Chapter 3 - International Financial Markets

Intl Financial Management (University College Dublin)

Chapter 3: International Financial Markets

Foreign Exchange Markets

When MNCs invest or borrow in foreign markets they rely on the foreign exchange market to obtain the currencies that they need

Facilitates international trade and financial transactions

This market is of great interest to Governments – if the price of € rises relative to the £, then all goods in Europe will be relatively more expensive to UK purchasers

Foreign Exchange Transactions:

- Spot market = a foreign exchange transaction for immediate exchange is said to trade in the spot market, exact rate is spot rate
- Transactions include derivatives: forwards, futures, swaps and options
- Trading between banks occurs in the **interbank market** if a bank is short of a particular currency
- The US dollar is the common medium of exchange in spot markets
- Spot market for each currency can be described by its liquidity, which reflects the level of trading activity. The more willing buyer and sellers – the more liquid a market is

Attributes of Banks that Provide Foreign Exchange:

- Competitiveness of quote
- Special relationship with bank
- Speed of execution
- Advice about current market conditions
- Forecasting advice

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Converting Currencies

N.B. → when converting currency

If the destination currency is the base, then divide, otherwise multiply

Base – single unit

EG. convert €100 into destination currency

€09192:$1	Base: $	Destination: $	Therefore: Multiply
$1.0880:€1	Base: €	Destination: $	Therefore: Divide

Foreign Exchange Quotations:

- A bank's bid (buy) quote for a foreign currency will always be less than its ask (sell) quote
- This covers the cost of the banks foreign exchange transactions
- Bid-Ask Spread:

$$\text{Bid / ask spread} = \frac{\text{Ask rate} - \text{Bid rate}}{\text{Ask rate}}$$

- Factors that affect the spread:
  - Order costs = costs of processing orders
  - Inventory costs = costs of maintaining an inventory of a particular currency
  - Competition = the more intense the competition, the smaller the spread quoted
  - Volume = currencies that have a large trading volume are more liquid as there are numerous buyers and sellers at any given time
  - Currency risk = economic or political conditions that cause the demand for and supply of currency can change abruptly

→ Direct Quote = the number of units of home currency for one of the foreign currency (base is foreign currency)

→ Indirect Quote = the number of units of foreign currency for one unit of the home currency (base is home currency)

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- Cross exchange rate = amount of one foreign currency per unit of another foreign currency EG. If a UK firm wants to convert earnings in Mexican pesos to Australian dollars

- Currency derivatives = a contract with a price that is partially derived from the value of the underlying currency that it represents

- Forwards contracts = agreement between foreign exchange dealer and MNC that specifies the currencies to be exchanged, the exchange rate and the date the transaction will occur

Currency Futures & Options Markets:

- Currency futures contracts = similar to forward contracts but sold on an exchange instead of offered by commercial banks:
  - Specifies a **standard** volume of a particular currency to be exchanged on a specific settlement date at a specific rate
  - The futures rate is the exchange rate at which one can purchase or sell a specified currency on the specified settlement date
  - future spot rate is the spot rate that will exist at a future point in time and is uncertain as of today
  - offer more flexibility than forward contracts as they do not require any obligation

- Currency Options Contracts = calls/puts
  - Currency call option: provides the right to buy currency at a specified strike price within a specified period of time – used to hedge future payables

  - Currency put option: provides the right to sell currency at specified strike price within a specified period of time – used to hedge future receivables

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International Money Market

- Corporations or governments need short-term funds denominated in a currency different from their home currency
- International money market has grown because firms:
    - May need to borrow funds to pay for imports denominated in a foreign currency.
    - May choose to borrow in a currency in which the interest rate is lower.
    - May choose to borrow in a currency that is expected to depreciate against their home currency

Market Efficiency:

1. weak form efficiency – requires that currency prices move randomly in the short term. Testing for randomness is testing for an absence of patters, if patterns are not found the market is weak form efficient
2. semi-strong form efficiency – requires that prices reflect all published information
3. strong form efficiency – all information to be published including private info

Origins & Development:

- European Money Market = Dollar deposits in banks in Europe and other continents are called Eurodollars or Eurocurrency.
- Asian Money Market = Centred in Hong Kong and Singapore. Originated as a market involving mostly dollar-denominated deposits, and was originally known as the Asian dollar market
- Bitcoin Internet Market = internet-based currency, could potentially further lessen government control of finance

Money Market Interest Rates Among Currencies:

- Money market interest rates in a country is dependent on the demand for short-term funds by borrowers, relative to the supply of these available funds that are provided by savers.
- Money market rates vary due to differences in the interaction of the total supply of short-term funds available (bank deposits) in a specific country versus the total demand for short-term funds by borrowers in that country.

- Global Integration of Money Market Interest Rates:
    - When economic conditions weaken, the corporate need for liquidity declines, and corporations reduce the amount of short-term funds they wish to borrow.
    - When economic conditions strengthen, there is an increase in corporate expansion, and corporations need additional liquidity to support their expansion

- Risk of International Money Market Securities:
    - International Money Market Securities are debt securities issued by MNCs and government agencies with a short-term maturity (1 year or less)
    - Normally, these securities are perceived to be very safe from the risk of default
    - Even if the international money market securities are not exposed to credit risk, they are exposed to exchange rate risk when the currency denominating the securities differs from the home currency of the investors

International Credit Market

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- MNCs sometimes obtain medium-term funds through term loans from local financial institutions or through the issuance of notes (medium-term debt obligations) in their local markets.
- Loans of 1 year or longer extended by banks to MNCs or government agencies in Europe are commonly called Eurocredits or Eurocredit loans.
- To avoid interest rate risk, banks commonly use floating rate loans with rates tied to the London Interbank Offer Rate(LIBOR).

Syndicated loans in the Credit Market:

- Sometimes a single bank is unwilling or unable to lend the amount needed by an MNC or government agency – in this case a syndicate of banks may be organized
- Each bank in the syndicate participates in the lending
- The lead bank is responsible for negotiating the terms with the borrower
- Reduces the default risk of a large loan and can also add extra incentive to pay back

Regulations in the Credit Market:

- Single European Act
  - ➢ Capital can flow freely throughout Europe
  - ➢ Banks can offer a wide variety of lending, leasing and securities activities in the EU
  - ➢ Regulations regarding competition, merger and taxes are similar throughout the EU
  - ➢ A bank established in any one of the EU countries has the right to expand into any or all of the other EU countries

- Basel Accord Regulations:

I. Banks must maintain capital equal to at least 4% of their assets

II. Based on 3 pillars:
   - i) Minimum capital requirements
   - ii) Supervisory review
   - iii) Market discipline

III. New methods of estimating risk-weighted assets that would increase the level of these assets and therefore require banks to maintain higher levels of capital

- Impact of the credit crisis on the credit market:
  - ➢ The credit crisis of 2008 triggered by defaults in subprime loans led to a halt in housing development, which reduced income, spending, and jobs
  - ➢ Financial institutions became cautious with their funds and were less willing to lend funds to MNCs

<u>International Bond Market</u>

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- Bonds or debentures or bills are issued by countries and governments
- Bond typically offers a fixed interest payment for a number of years or a term
- No ownership interest – no voting rights
- International bonds are classified as foreign bonds or Eurobonds
- Foreign bonds are issued by borrowers foreign to the country where the bond is placed

Why MNCs choose to issue bonds in international bond market:

1. Issuers recognize they may eb able to attract a stronger demand by issuing bonds in a foreign country than in their home country
2. Prefer to finance a specific foreign project in local currency to reduce exposure to exchange rate risk as payment on loans will partially offset project receipts
3. Financing in a foreign currency with a lower interest rate may enable MNC to reduce its cost of financing

Eurobonds:

- Bonds that are sold in countries other than the country of the currency denominating the bonds
- Emerged as a result of the Interest Equalization Tax imposed by US government to discourage US investors from investing in foreign securities
- Features of Eurobonds
  - Bearer bonds
  - Annual coupon payments
  - Convertible or callable clause

- Denominations of Eurobonds
  - commonly denominated in a number of currencies
  - because interest rates for each currency and credit conditions change constantly, the popularity of particular currencies changes over time

- Underwriting Process
  - Underwritten by multinational syndicate of investment banks and simultaneously placed in many countries

- Secondary Market
  - market makers are in many cases the same underwriters who sell the primary issues

- Impact of the Euro on the Eurobond Market
  - Before the euro's adoption, many countries issued bonds denominated in their local currency.
  - With many bonds issued in euro denominations, the market is much larger and more liquid.

Risk of International Bonds:

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- Interest rates vary between 2 countries due to different inflation rates and different risk
- Interest Rate Risk = potential for the value of bonds to decline in response to rising long-term interest rates
- Exchange Rate Risk = represents the potential for the value of bonds to decline (from the investor's perspective) because the currency denominating the bond depreciates against the home currency
- Liquidity Risk = represents the potential for the value of bonds to decline because there is not a consistently active market for the bonds
- Credit Risk = represents the potential for default.

➔ **Yield to Maturity** – is the interest rate at which the present value of the stream of payments (coupon payments + face value at maturity) is exactly equal to the current price.

Equal to the Internal rate of return of the bond at the current price

$$P = \frac{F}{\left[1+(\lambda/m)\right]^n} + \sum_{k=1}^{n} \frac{C/m}{\left[1+(\lambda/m)\right]^k}$$

➔ **Price-yield curves** – the only way a bond's yield can change is for the bond price to change. The price change required to match the yield change varies with the structures of the bond

➔ Long term bonds are more sensitive to interest rate changes than shorter term bonds – true for coupon bearing bonds and zero-coupon bonds

➔ Lower coupon bond has a higher sensitivity to interest rate changed than the higher coupon bond for a given maturity

Apart from YTM, other measures of yield give additional insight into a bond's properties

➔ **Current yield**:

$$CY = \frac{\text{annual coupon payment}}{\text{bond price}} \times 100$$

International Stock Markets

Issuance of stock in foreign markets:

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This can enhance a firm's global image

- Issuance of Foreign shares in the US
  - Yankee stock offerings = non-US firms that need large amounts of funds can issue stock in the US
  - This can diversify its shareholder base which can reduce share price volatility when large investors sell shares
- American Depository Receipts:
  - non-US firms can obtain equity financing through ADRs – certificates representing bundles of shares
  - use of ADRs circumvents some disclosure requirements imposed on share offerings in the US
  - Because ADR shares can be traded just like shares of a stock, the price of an ADR changes each day in response to demand and supply conditions
  - Value of an ADR should move in tandem with the value of the corresponding stock that is listed on the foreign stock exchange
  - ADR are especially attractive to US investors who anticipate that the foreign stock will perform well and that the currency in which it is denominated will appreciate against the dollar

$$P_{ADR} = P_{FS} \times S$$

- Padr: Price of ADR
- Pfs: price of foreign stock measured in foreign currency
- S: spot rate of foreign currency

Non-US firms listing on US Exchanges:

- Non-US firms have shares listed on NYSE or NASDAQ so that they can be easily traded in the secondary market
- The Sarbanes-Oxley Act led many non-US firms to place new issues of their stock in the UK instead of the US so that they would not have to comply with that law

Investing in Foreign Stock Markets:

- Many investors purchase stocks outside of their home country

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- Market characteristics vary among countries:
    - Stock market participation and trading activity are higher in countries where managers are encouraged to make decisions that serve shareholder interests and where there is greater transparency
    - Factors that influence trading activity:
        - Rights
        - Legal protection of shareholders
        - Government enforcement of securities laws
        - Accounting laws

Integration of International Stock Markets & Credit Markets:

- Key link is risk premium – this effects rate of return required by financial institutions

<u>How Financial Markets serve MNCs:</u>

Corporate functions that require foreign exchange markets

- Foreign trade with business clients
    - Exports generate foreign cash inflow
    - Imports require cash outflows
- Direct foreign investment, or the acquisition of foreign real assets
    - Requires cash outflows
    - Generates future inflows through remitted dividends back to the MNC parent or the sale of foreign assets
- Short-term investment or financing in foreign securities.
- Longer-term financing in the international bond or stock markets.