AcF305:
International Financial and Risk Management
Week 10: Revision

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Week 1

- Why does money exist? What were early forms of money and why were they not successful?

- Development of the banking system: merchants depositing their gold coins in a bank's vault → receive bank receipt.
  - Potential of a bank run.

- Money supply.

- Balance of payments: records transactions between residents of one country and foreigners over a specific time period.

- Exchange rate regimes.

Week 2

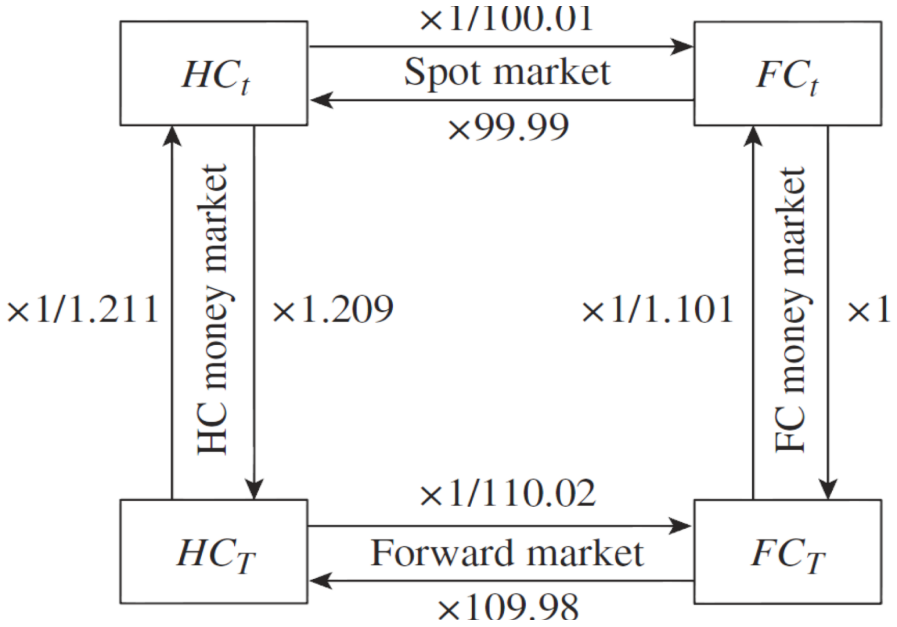
- Bitcoin: definitions.
- What are exchange rates? Difference between spot rate and forward rate; some technical details treated.
- **Bid** and **ask** rates: at what rate does an economic agent buy and at what rate does he/she sell?
  - Finding the inverse quote (in the presence or absence of bid and ask rates).
- Some institutional aspects of the market for foreign exchange.

Week 2

- Law of one price, driven by arbitrage or shopping around.
- Purchasing power parity: PPP exchange rate.
  - Different forms of purchasing power parity: commodity price parity, absolute purchasing power parity and relative purchasing power parity.
- Real exchange rate: nominal exchange rate divided by PPP rate.

Week 4

- Forward spreads vs. maturity/customer characteristics.
- Covered interest parity with bid/ask spreads.



- Definition of hedging and exposure.
  - Some technical details on how real firms hedge (hedging bins, hedging with alternative instruments, etc.).
- Some simple and complicated speculation strategies.

Week 5

- Difference between forward and futures contract (marking to market: simpler form of variable collateral or daily re-contracting).
- Technical details about future contracts, institutional features.
- Problems of hedging with future contracts:
  1. There might not be a futures contract on the FC in which the firm has its exposure.
  2. The futures contract might not have the same maturity as the exposure.
  3. The size of the futures contract might be different from the size of the exposure.
- In general, the hedged cash flow at time T_1 will be:
  cash flow at $T_1 = \tilde{S}_{T_1}^{(e)} - \beta * \left(\tilde{f}_{T_1,T_2}^{(h)} - f_{t,T_2}^{(h)}\right)$
  = HC value of long FC 1 + HC value of short β futures

Week 6

- Option contracts: definitions, basics and jargon.
- Payoff diagrams: What is the payoff at maturity of a call/put option? But also: What is the combined payoff of a EUR exposure and a GBP/EUR put option?
- Institutional features of the options market.
- Some arbitrage relationships, e.g.:
    1. American options are worth no less than European options.
    2. A European call is more valuable than a forward purchase.
- Put-call parity for European options.
- Using options for hedging or speculation.

Week 7/8

- Relevance of corporate hedging: does it create value for shareholders?
- Three different types of exposure: contractual exposure, operating exposure (together: economic exposure) and accounting exposure; which one is least important?
- Effectiveness of hedging transaction exposure in the presence of default risk.
- Hedging of non-linear exposures ("doing better than the status quo").
  - two different risks (i.e. economic and exchange rate risk)

Week 8/9

- Integrated and separated markets: definitions.
- In which case should we use which discount approach?
    1. Translate expected FC cash flows into HC and then discount at the HC discount rate (be careful: covariance term). → segmented and integrated markets
    2. Discount expected FC cash flows at the foreign discount rate and then translate proceeds at spot rate. → integrated markets

Week 8/9

- Review of the CAPM essentials: investors want to hold mean-variance efficient portfolio.
- **Rule**: In an optimal portfolio, the extra benefit-over-extra cost ratio must be equal across all stocks.
- In an integrated world, need to extend standard CAPM by exchange rates:

$$E(\tilde{r}_j - r_0) = \beta_{j,w;all\ s} E(\tilde{r}_w - r_0) + \sum_{k=1}^{N} \gamma_{j,s_k;w,other\ s} E(\tilde{s}_k + r^*_{0,k} - r_0)$$

Week 10

- Using NPV calculations for a foreign investment project.
  - The three-step approach.
    - First, treat the subsidiary as if it were a branch.
    - Then consider the intra-company transactions.
    - And, lastly, the inter-company transactions.
- Also need to take political risk into account.

High level summary

(but do not forget the other important details)

- Three main theories:
  - Law of one price ➔ Leads to put-call parity
  - Purchasing power theory
  - Covered interest parity
- Three main derivative markets
  - Forward markets
  - Future markets
  - Option markets
- Risk management: we have learnt how to hedge currency risk exposure
  - The most challenging one is hedging with futures due to the specifications of future contracts
- Measure risk exposure using simple (linear) methods

Thank you!