Chapter Objectives

Describe the background and corporate use of the following International Financial Markets:

- Foreign exchange market
- International money market
- International credit market
- International bond market
- International stock markets

Foreign Exchange Market (1 of 15)

Allows for the exchange of one currency for another.

Exchange rate specifies the rate at which one currency can be exchanged for another.

Foreign Exchange Market (2 of 15)

History of Foreign Exchange

- Gold Standard (1876 – 1913)
  - Each currency was convertible into gold at a specified rate. When World War I began in 1914, the gold standard was suspended.
- Agreements on Fixed Exchange Rates
  - Bretton Woods Agreement 1944 – 1971
  - Smithsonian Agreement 1971 – 1973
- Floating Exchange Rate System
  - Widely traded currencies were allowed to fluctuate in accordance with market forces

Foreign Exchange Market (3 of 15)

Foreign Exchange Transactions

- The over-the-counter market is the telecommunications network where companies normally exchange one currency for another.
- **Foreign exchange dealers** serve as intermediaries in the foreign exchange market
- **Spot Market:** A foreign exchange transaction for immediate exchange is said to trade in the spot market. The exchange rate in the spot market is the spot rate.
- **Spot Market Structure:** Trading between banks occurs in the **interbank market**.

Foreign Exchange Market (4 of 15)

Foreign Exchange Transactions (continued)

- **Use of the dollar in spot markets:** The U.S. Dollar is the commonly accepted medium of exchange in the spot market. This is especially true in countries where the home currency is weak or subject to restrictions.
- **Spot market time zones:** Foreign exchange trading is conducted only during normal business hours in a given location. Thus, at any given time on a weekday, somewhere around the world a bank is open and ready to accommodate foreign exchange requests.
- **Spot market liquidity:** More buyers and sellers means more liquidity.

Foreign Exchange Market (5 of 15)

Foreign Exchange Transactions (continued)

- **Attributes of Banks That Provide Foreign Exchange**
  - Competitiveness of quote
  - Special relationship with the bank
  - Speed of execution
  - Advice about current market conditions
  - Forecasting advice

Foreign Exchange Market (6 of 15)

Foreign Exchange Transactions (continued)

- **Bid/Ask Spread of Banks**
  - At any given point in time, a bank's **bid** (buy) quote for a foreign currency will be less than its **ask** (sell) quote.
  - **Bid/Ask spread of banks:** The bid/ask spread covers the bank's cost of conducting foreign exchange transactions.

Foreign Exchange Market (7 of 15)

Foreign Exchange Transactions (continued)

- **Comparison of Bid/Ask spread among currencies** (Exhibit 3.1)
  - The difference between a bid quote and an ask quote will look much smaller for currencies of lesser value. This differential can be standardized by measuring the spread as a percentage of the currency's spot rate.

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

Exhibit 3.1 Computation of the Bid Ask Spread

Currency	BID Rate	ASK Rate	$\frac{\text{ASK Rate} - \text{BID Rate}}{\text{ASK Rate}}$	=	BID/ASK Percentage Spread
British pound	\$1.52	\$1.60	$\frac{\$1.60 - \$1.52}{\$1.60}$	=	0.05 *or* 5%
Japanese yen	\$0.0070	\$0.0074	$\frac{\$0.0074 - \$0.0070}{\$0.0074}$	=	0.054 *or* 5.4%

Foreign Exchange Market (8 of 15)

Foreign Exchange Transactions (continued)

- **Factors That Affect the Spread**

The spread on currency quotations is influenced by the following factors:

$$\begin{array}{ccccccc} \mathit{Spread} = f\,(& \text{Order costs,} & \text{Inventory costs,} & \text{Competition,} & \text{Volume,} & \text{Currency risk} &) \\ & + & + & - & - & + & \end{array}$$

- **Order costs**: Costs of processing orders, including clearing costs and the costs of recording transactions.
- **Inventory costs**: Costs of maintaining an inventory of a particular currency.
- **Competition**: The more intense the competition, the smaller the spread quoted by intermediaries.

Foreign Exchange Market (9 of 15)

Foreign Exchange Transactions (continued)

- **Factors That Affect the Spread (continued)**
  - **Volume**: Currencies that have a large trading volume are more liquid because there are numerous buyers and sellers at any given time.
  - **Currency risk**: Economic or political conditions that cause the demand for and supply of the currency to change abruptly.

Foreign Exchange Market (10 of 15)

Foreign Exchange Quotations

Direct versus indirect quotations at one point in time

- **Direct Quotation** represents the value of a foreign currency in dollars (number of dollars per currency).
  - Example: 1 euro = *x* dollars
- **Indirect quotation** represents the number of units of a foreign currency per dollar.
  - Example: 1 dollars = *x* euro
  - Indirect quotation = 1 / Direct quotation

Exhibit 3.2 Direct and Indirect Exchange Rate Quotations

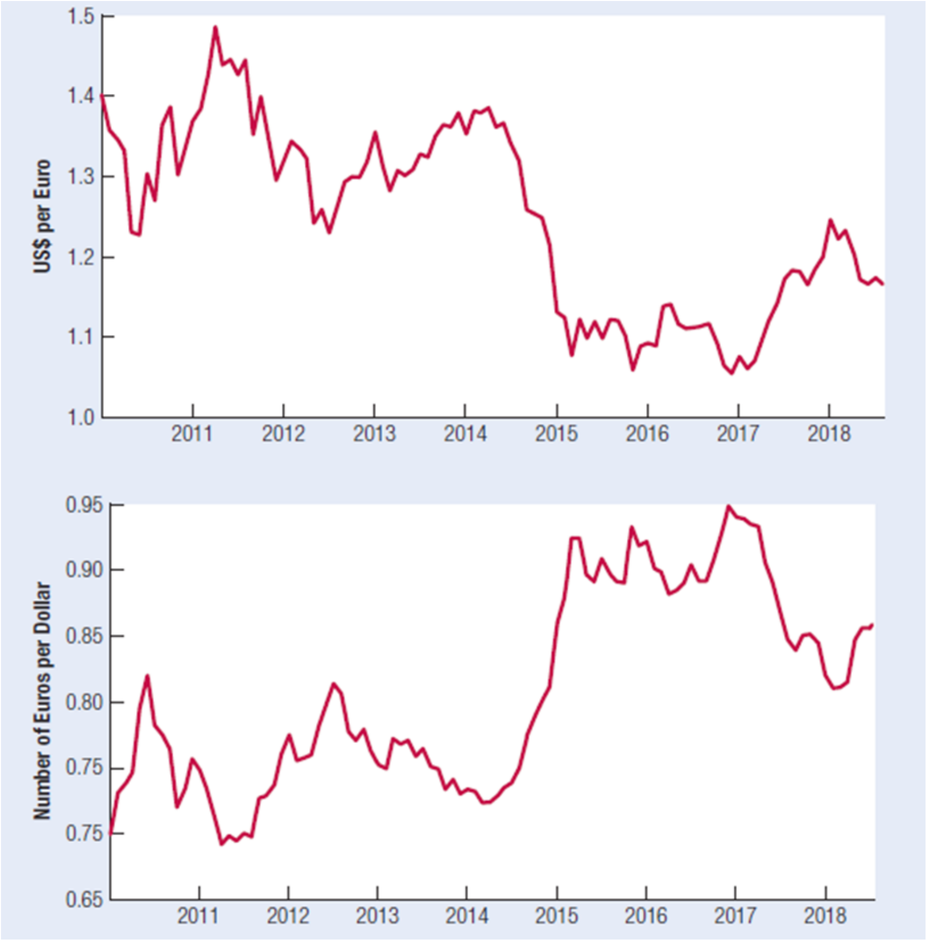
(1) Currency	(2) Direct Quotation (dollars per unit) At Start of Period	(3) Indirect Quotation (units per dollar) At Start of Period	(4) Direct Quotation at End of Period	(5) Indirect Quotation at End of Period
Canadian dollar	$.66	1.51	$0.70	1.43
Euro	$1.031	0.97	$1.064	0.94
Japanese yen	$0.009	111.11	$0.0097	103.09
Mexican peso	$0.12	8.33	$0.11	9.09
Swiss franc	$0.62	1.61	$0.67	1.49
U.K. pound	$1.50	0.67	$1.60	0.62

Foreign Exchange Market (11 of 15)

Foreign Exchange Quotations (continued)

- **Direct versus indirect exchange rate over time** (Exhibit 3.2 and 3.3)
  - Exhibit 3.2 demonstrates that the indirect exchange rate is the inverse of the direct exchange rate and also shows relationship between direct exchange rate and indirect exchange rate.
  - When the euro is **appreciating** against the dollar (based on an upward movement of the direct exchange rate of the euro), the indirect exchange rate of the euro is declining.
  - When the euro is **depreciating** (based on a downward movement of the direct exchange rate) against the dollar, the indirect exchange rate is rising.

Exhibit 3.3 Relationship over Time between the Euro’s Direct and Indirect Exchange Rates



Foreign Exchange Market (12 of 15)

Foreign Exchange Quotations (continued)

- **Source of exchange rate quotations**
  - Updated currency quotations are provided for several major currencies on Yahoo's website (finance.yahoo.com/currency).
  - Exchange rate quotations are also provided by many other online sources, including oanda.com.

Foreign Exchange Market (13 of 15)

Foreign Exchange Quotations (continued)

- **Cross Exchange Rates**
  - **Cross exchange rate** is the amount of one foreign currency per unit of another foreign currency
  - **Example**

Value of peso = $0.11

Value of Canadian dollar = $0.70

$$\text{Value of peso in C\$} = \frac{\text{Value of peso in \$}}{\text{Value of C\$ in \$}}$$

$$= \frac{\$0.11}{\$0.70} = \text{C\$ } 0.157$$

- ***Cross Exchange Rates over Time***: As the exchange rates of two currencies change against the U.S. dollar over time, the cross exchange rate of these currencies can change as well.

Foreign Exchange Market (14 of 15)

Derivative Contracts in the Foreign Exchange Market

- **Forward Contracts**: agreements between a foreign exchange dealer and an MNC that specifies the currencies to be exchanged, the exchange rate, and the date at which the transaction will occur.
    - The **forward rate** is the exchange rate specified by the forward contract.
    - The **forward market** is the over-the-counter market where forward contracts are traded.

Foreign Exchange Market (15 of 15)

Derivative Contracts in the Foreign Exchange Market (continued)

- **Currency Futures Contracts**: specifies a standard volume of a particular currency to be exchanged on a specific settlement date.
  - The **Futures rate** *is the exchange rate at which an entity can purchase or sell a specified currency on the settlement date in accordance with the futures contract.*
- ***Currency Options Contracts*** currency options contracts can be classified as calls or puts.
  - A **currency call option** provides the right to buy a specific currency at a specific price within a specific period of time.
  - A **currency put option** provides the right to sell a specific currency at a specific price within a specific period of time.

International Money Market (1 of 4)

Corporations or governments need **short-term funds** denominated in a currency different from their home currency.

The 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

International Money Market (2 of 4)

Origins and Development

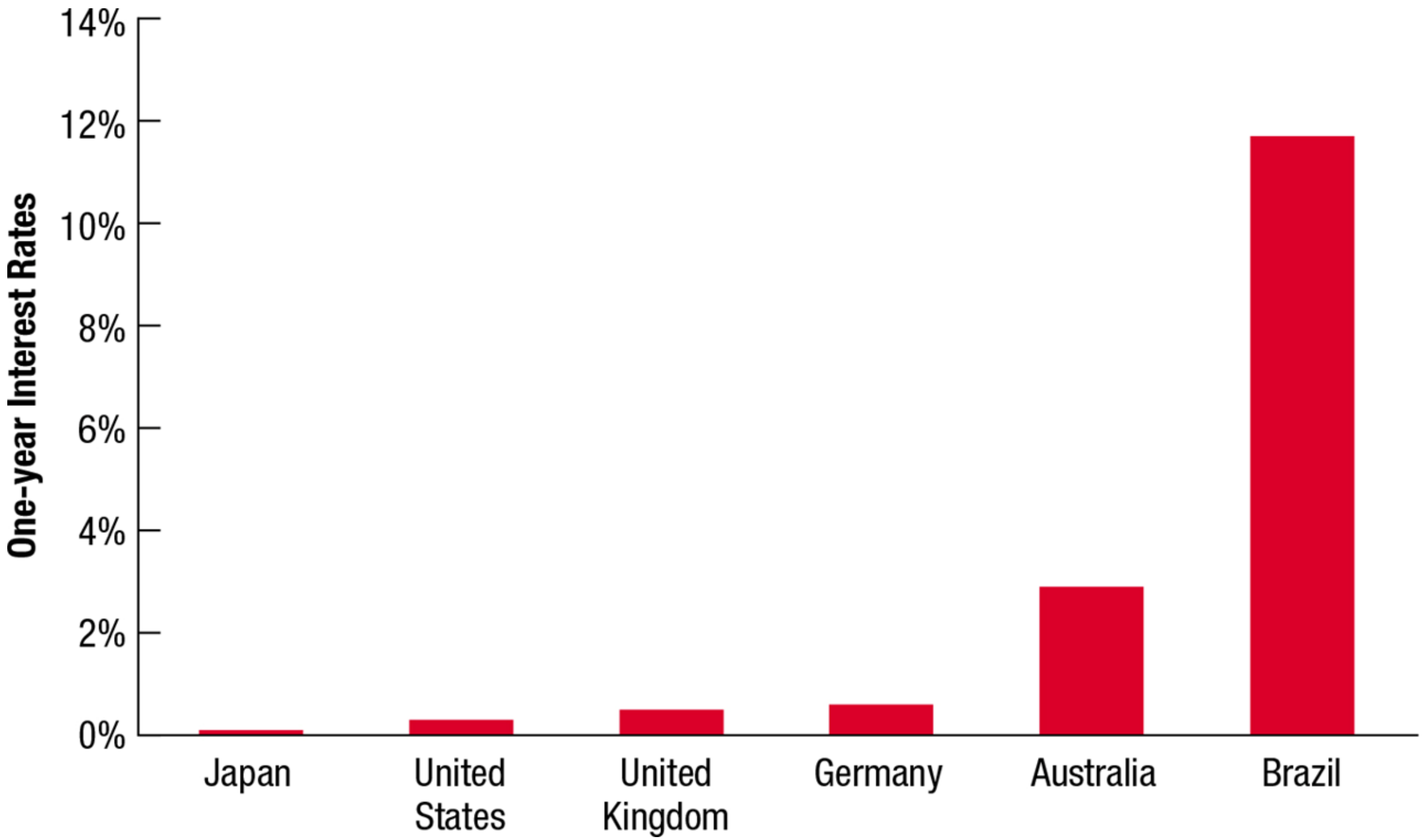
- **European Money Market:** Dollar deposits in banks in Europe and other continents are called Eurodollars or Eurocurrency. Origins of the European money market can be traced to the Eurocurrency market that developed during the 1960s and 1970s.
- **Asian Money Market:** Centered in Hong Kong and Singapore. Originated as a market involving mostly dollar-denominated deposits, and was originally known as the Asian dollar market.

International Money Market (3 of 4)

Money Market Interest Rates Among Currencies

- The money market interest rates in any particular country are dependent on the demand for short-term funds by borrowers, relative to the supply of available short-term funds that are provided by savers. (Exhibit 3.4)
- 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.

Exhibit 3.4 Comparison of 2015 International Money Market Interest Rates



International Money Market (4 of 4)

Money Market Interest Rates Among Currencies (continued)

- **Global Integration of Money Market Interest Rates**
  - Money market interest rates among countries tend to be **highly correlated** over time.
  - **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

Money Market Interest Rates Among Currencies (continued)

- **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 (1 of 5)

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).**

International Credit Market (2 of 5)

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.
- A **syndicate** of banks can be formed to underwrite the loans and the lead bank is responsible for negotiating the terms with the borrower.

International Credit Market (3 of 5)

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, mergers, 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** — Banks must maintain a high level of capital as a percent of their assets. For this purpose, banks' assets are weighted by risk.

International Credit Market (4 of 5)

Regulations in the Credit Market (Continued)

- **Basel II Accord** — Attempts to account for differences in collateral among banks. In addition, this accord encourages banks to improve their techniques for controlling operational risk, which could reduce failures in the banking system. Also plans to require banks to provide more information to existing and prospective shareholders about their exposure to different types of risk.
- **Basel III Accord** — Called for new methods of estimating risk-weighted assets that would increase the level of risk-weighted assets, and therefore require banks to maintain higher levels of capital.

International Credit Market (5 of 5)

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.

International Bond Market (1 of 4)

Foreign bonds are issued by borrower foreign to the country where the bond is placed.

Eurobonds

- Features of Eurobonds
  - Bearer bonds
  - Annual coupon payments
  - Convertible or callable
- Denominations of Eurobonds
  - Commonly denominated in a number of currencies
- Secondary Market
  - Market makers are in many cases the same underwriters who sell the primary issues

International Bond Market (2 of 4)

Development of Other Bond Markets

- Bond markets have developed in Asia and South America.
- Bond market yields among countries tend to be highly **correlated** over time.
- When economic conditions **weaken**, aggregate demand for funds declines with the decline in corporate expansion.
- When economic conditions **strengthen**, aggregate demand for funds increases with the increase in corporate expansion.

International Bond Market (3 of 4)

Risk of International Bonds

- **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.

International Bond Market (4 of 4)

Impact of the Greek Crisis on Bonds

- **Spring 2010**: Greece experienced weak economic conditions and a large increase in the government budget deficit.
- **Concern spread** to other European countries such as Spain, Portugal, and Ireland that had large budget deficits.
- **May 2010**: Many European countries and the IMF agreed to provide Greece with new loans.
- **Contagion Effects:**
  - Weakened some other European countries.
  - Forced creditors to recognize that government debt is not always risk free.

International Stock Markets (1 of 5)

Issuance of Stock in Foreign Markets — Some U.S. firms issue stock in foreign markets to enhance their global image.

- Impact of the Euro: resulted in more stock offerings in Europe by U.S. and European based MNCs.

Issuance of Foreign Stock in the U.S.

- **Yankee stock offerings** — Non-U.S. corporations that need large amounts of funds sometimes issue stock in the United States
- **American Depository Receipts** (ADR) — Certificates representing bundles of stock. ADR shares can be traded just like shares of a stock.

International Stock Markets (2 of 5)

Non-U.S. Firms Listing on U.S. Exchanges

- Non-U.S. firms have their shares listed on the New York Stock Exchange or the Nasdaq market so that the shares can easily be traded in the secondary market.
- Effect of Sarbanes-Oxley Act on Foreign Stock Listings — Many non-U.S. firms decided to place new issues of their stock in the United Kingdom instead of in the United States so that they would not have to comply with the law.

International Stock Markets (3 of 5)

Investing in Foreign Stock Markets

- Many investors purchase stocks outside of the home country.
- Recently, firms outside the U.S. have been issuing stock more frequently.
- Comparing the size of stock markets (Exhibit 3.5)

Exhibit 3.5 Comparison of Stock Exchanges (2015)

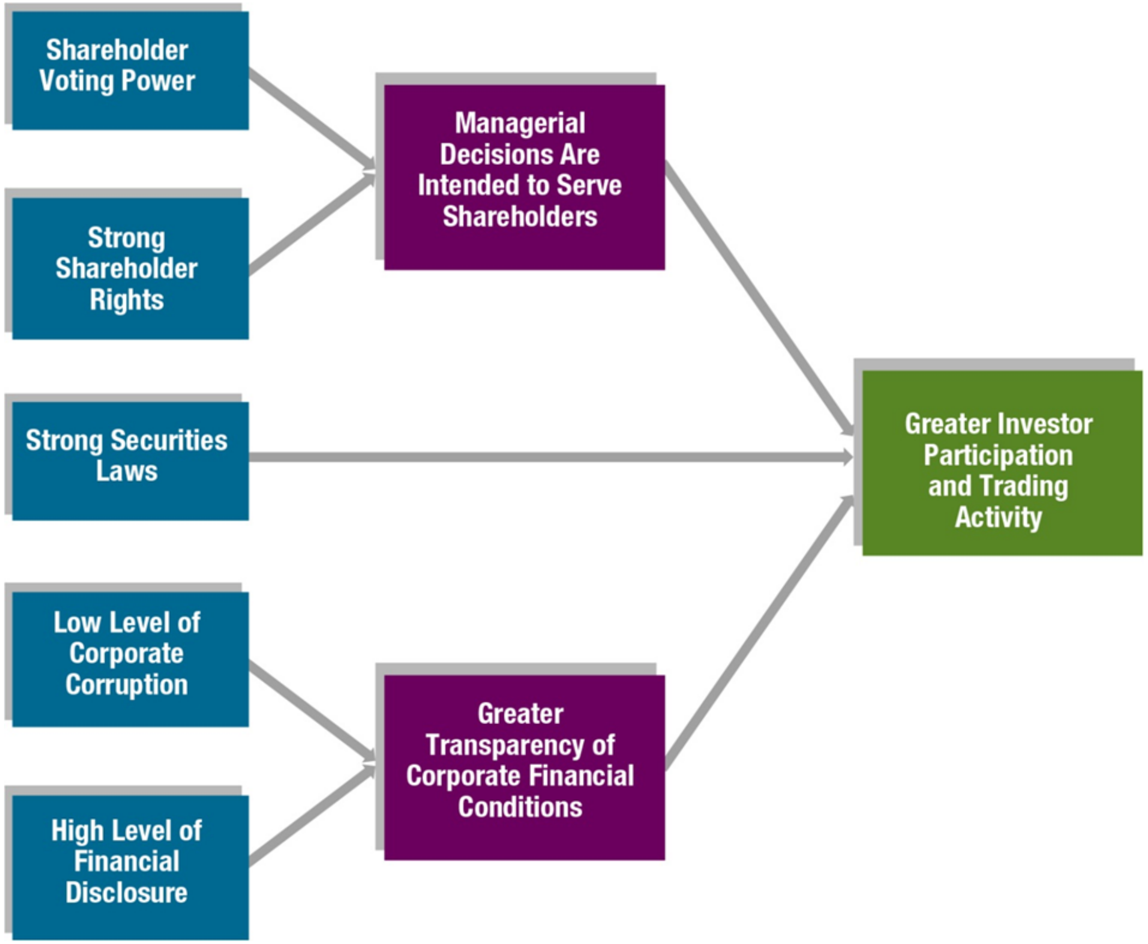
Country	Market Capitalization (billions of dollars)	Number of Listed Companies
Argentina	60	101
Australia	1,622	2,071
Brazil	823	308
Chile	225	308
China	6,270	2,635
Greece	22	244
Hong Kong	3,324	1,763
Hungary	13	48
Japan	4,485	3,470
Mexico	460	147
Norway	219	220
Slovenia	6	77
Spain	942	3,460
Switzerland	1,515	275
Taiwan	860	882
United Kingdom	6,187	2,938
United States	19,222	5,250

International Stock Markets (4 of 5)

How Market Characteristics Vary among Countries (Exhibit 3.6)

- 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** vary by country
  - **Legal protection** of shareholders
  - **Government enforcement** of securities laws
  - **Accounting laws**

Exhibit 3.6 Impact of Governance on Stock Market Participation and Trading Activity



International Stock Markets (5 of 5)

Integration of Stock Markets

- Stock market conditions reflect the host country's conditions. If the country is integrated, the stock market will be also.

Integration of International Stock Markets and Credit Markets

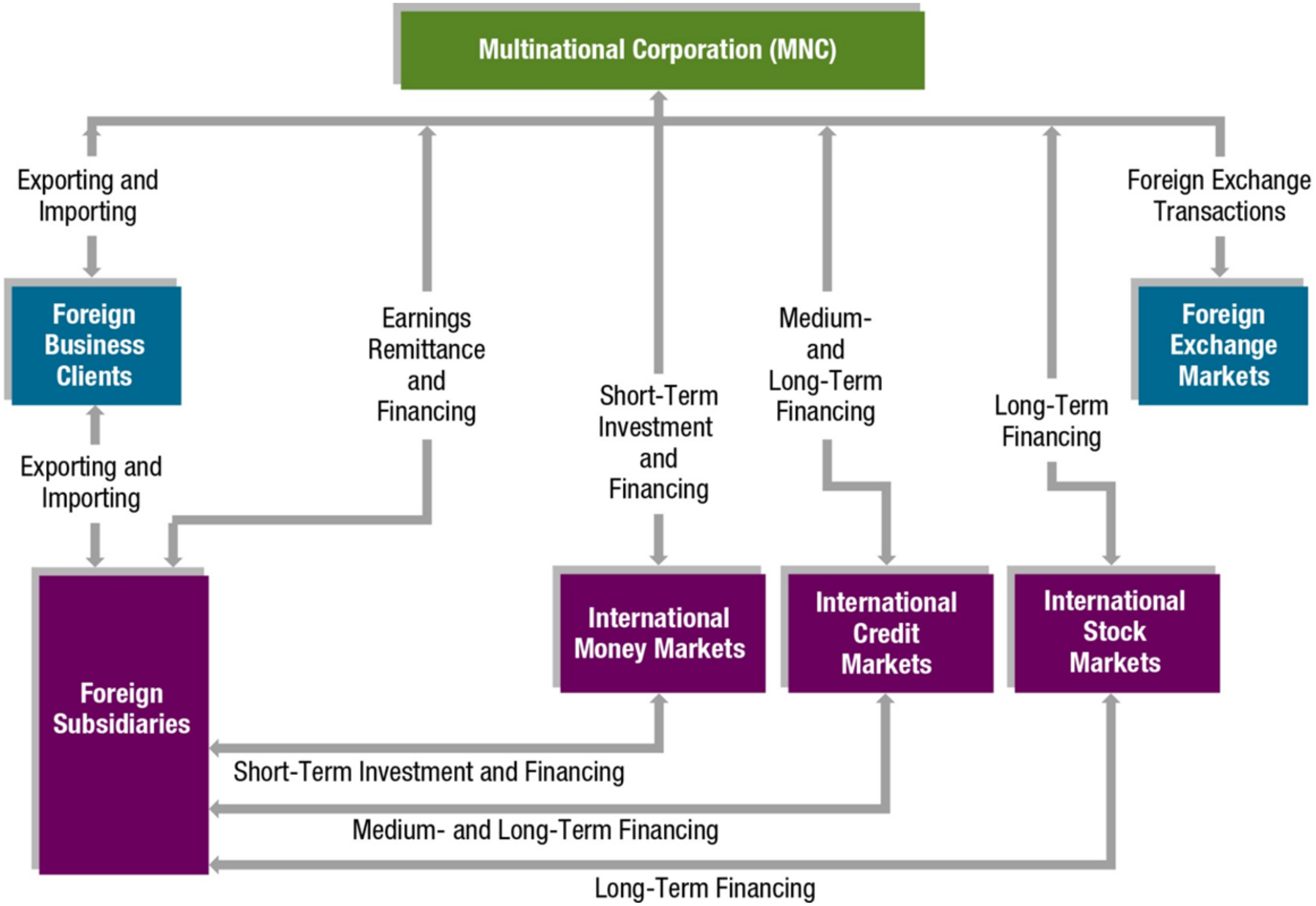
- The key link is the risk premium, which affects the rate of return required by financial institutions.

How Financial Markets Serve MNCs (Exhibit 3.7)

Corporate functions that require foreign exchange markets.

- Foreign trade with business clients.
- Direct foreign investment, or the acquisition of foreign real assets.
- Short-term investment or financing in foreign securities.
- Longer-term financing in the international bond or stock markets.

Exhibit 3.7 Foreign Cash Flow Chart of a Multinational Corporation (MNC)



Summary (1 of 3)

- The foreign exchange market allows currencies to be exchanged in order to facilitate international trade or financial transactions. Commercial banks serve as financial intermediaries in this market. They stand ready to exchange currencies for immediate delivery in the spot market. In addition, they are also willing to negotiate forward contracts with MNCs that wish to buy and/or sell currencies in the future.

Summary (2 of 3)

- The international money markets are composed of several large banks that accept deposits and provide short-term loans in various currencies. This market is used primarily by governments and large corporations.
- The international credit markets are composed of the same commercial banks that serve the international money market. These banks convert some of the deposits received into loans (for medium-term periods) to governments and large corporations.

Summary (3 of 3)

- The international bond markets facilitate international transfers of long-term credit, thereby enabling governments and large corporations to borrow funds from various countries. The international bond market is facilitated by multinational syndicates of investment banks that help to place the bonds.
- International stock markets enable firms to obtain equity financing in foreign countries. Thus, these markets help MNCs finance their international expansion.