

Introduction to International Financial Management



Basics

Why do firms invest abroad?

- Sell products in foreign markets to earn excess returns (HLL, Coke, Pepsi)
- Produce products more efficiently than domestically (Videocon International)
- Secure necessary raw materials (Tata Tea, IFFCO/SPIC)
- Misc. (Pepsi Foods)

Exchange Rate Terms

- Exchange Rate - Amount of one currency needed to purchase one unit of another
- Spot exchange rate (1 Dh = Rs. 13.30)
- Forward exchange rate (1 Dh = Rs. 13.45)
- Currency risk - Volatility of exchange rates
- Translation exposure – change in financial statements caused by changes in exchange rates
- Transactions exposure – settling a particular transaction at one exchange rate when the obligation was originally recorded at another

Forex Markets

- Forward Premiums and Forward Discounts
- Premium/discount is equal to $[\text{forward price} - \text{spot price}] / \text{spot price}$
- Suppose, spot price is 112.645 yen per dollar and 3 month forward rate is 113.000 yen per dollar
- Yen has a higher value in the forward market than in the spot market. Yen is selling at a premium
- So, Rupee is selling at a _____ to Dirham

Foreign Exchange Markets and Exchange Rates

- Without a doubt, the foreign exchange market is the world's largest financial market.
- Most currency is quoted in terms of dollars.
- Participants would include ...
- Most of the trading takes place in a few currencies:
 - U.S. dollar (\$); Euro (€); British pound sterling (£); Japanese yen (¥);

Indian companies raising finance abroad

American Depository Receipt (ADR): a security issued in the U.S. to represent shares of a foreign stock

Three popular ways

- Level III: Offering the shares and getting them listed on the US exchanges (Infosys Technologies)
- ADRs: Offering of American Depository Receipts (ADRs) in the US (Wipro)
- GDRs: Offering of Global Depository Receipts (GDRs) outside India and the US (Hindalco)

Other Terminology

- Eurocurrency: money deposited in a financial center outside the home country., say, Eurodollars.
- Foreign bonds: bonds issued in another nation's capital market by a foreign borrower (Yankee bonds)
- Gilts: Government securities (usually British)
- LIBOR: The rate most international banks charge one another for loans of Eurodollars overnight in the London market
- Cross rate: the exchange rate between two foreign currencies implied by the exchange rates of each currency with a third one
- Eurobonds: bonds denominated in a particular currency and issued simultaneously in the bond markets of several countries

Cross Rates

Suppose that $S_{DM}(0) = .50$

- *i.e.*, \$1 = 2 DM in the spot market

- and that $S_{¥}(0) = 100$

- *i.e.*, \$1 = ¥100

What must the DM/¥ cross rate be?

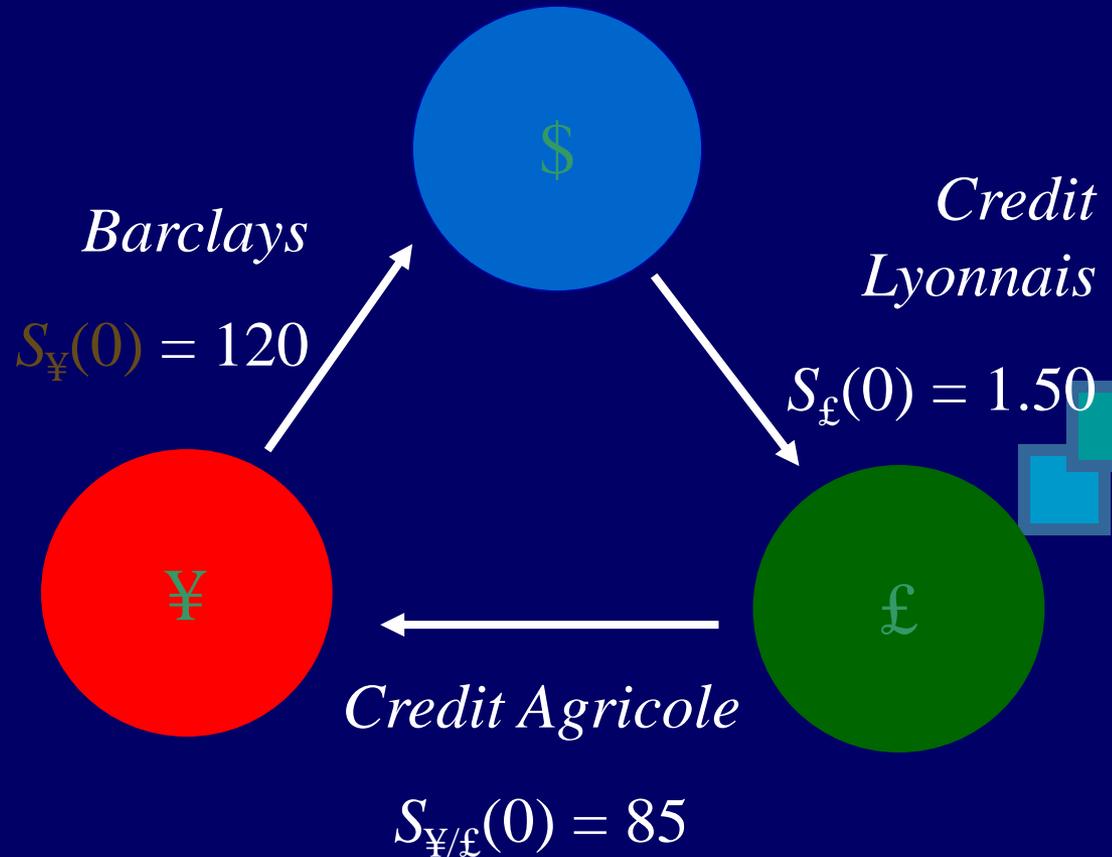
$$\text{since } \frac{DM}{¥} = \frac{\cancel{\$}}{¥} \times \frac{DM}{\cancel{\$}},$$

$$\frac{DM}{¥} = \frac{\$1}{¥100} \times \frac{DM 2}{\$1} = \frac{DM 1}{¥50} =$$

$$\Rightarrow S_{DM/¥}(0) = .02 \text{ or } DM1 = ¥50$$

Triangular Arbitrage

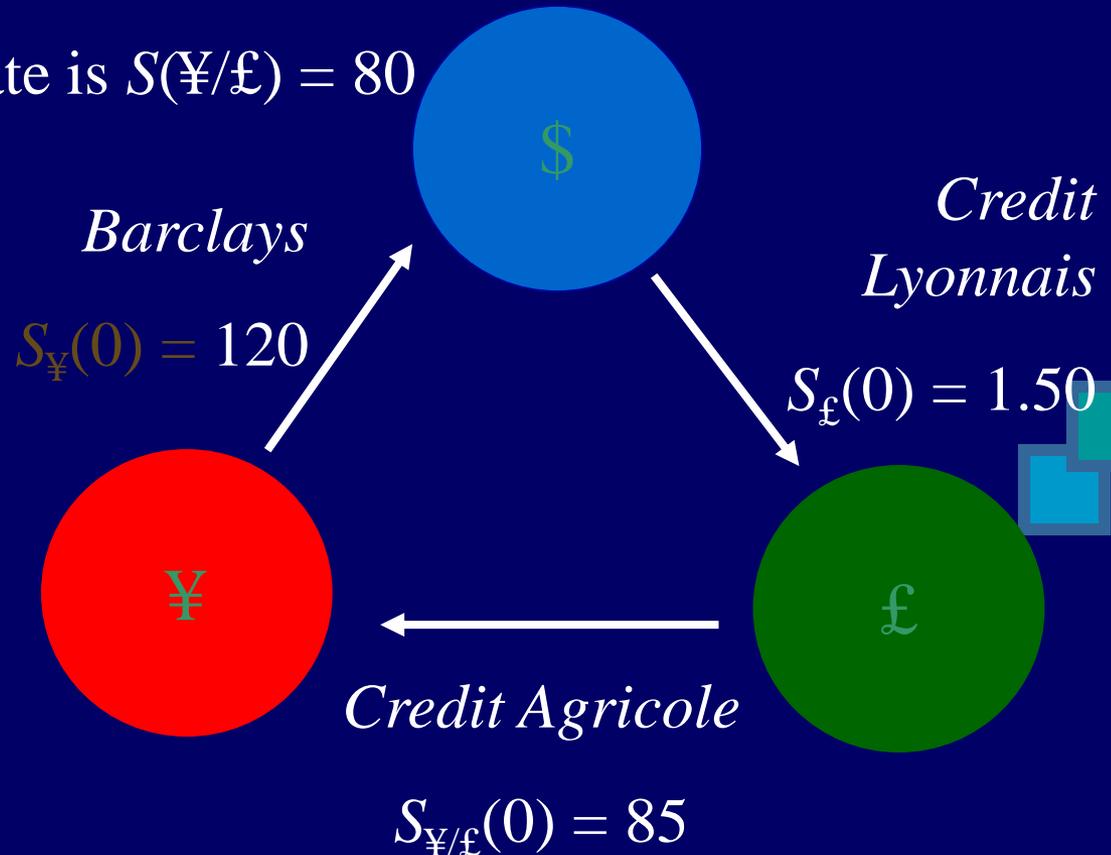
Suppose we observe these banks posting these exchange rates.



Triangular Arbitrage

The implied $S(\text{¥}/\text{£})$ cross rate is $S(\text{¥}/\text{£}) = 80$

$$\frac{\text{£}1.50}{\text{\$}1} \times \frac{\text{\$}1}{\text{¥}120} = \frac{\text{£}1}{\text{¥}80}$$

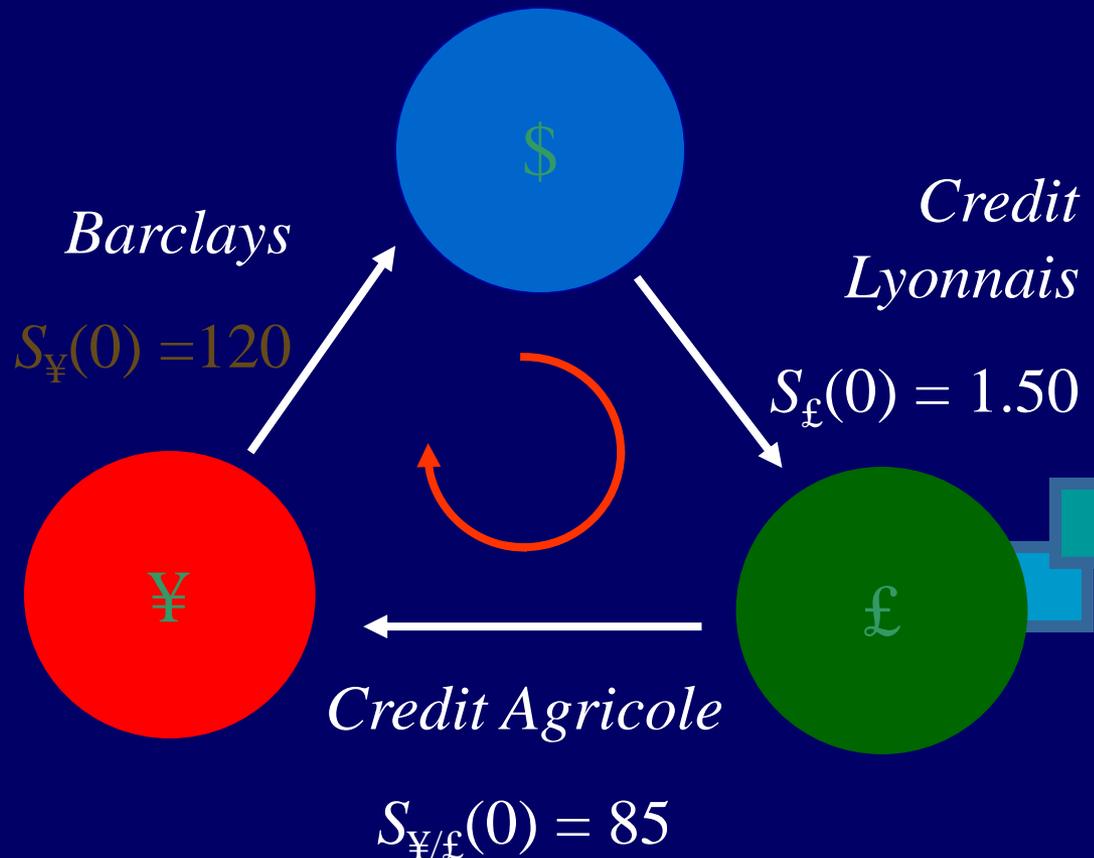


So, how can we make money?

Triangular Arbitrage

As easy as 1 – 2 – 3:

1. Sell our \$ for £,
2. Sell our £ for ¥,
3. Sell those ¥ for \$.



International Capex

How do we take international capital budgeting decisions?

- Estimate expected cash flows in the foreign currency
- Only consider those cash flows that can be repatriated to the home country parent
- Compute their domestic currency (INR) equivalents at the expected exchange rate
- Determine the NPV of the project using the domestic required rate of return (adjusting for any associated risk premium for a foreign investment)

International Capex Example

(compiled from Van Horne & Wachowicz)

- For example, the current exchange rate might be 2.5 Japanese Yen per one Indian Rupee
- XYZ Ltd is considering an investment in Japan to sell Idli's and Dosa's, and the initial cash outlay is 1.5 million Yen.
- The project has 4-year project life with cash flows given on the next slide.
- The appropriate required return for repatriated Indian Rupees is 18%.
- The appropriate expected exchange rates are given on the next slide.

Example continued ...

End of Year	Expected Cash Flow (JPY)	Exchange Rate (JPY to INR)	Expected Cash Flow (INR)	Present Value of Cash Flows at 18%
0	-1,500,000	2.50	-600,000	-600,000
1	500,000	2.54	196,850	166,822
2	800,000	2.59	308,880	221,833
3	700,000	2.65	264,151	160,770
4	600,000	2.72	220,588	<u>113,777</u>
Net Present Value =				63,202

International Capex

Some issues to be considered

- International diversification?
- Could mean risk reduction
- Indian/Japanese Government Tax (and other laws) are usually different
- Political risk (expropriation, local opposition)
- Protect the firm by hiring local nationals, acting responsibly in the eyes of host government, entering joint ventures, making the subsidiary reliant on the parent company, and purchasing political risk insurance

Natural Hedges

- Pricing – Cost globally determined (Petrochemicals)
- Pricing – Cost domestically determined (Milk)
- Pricing global – Cost domestic (Mercedes Benz)
- Pricing domestic – Cost global (Fertilizers)
- Currency-related Hedges – Forward contracts, Futures contracts, Options, Swaps, Forfaiting, Countertrade

Cash Management

- What should a firm do if it knew that a local foreign currency was going to fall in value?
- Exchange cash for real assets (inventories) whose value is in their use rather than tied to a local currency
- Reduce or avoid any increase in trade credit
- Obtain trade credit or borrow in the local currency