixed now

- Provides insurance if one has funds coming in in the future, because it `locks in’ interest rate at which the funds can be invested

**Short position** = agree to sell bonds at future date at a price fixed now

- Provides insurance if one is holding bonds, because it `locks in’ price at which they can be sold.
Financial Futures Markets

Financial Futures Contract
1. Specifies delivery of type of security at future date
2. Arbitrage ⇒ at expiration date, price of contract = price of the underlying asset delivered
3. $i \uparrow$, long contract has loss, short contract has profit
4. Hedging similar to forwards

Traded on Exchanges: Global competition, regulated by CFTC
Widely Traded
Financial Futures Contracts

[Table 1 of textbook here]
Futures versus Forwards

Contract Design
Forwards more flexible, futures just available on standard securities; hedging is subject to basis risk.

Liquidity
With forwards, it’s harder to find counterparty. Standardized futures contracts retraded easily. With futures, netting means some parties don’t have to deliver; also delivery of range prevents ‘corner’.

Default Risk
Futures Contracts marked to market
Hedging FX Risk

Example: Customer due 20 million Euro in two months, current 1 Euro = $0.87

1. Forward agreeing to sell Euro 20 million for $17.4 million, two months in future

2. Sell Euro 20 million of futures
Options

Options Contract

Right to buy (call option) or sell (put option) instrument at exercise (strike) price up until expiration date (American) or on expiration date (European)

Hedging with Options

To insure against price risk of a bond that one is holding, one can buy the same # of put option contracts as one would sell of futures

Disadvantage: pay premium up front
Advantage: protection if i ↑, gain if i ↓
Profits and Losses: Options vs. Futures

$100,000 T-bond contract,
1. Exercise price of 115, $115,000.
2. Premium = $2,000

[Figure 1 on p.351 of textbook here]
Factors Affecting Premia

1. Higher strike price, lower premium on call options and higher premium on put options.

2. Greater term to expiration, higher premiums for both call and put options.

3. Greater price volatility of underlying instrument, higher premiums for both call and put options.