Glossary

absolute borrowing advantage A situation in which one corporation's all-in costs are lower in each of two currencies than another corporation's all-in costs.

absolute purchasing power parity The idea that the exchange rate should adjust to equate the internal and external purchasing powers of a money, in which case the exchange rate, quoted as domestic currency per foreign currency, should equal the ratio between the domestic and foreign price levels.

ad valorem duties Tariffs that are quoted as a certain percentage of the export price.

adjusted net present value (ANPV) A capital budgeting technique that derives the value of a firm or project in steps, first deriving the present value of the all-equity free cash flows and then adding the present value of financial side effects and growth options.

affiliate bank A bank partly owned but not controlled by a foreign parent bank.

agency costs The costs that the owners of a firm incur because of the separation of ownership and control.

agency theory Economic models that explore the problems in corporations arising from the separation of ownership and control and that devise ways to resolve them.

AIC (all-in-cost) principle The discount rate or internal rate of return that equates the present value of all the future interest and principal payments to the net proceeds (face value minus fees) received by the issuer.

American depositary receipt (ADR) A stock certificate traded in the United States representing a specific number of shares in a company listed on a foreign stock exchange that are held in custody by a U.S. depositary bank that issues the ADR.

American option An option that can be exercised at the discretion of the buyer any time between the purchase date and the maturity date.

American quote The dollar price of a foreign currency—that is, the amount of dollars it takes to purchase one unit of the foreign currency.

anti-globalization An umbrella term encompassing separate social movements, united in their opposition to the globalization of corporate economic activity and the free trade with developing nations that results from such activity.

appreciation In discussing changes in exchange rates, the strengthening or increase in value of one currency relative to another.

arbitrage The process of earning riskless profits by simultaneously buying and selling equivalent assets or commodities.

arbitrage pricing theory (APT) An asset pricing model based on the idea that a number of economy-wide factors systematically affect the returns on a large number of securities and hence drive their expected returns.

ask rate The price (exchange rate) at which a dealer is willing to sell one currency in return for another currency. Also called the offer price.

asset market approach (to exchange rate determination) Exchange rate models that view the exchange rate as an asset price, with its value depending on current fundamentals (such as relative money supplies and output levels of countries) and expected values of future economic fundamentals.

asset securitization The packaging of assets or obligations into securities for sale to third parties.

asset substitution A situation in which managers, acting in the interests of shareholders, accept a high-variance project that may lower overall firm value but that increases shareholder value.

Association of Southeast Asian Nations (ASEAN) A regional economic and political organization that is designed to promote trade and investment in its member countries: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

aval An irrevocable guarantee of the debts of an importer, usually guaranteed by the importer's government or its bank.

average-rate option An option contract in which the payoff depends on the difference between the strike price and the average exchange rate, calculated from the initiation of the contract to the expiration date.

B/A (banker's acceptance) A document, tradable in financial markets, that is created when a bank stamps and signs a time draft indicating that the bank will pay the face value of a draft at maturity.

back-to-back loan An agreement that is similar in structure to a parallel loan but in which the loans are made between the multinational parent corporations, which then lend to their subsidiaries in two different countries, and which contains the right of offset.

Baker Plan A 1985 plan that constituted a second phase of the handling of the developing country Debt Crisis. It relied heavily on countries agreeing to change their economic policies following guidelines set by the IMF in exchange for a modest amount of new loans extended to developing countries by private commercial banks and the World Bank.

balance of payments (BOP) A summary of the value of the transactions between a country's residents, businesses, and government with the rest of the world for a specific period of time, such as a month, a quarter, or a year.

balance-sheet hedge The practice of denominating debt in a currency in which a firm has revenues.

Bank for International Settlements (BIS) An international organization based in Basel, Switzerland, that promotes international monetary and financial stability and serves as a bank for the world's central banks.

barrier option A traditional option with an additional requirement that either activates the option or extinguishes it if the exchange rate passes through a prespecified barrier exchange rate.

Basel Accord An agreement between G10 countries that sets capital requirements (also known as "capital adequacy rules") for internationally active banks.

basis point adjustment The process of changing the interest rate on the side of a currency swap the client is paying away from the bank's quoted rate when the client wants to receive interest cash flows from the bank at something other than the bank's quoted rate.

basis risk The risk arising from differences between the current spot price and the futures price and the fact that the maturity of what is being hedged may not be the maturity of the futures contract.

basket of currencies A composite currency composed of various amounts of other currencies.

beta The systematic risk of an individual asset in the capital asset pricing model (CAPM). Measured as the covariance of the return on the security with the return on the market portfolio divided by the variance of the return on the market portfolio.

bid–ask spread The difference between the ask rate and the bid rate. The spread constitutes a source of profits for market makers.

bid rate The price (exchange rate) at which a dealer is willing to buy one currency in return for another currency.

bilateral investment treaty (BIT) An agreement between two countries that promises mutual respect for, and protection of, investments in each other's territory, with the purpose of encouraging international capital investment.

bilateral netting system A payment system between two parties who agree to transfer only the net amounts that are owed to each other.

binomial option pricing Model to price options that assumes that random movements in the underlying asset, over short intervals, are well approximated by a discrete, two-state model. The option is then priced by considering a portfolio of stocks and bonds, or currencies, that replicates the payoff to the option over the two states.

B/L (bill of lading) A contract issued to an exporter by a shipping company that will transport the exporter's goods to their destination.

blocked funds A problem encountered by multinational corporations when government restrictions in a host country prevent the transfer of foreign currency out of that country.

BOP *See* balance of payments.

Brady bonds Bonds issued by countries in response to the Brady Plan in which the principal and some initial interest payments are collateralized.

Brady Plan A comprehensive plan to resolve the developing countries Debt Crisis developed in 1989 by then U.S. Treasury Secretary Nicholas Brady. This plan put pressure on banks to offer some form of debt relief to developing countries. It also called for an expansion in secondary market transactions aimed at debt reduction.

breakout Term used by chartists to describe a situation when a trading range is broken and a sudden rise or fall in prices is expected.

Bretton Woods Agreement An accord signed by 44 Allied nations toward the end of World War II. It established regulations and regulatory bodies for an international monetary system, based on a target zone relative to the dollar, which itself was fixed relative to gold at $35 per ounce. The system collapsed in 1971.

buyback An agreement in which an exporter of physical capital agrees to accept payment in the form of the output of a plant, which the exporter helps to construct in a foreign country.

buyer credit An international finance method used when expensive capital equipment is imported in which the exporter arranges for a financial institution to grant credit to the importer to enable payment to the exporter.

call option *See* foreign currency call option.

cannibalization of exports The possible loss of export revenue when a foreign market is served by direct foreign investment and the former exports to that market are unable to be sold elsewhere.

capital account A major account of the balance of payments that records the purchases and sales of foreign assets by domestic residents as well as the purchases and sales of domestic assets by foreign residents.

capital adequacy rules *See* Basel Accord.

capital allocation line (CAL) A description of the feasible trade-offs between expected return and standard deviation that arise when allocating capital between a risk-free asset and a single risky asset.

capital asset pricing model (CAPM) A model in which an asset's risk premium, its expected return in excess of the risk-free rate, is determined by its beta with respect to the market portfolio times the risk premium on the market portfolio.

capital budgeting The process of valuing investments by taking their net present values and allocating capital upon that basis.

capital controls Regulations that restrict the flow of capital into and out of a country.

capital expenditures The investments in plant and equipment that a firm makes in expectation of future profitability.

capital flight An outflow of capital from a country, typically associated with a prospective devaluation of the currency or other actions by the country's government that would result in a loss of wealth for investors in that country.

capital inflow Purchases by foreign residents of the assets of a country, such as its stocks, bonds, or real estate, or the sale of foreign assets by domestic residents.

capital outflow Purchases by domestic residents of the assets of a foreign country, such as its stocks, bonds, or real estate, or the sale of domestic assets by foreign residents.

CAPX *See* capital expenditures.

carry trade Investment in a high-yield currency while borrowing in a low-yield currency (or buying the high-yield currency in the forward market relative to the low-yield currency).

cash-in-advance Export financing technique requiring the importer to pay the exporter before the goods are shipped, implying that the exporter does not have to finance the goods during their shipment.

centralized debt denomination A situation in which a multinational corporation borrows in the company's domestic currency.

certificate of analysis A document that attests to some measurable characteristics of a shipment.

certificate of origin A document that indicates the source of a shipment of merchandise.

chartism Forecasting technique (for exchange rates or other asset prices) that tries to infer possible future trends based only on information regarding the actual trading history of the asset price.

clean acceptance An export finance method in which a bank agrees to accept a certain number and amount of time drafts submitted by the exporter. The bank immediately discounts the drafts to provide financing for the exporter, and the exporter repays the face amount of the draft to the bank at maturity.

clean bill of lading A shipping contract that indicates that the carrier believes the merchandise was received in good condition, based on visual inspection.

clearing arrangements International barter conducted with the extension of credit from one party to the other.

Clearing House Interbank Payments System (CHIPS) An electronic payment system that transfers funds and settles transactions in U.S. dollars.

clearinghouse An agency or a separate corporation of a futures exchange that acts as a buyer to every clearing member seller and a seller to every clearing member buyer. The clearinghouse also settles trading accounts, collects and maintains margin monies, regulates delivery, and reports trading data.

clearing member A member of an exchange clearinghouse. The member is usually a company, which is responsible for the financial commitments of its customers for whom it clears trades.

closed-end fund An investment fund that trades on a stock exchange at a price that may differ from the net asset value of the assets of the managed portfolio.

CLS Bank A financial institution owned by the world's largest financial groups that engages in continuous linked settlement by collecting details of all the currency trades between its member banks, using multilateral netting to figure net payments for each bank and finalizing pay-ins and pay-outs to the system over a 5-hour window.

CME Group The Chicago Mercantile Exchange Group, a large futures and options exchange, that trades, among other contracts, currency futures and options on those futures.

commercial invoice A document given by an exporter to an importer that contains a detailed description of the merchandise in question, including unit prices, the number of items, and the financial terms of the sale.

Commodity Futures Trading Commission (CFTC) The government organization that regulates the U.S. futures industry.

comparative advantage The idea that international trade makes everyone better off when countries specialize in the production of goods that they produce relatively most efficiently.

comparative borrowing advantage A situation in which one corporation's ratio of all-in costs for borrowing in two currencies is lower than another corporation's ratio of all-in costs.

compensatory trade A type of complex countertrade.

conditional expectation The probability-weighted average of future events, such as possible future exchange rates, which is also the mean of a conditional probability distribution for that variable. Also called the conditional mean.

conditional mean *See* conditional expectation.

conditional probability distribution A description of possible future events and their respective probabilities of occurrence that is based on an information set at a point in time.

conditional standard deviation The square root of the variance of a conditional probability distribution of a particular variable, such as the rate of currency appreciation. Often called the conditional volatility when applied to a financial return.

conditional volatility *See* conditional standard deviation.

confirmed documentary credit (D/C) A documentary credit in which, in addition to the bank that issues the documentary credit, a second commercial bank that is usually well known to the exporter agrees to honor the draft presented by the exporter.

consular invoice A document filled out by an exporter in consultation with the local consulate of the importing country that provides information to customs officials in the importing country, with the goal of preventing false declarations of the value of the merchandise.

contagion The phenomenon in which a currency or other financial crisis spreads from one country to another merely as a result of a crisis occurring in a first country.

conversion The process of buying a foreign currency in the forward market and selling it forward with a synthetic forward contract constructed with options.

convertible bond A corporate bond that is convertible into a fixed number of equity shares of the corporation prior to maturity.

convex tax code A tax system that imposes a larger tax rate on higher incomes and a smaller tax rate on lower incomes, also called a progressive system of taxation.

corporate governance The legal and financial structure that controls the relationship between a company's shareholders and its management.

correlation A number between –1 and 1 that indicates how closely related are the random variations in two variables.

correspondent bank A bank that performs services as a proxy for financial institutions that lack an on-site presence in a particular country.

costs of financial distress The loss of firm value from the direct costs of bankruptcy associated with legal, consulting, and accounting fees and the indirect losses associated with the possibility that the firm may go into bankruptcy.

counterpurchase A trading activity that is similar to a buyback, except the exporter agrees to purchase goods that are not produced by the importer.

countertrade A variety of international trade activities in which exporters and importers exchange goods and services without necessarily having to use money as a medium of exchange.

country credit spread The difference between the yield on a bond issued by a developing country in an international currency and the government bond yield of the country that issues the international currency. This spread reflects sovereign risk.

country fund A closed-end fund that invests in the securities of one particular country.

country risk The risk that a country's political environment as well as its economic and financial environment may adversely affect a company's cash flows.

country risk premium The additional yield above the risk-free rate demanded by investors in government bonds to protect them against political risk.

country risk rating Assessments of country risk produced by a number of specialized organizations, typically for a large number of countries.

covariance The probability-weighted average of the product of the deviations of two random variables from their means, which measures how the two random variables move together, or covary with each other.

covered interest rate arbitrage An arbitrage that exploits deviations from covered interest rate parity.

covered interest rate parity A no-arbitrage relationship between spot and forward exchange rates and the two nominal interest rates associated with these currencies.

crawling peg system A target zone system wherein the bands are reset over time, typically in response to movements in inflation.

credit default swap (CDS) A bilateral insurance contract between a protection buyer and a protection seller to protect against default on a specific bond or loan issued by a corporation or sovereign. The protection buyer pays semiannual or annual insurance premiums to the protection seller. In return, when there is a default event, the protection seller transfers money (e.g., the face value of the bond) to the protection buyer in return for the defaulted bond.

credit rating A rating that is provided by a credit-rating firm and that indicates the creditworthiness of a corporate or government borrower.

credit spread The difference between the borrowing cost of a corporate borrower and the borrowing cost of a risk-free government on a security with similar maturity.

credit transaction In balance of payments accounting, any transaction that results in a receipt of funds from foreigners; in other words, any transaction that gives rise to a conceptual inflow or source of foreign currency.

cross-currency settlement risk The risk that a financial institution will fail to deliver currency on one side of a foreign exchange transaction, even though the financial institution has received the other currency from its counterparty to the transaction. Also called Herstatt risk.

cross-holding The practice of one firm owning shares in another firm.

cross-listing The practice of listing shares on an exchange outside the country in which the company is headquartered.

cross-rate An exchange rate between two currencies not involving the U.S. dollar.

currency board An exchange rate system in which the monetary base of the domestic currency is 100% backed by a foreign reserve currency and is fully convertible into the reserve currency at a fixed rate and on demand.

currency swap An agreement between two counterparties to exchange principals denominated in two currencies of equivalent value at the spot exchange rate and then to have one party pay interest and principal on the currency it received and the other party to pay interest and principal on the currency it received.

currency warrants Longer maturity foreign currency options that are sometimes issued by major corporations and are actively traded on exchanges.

current account A major account of the balance of payments that records transactions in goods and services, transactions associated with the income flows from assets, and unilateral transfers.

cylinder option A contract that allows the buyer to specify a desired trading range in the future so that if the future spot rate falls outside of the range, the buyer transacts at the limits of the range. Unlike the range forward contract, the trading range is set to allow the buyer either to pay money or possibly to receive money up front for entering into the contract.

D/A (documents against acceptance) collection A method of international trade in which an exporter extends credit to an importer, which acknowledges its legal obligation to pay the face amount of a draft at maturity by having the collecting bank present a time draft to the importer who must sign it, date it, and write *accepted* across it before the shipping documents are released to the importer.

dark pools Electronic trading systems that deliberately sacrifice price and volume transparency to offer anonymity to large traders.

D/C (documentary credit) A method of international trade in which commercial banks stand between an importer and an exporter to assure the exporter of payment after fulfilling certain requirements. In the United States, also known as a letter of credit (L/C).

debit transaction In balance of payments accounting, any transaction that results in a payment to foreigners; in other words, any transaction that gives rise to a conceptual outflow or use of foreign currency.

debt buyback A situation in which a country buys back its own outstanding loans at a discount.

Debt Crisis A 1980s economic and financial crisis that occurred in a large number of developing countries after many defaulted on their loan payments to international banks and that took a full decade to be resolved.

debt–equity swap A situation in which a multinational corporation buys the debt of a country from an original creditor at a discount, presents the debt to the debtor government, receives local currency equal to the face value of the debt, and then uses the local currency to make an equity investment in that country.

debt overhang The notion that a country saddled with a huge debt burden has little incentive to implement economic reforms or stimulate investment because the resulting increase in income will simply be appropriated by the country's creditors in the form of higher debt payments. Also used to describe a similar situation within a firm in which the management has no incentive to undertake profitable investments because the benefits accrue mostly to bondholders.

decentralized debt denomination A situation in which a multinational corporation borrows in the currencies in which its revenues are received.

deemed-paid credit The amount of domestic tax credit a company receives for foreign taxes paid by one of its subsidiaries.

deficit In balance of payments accounting, the idea that debits on a particular account are greater than credits on that account.

deflation The rate of change of the price level when prices are falling.

delta (of an option) The change in the value of the derivative asset with a small change in the value of the underlying asset.

delta neutral The property of a portfolio of foreign exchange positions, of not being exposed to risk of loss from small changes in foreign exchange rates.

demand curve A function that indicates the quantity demanded by consumers, given the relative price of a product.

demutualization The process of converting stock exchanges from non-profit, member-owned organizations to for-profit, investor-owned, and typically publicly traded companies.

density function The mathematical formula that describes a probability distribution.

depository receipt *See* DR.

depreciation In discussing changes in exchange rates, a weakening or decrease in the value of one currency relative to another.

depreciation (accounting) Accounting deductions for corporate income tax associated with previous capital expenditures on plant and equipment.

depreciation tax shield The amount of taxes that a corporation avoids because depreciation is a deductible expense.

derivative securities Financial contracts, such as forwards, futures, options, and swaps, whose values depend on the values of underlying asset prices, such as exchange rates, interest rates, or stock prices.

devaluation A change in a fixed exchange rate that increases the domestic currency price of foreign currency and thus decreases the value of the domestic currency.

devaluation premium The part of the interest rate on a particular currency that reflects its expected depreciation relative to another currency.

digital options Contracts that pay off an amount of cash or the value of an asset when a certain condition is met—for example, when the spot rate is lower than the strike price.

direct quote An exchange rate quote expressed as an amount of domestic currency per unit of foreign currency.

dirty float currency system A floating exchange rate system in which a central bank nonetheless intervenes in the foreign exchange market, buying and selling its currency to affect its foreign exchange value.

discount rates Expected rates of return used to take present values.

documentary collection A method of international trade, with some bank involvement, in which an exporter retains control of goods until an importer has paid or is legally bound to pay.

dollarization The phenomenon in which use of a foreign currency drives out the domestic currency as a means of payment and as a savings vehicle.

domestic bonds Bonds that are issued and traded within the internal market of a single country and are denominated in the currency of that country.

domestic CAPM An application of the CAPM that assumes that the assets of a country are held only by investors who reside in that country so that the market portfolio is a local market index.

D/P (documents against payment) collection A method of international trade in which an importer must pay the amount of a sight draft to the collecting bank before the trade documents are released.

DR (depositary receipt) A stock certificate that represents a specific number of shares in a company listed in a foreign stock exchange that are held in custody by a depositary bank that issues the DR.

dragon bond A Eurobond targeted at the Asian market (outside Japan) with Asian syndication.

dual-currency bond A straight, fixed-rate bond issued in one currency, for example yen, which pays coupon interest in that same currency, but the promised repayment of principal at maturity is denominated in another currency, for example U.S. dollars.

early exercise The exercise of an American option prior to maturity.

earnings before interest and taxes (EBIT) Revenue minus cost of goods sold minus selling and general administrative expenses and minus accounting depreciation.

economic and monetary union (EMU) Agreement among European Union countries to achieve an economic and monetary union. In an economic union, there is free movement of labor, goods, services, and capital. In a monetary union, a group of currencies uses a common currency and a common central bank conducts monetary policy. Also, informally used as the European Monetary Union to specifically describe the countries that abandoned their sovereign currencies in order to create the euro.

economic exposure *See* real exchange risk.

Edge Act bank A federally chartered subsidiary of a U.S. bank that is physically located in the United States but is allowed to engage in a full range of international banking activities. This bank can accept deposits from foreign customers, finance international trade, transfer international funds, and even own equity in U.S. corporations.

efficient frontier The set of risky portfolios that maximize the expected return on the portfolio for each level of portfolio variance.

elasticity The percentage change in the quantity demanded with a percentage change in the relative price of a product but defined to be a positive number.

electronic communication network (ECN) A system that electronically collects and matches buy and sell orders and displays the best available prices.

electronic foreign exchange trading (eFX) Electronic trading platforms that may offer multiple quotes from a number of foreign exchange dealers and that may house an electronic communication network (ECN).

eligible banker's acceptance (B/A) A banker's acceptance that meets the requirements of the Federal Reserve and consequently does not require the bank to hold reserves against the B/A.

emerging markets In equity trading, the stock markets of developing countries, or more generally, the countries themselves.

equity market liberalization A policy reform that allows foreign investment in the local stock market and allows local investors to invest abroad.

equity risk premium In general, the expected return on an equity in excess of the risk-free return, and specifically, the expected excess return on the market portfolio.

estimator The formula for translating data into parameter estimates (of a model); see also OLS estimator.

Eurobank A bank that operates in the Eurocurrency market, making short-term loans and extending Eurocredits to other financial institutions, corporations, sovereign governments, and international organizations.

Eurobond An international bond that is denominated in one or more currencies but that is traded in external markets outside the borders of the countries issuing the currencies.

Eurocredit A long-term loan granted by a syndicate of banks to a bank, a corporation, a government, or an international organization; typically issued at a spread above LIBOR.

Eurocurrency market *See* external currency market.

Euro-equity market A market for issuing shares in multiple foreign markets, sometimes simultaneously with distribution in the domestic market.

Euro-MTNs (Euro-medium-term notes) Notes that are similar to Euronotes but whose maturity is longer—between 9 months and 10 years.

Euronotes Short-term, negotiable promissory notes distributed for a borrower by an international bank over a specified period (5 to 7 years). They are more flexible than floating-rate notes and usually cheaper than syndicated loans.

European Currency Unit (ECU) A historical currency basket in the European Monetary System composed of specific amounts of 12 different European currencies.

European Economic Community (EEC) An agreement, created by the Treaty of Rome in 1957, between six countries (Belgium, West Germany, Luxembourg, France, Italy, and the Netherlands) to remove trade barriers between themselves and to form a "common market."

European Monetary System (EMS) A target zone system created in 1979 for currencies of European Union countries to prevent large currency fluctuations relative to one another, which was replaced by a monetary union in 1999.

European option An option that can be exercised only at maturity.

European quote An exchange rate quote expressed as the amount of foreign currency needed to buy 1 dollar.

European Union (EU) An intergovernmental union of 27 European countries that was established in 1992 by the Maastricht Treaty to promote economic and political integration.

eurozone The group of countries that use the euro as their currency.

***ex ante* real interest rate** Nominal interest rate minus expected inflation.

exchange controls Government regulations that interfere with the buying and selling of foreign exchange (for example, taxes or quotas on foreign exchange transactions).

exchange rate The relative price of two currencies, such as the Japanese yen price of the U.S. dollar, the U.S. dollar price of the British pound, or the Mexican peso price of the euro.

exchange rate pass-through The amount that a given change in the exchange rate changes the prices of products.

exchange-traded fund (ETF) An investment fund that trades on an exchange but whose price is kept close to the value of the underlying portfolio through arbitrage activities by a few institutional investors.

exercise price *See* strike price.

Ex-Im Bank The Export–Import Bank of the United States, an independent U.S. government corporation involved in financing and facilitating U.S. exports.

exotic options Options with different payoff patterns and features than the basic call and put options.

expectations hypothesis Theory of the term structure that holds that long-term interest rates are an appropriate weighted average of the current short-term rate and expected future short-term rates.

expected rate of inflation The rate of change of prices of goods and services that people think may occur over some future horizon.

expected real interest rate *See ex ante* real interest rate.

expected value The probability-weighted average of future events.

export factor A company that performs credit risk investigations for exporters and collects funds from an exporter's accounts receivable while possibly providing financing to the exporter.

exports Sales of domestic goods and services to foreign residents.

expropriation The act of a government seizing property without compensating the owners for it—in particular by turning private companies into state-owned companies.

external currency market The interbank market for deposits and loans that are denominated in currencies that are not the currency of the country in which the bank is operating.

external equity market *See* Euro-equity market.

external purchasing power (of a currency) The amount of goods and services that can be purchased with the domestic currency in a foreign country.

factoring Export financing and facilitation business. *See* export factor.

Fama-French three-factor model An asset pricing model in which the factors are the excess return on the market portfolio, the excess return on a portfolio long in small stocks and short in big stocks, and the excess return on a portfolio long in high book-to-market stocks (value stocks) and short in low book-to-market stocks (growth stocks).

fat tails Property of a probability distribution in which more of the event probability is away from the mean than in the normal distribution.

Fedwire A real-time gross settlement system operated by the Federal Reserve System of the United States that instantly moves dollar balances between financial institutions.

Feldstein-Horioka puzzle The observation that countries' savings and investment expenditures are highly correlated, perhaps more than would be predicted by perfect capital mobility.

filter rules Trading rules designed to detect trend behavior in exchange rates, such as *x*% and moving-average rules.

financial disintermediation The process whereby corporate borrowing happens via a tradable security issued in the public market, rather than a non-tradable loan provided by financial intermediaries.

financial distress The situation where a firm is close to or perceived to be close to bankruptcy.

financial slack The presence of excess cash that is not needed to efficiently run a firm.

Fisher hypothesis Theory holding that the nominal interest rate equals the expected real interest rate plus the expected rate of inflation.

fixed exchange rate *See* pegged currency.

fixed-rate debt Debt for which the interest amount is fixed over time.

floating currency An exchange rate system in which the relative values of currencies are determined by market forces, without government interventions or restrictions.

floating-rate debt Debt for which the interest rate varies through time, according to variation in a reference rate, which is often LIBOR.

floating-rate notes (FRNs) Medium-term bonds, with maturities between 1 and 10 years and with coupon payments indexed to a reference interest rate, typically LIBOR.

flow to equity (FTE) A capital budgeting approach that finds equity value by directly discounting expected cash flows to equity holders with an appropriate risk-adjusted rate.

forecast error The difference between the actual realization of a random variable (like the future spot exchange rate) and the forecast of that random variable.

foreign bonds Bonds issued in a domestic market by a foreign borrower, denominated in the domestic currency, marketed to domestic residents, and regulated by the domestic authorities.

foreign branch of a bank A bank that is legally a part of its parent bank but operates like a local bank thereby allowing the parent bank to offer its domestic, foreign, and international customers direct, seamless service in a foreign country.

foreign currency call option A contract that gives the buyer of the option the right, but not the obligation, to buy a specific amount of foreign currency with domestic currency at an exchange rate stated in the contract.

foreign currency futures contracts Contracts, traded on futures exchanges that are similar to forward contracts and that allow one to bet on the direction of change of an exchange rate and effectively buy or sell foreign currency at an agreed-upon price, determined on a given future day.

foreign currency put option A contract that gives the buyer of the option the right, but not the obligation, to sell a specific amount of foreign currency with domestic currency at an exchange rate stated in the contract.

foreign direct investment (FDI) Occurs when a company from one country makes a significant investment that leads to at least a 10% ownership interest in a firm in another country.

foreign exchange brokers Financial intermediaries in the foreign exchange market who do not put their own money at risk but who receive a brokerage fee for matching buyers and sellers of currencies.

foreign exchange dealers Traders of currencies at commercial banks, investment banks, and brokerage firms in the major financial cities around the world.

foreign exchange market An over-the-counter market where currencies are traded.

foreign exchange reserves The foreign currency assets held by a central bank.

forfaiting Export financing technique whereby an exporter's accounts receivable are sold without recourse to the exporter.

forward contract An agreement between two parties to exchange specific amounts of two currencies at a future time at a quoted forward exchange rate.

forward foreign exchange market The over-the-counter market for the exchange of currencies at a future time at contractual prices (forward rates) agreed today. Also called the forward market.

forward market investment A long or short position in the forward market to be closed out at the future spot rate.

forward market return The return on a forward market investment that represents the difference between the future spot rate and the forward rate for a long contract or the negative of that for a short contract.

forward premium or discount The difference between the forward and spot exchange rates expressed as a percentage of the spot rate. A premium specifies a positive value, and a discount specifies a negative value.

forward rate An exchange rate in a forward contract that is quoted today for exchange of currencies at a future time.

forward rate bias The difference between the expected future spot rate and the corresponding forward rate.

forward settlement date The date the exchange of currencies occurs in a forward foreign exchange contract. Also called the forward value date.

forward value date *See* forward settlement date.

foul bill of lading A shipping contract that indicates that the carrier received the merchandise in a damaged condition, based on visual inspection.

franchising Method to expand overseas, whereby the firm provides a specialized sales or service strategy, offers support at various levels, and may even initially invest in the franchise in exchange for periodic fees.

free cash flows (FCF) The cash that can be returned to investors, which is gross cash flow minus investments in plant and equipment and working capital.

frequency distribution A histogram with observations in each interval expressed as fractions of the total number of observations.

frontier markets The young stock markets of the least-developed countries.

fronting loan A parent-to-affiliate loan that uses a large international bank as a financial intermediary.

full-service bank *See* universal bank.

fundamental analysis Approach to exchange rate determination that links exchange rates to fundamental macroeconomic variables such as GDP growth and the current account either through a formal model or through judgmental analysis.

future value The value of an investment in the future, found by multiplying the current value by 1 plus the interest rate.

futures commission merchant (FCM) An individual or organization that accepts orders to buy or sell futures contracts or options on futures and accepts money or other assets from customers to support such orders.

gamma (of an option) Describes how the option's delta changes with a change in the underlying exchange rate.

General Agreement on Tariffs and Trade (GATT) A multilateral agreement, signed in 1947, that was designed to provide an international forum to encourage free trade between member states by regulating and reducing tariffs on traded goods and by providing a common mechanism for resolving trade disputes. It was superseded in 1995 by the World Trade Organization (WTO).

generally accepted accounting principles (GAAP) Accounting standards determined in the United States by the Financial Accounting Standards Board.

global bond A bond issued simultaneously in a domestic market and in the Eurobond market.

global depositary receipt (GDR) A depositary receipt that trades across multiple markets and can settle in the currency of each market.

global minimum-variance portfolio The portfolio of assets with the least variance among all possible portfolios.

Global Offset and Countertrade Association (GOCA) An industry trade association that holds annual conferences and supports a Web site (www.globaloffset.org) devoted to the practice of countertrade.

global registered share (GRS) An ordinary share of a company that trades and transfers freely across national borders.

globalization The process of increasing global connectivity and integration between countries, corporations, and individuals within these nations and organizations in their economic, political, and social activities.

gold standard An exchange rate system in which a currency is pegged to a specified amount of gold and can be exchanged for gold at the central bank.

goods market arbitrage Buying and selling goods to make a profit without bearing risk.

government budget surplus The difference between taxes and total government expenditures (including spending on goods and services, transfer payments, and interest on government debt). Also known as national government saving.

gross cash flows Net operating profit less adjusted taxes plus accounting depreciation.

gross domestic product (GDP) The market value of all final goods and services produced within a country in a given period of time.

gross national income (GNI) The total income of an economy equal to gross domestic product plus the foreign income accruing to domestic residents minus the income from the domestic market accruing to non-residents plus unilateral transfers from foreigners.

grossed-up dividend The value of dividends received from a foreign subsidiary plus the tax credit for taxes paid to foreign governments.

growth option The option to do an additional project if the first project is successful. Its presence adds value to the first project.

hedge fund An investment company that pools investors' money and invests in financial instruments to make a positive return. Hedge funds tend to be less regulated than other investment pools and seek to profit in all kinds of markets by pursuing speculative investment practices that may increase the risk of loss.

hedging The act of using financial markets, especially derivative securities, to reduce or eliminate risks arising from underlying business transactions.

Herstatt risk *See* cross-currency settlement risk.

histogram Representation of the likelihoods of the occurrences of a random variable that groups observations into intervals of equal length and records the number of observations in each interval.

home bias The phenomenon that investors of countries are not very well internationally diversified but instead own portfolios concentrated in the securities of their home markets.

idiosyncratic risk The part of the uncertainty of a return that is not systematic. *See also* systematic risk.

idiosyncratic variance The part of an asset's return that cannot be explained by pervasive factors in the economy, especially the market return.

IMF conditionality The monetary and fiscal policies and macroeconomic conditions that a country must follow if it borrows from the IMF.

implied volatility The unique value of volatility (for the underlying asset) that sets the option price from an option pricing model equal to the option price observed in the market.

import competitor A domestic company that competes for business in the domestic market with foreign competitors.

imports Purchases of foreign goods and services by domestic residents.

impossible trinity *See* trilemma.

incremental profits The additional cash that comes into a firm as a result of making an investment.

index funds Funds that passively track stock indices, such as the S&P 500, without trying to outperform them.

indexing formula A clause in a contract that requires changes in prices based on the realization of certain contingencies such as the amount of inflation or depreciation of a currency.

indirect quote An exchange rate quote expressed as an amount of foreign currency per unit of domestic currency.

ineligible banker's acceptance (B/A) A banker's acceptance that does not meet the requirements of the Federal Reserve, which consequently requires that the bank hold reserves against the B/A.

inflation A general increase in monetary prices of goods and services in an economy measured as the rate of change of the price level.

information set The collection of all information used to predict the future value of an economic variable.

initial margin The initial amount of wealth that must be placed in a margin account, as determined by the futures exchange.

institutional investors Organizations that invest pools of money on behalf of individual investors or other organizations. Examples include banks, insurance companies, pension funds, mutual funds, and university endowments.

integrated market A market where securities are priced in the global capital market.

interbank market The wholesale part of the foreign exchange and external currency markets where major banks trade.

interest rate parity *See* covered or uncovered interest parity.

interest rate swap An agreement in which two counterparties agree to exchange fixed interest payments for floating interest rate payments on the same notional principal.

interest subsidy The firm value created by the ability of a firm to borrow at an interest rate below the firm's market-determined interest rate.

interest tax shield The firm value created by the tax deductibility of interest on debts.

internal purchasing power (of a currency) The amount of goods and services that can be purchased with the domestic currency in the domestic country.

International Bank for Reconstruction and Development (IBRD) Original name of the World Bank.

international banking facility (IBF) A separate set of asset and liability accounts, used to record international transactions, that is segregated on the parent bank's books and is not a unique physical or legal entity.

international barter International trade in which the transfer of goods or services from a party in one country is made directly to a party in another country in return for some other good or service of equal value.

international bonds Bonds traded outside the country of the issuer.

international CAPM A version of the CAPM that takes exchange rate risk into account.

International Center for the Settlement of Investment Disputes (ICSID) An organization within the World Bank that administers legal disputes filed as claims under bilateral investment treaties.

International Chamber of Commerce (ICC) A world business organization based in Paris that has thousands of member companies and associations in more than 130 countries, whose activities include setting rules and standards for international trade and arbitration and other forms of dispute resolution.

International Development Association (IDA) Orgainization within the World Bank that focuses on development of the poorest countries in the world by providing low-interest loans, interest-free credits, and grants for investments in education, health, infrastructure, communications, and other activities.

International Finance Corporation (IFC) Part of the World Bank group and a global investor and advisor committed to promoting private-sector development in developing countries. One priority is the development of domestic financial markets through institution building and the use of innovative financial products.

International Financial Reporting Standards (IFRS) Accounting regulations developed by the International Accounting Standards Board.

international Fisher equation *See* uncovered interest rate parity.

international investment income account The account on the balance of payments that is associated with flows of investment income.

international investment position *See* net international investment position.

International Monetary Fund (IMF) International organization of 187 member countries, based in Washington, DC, which was conceived at a United Nations conference convened in Bretton Woods, New Hampshire, in 1944. The main goal of the IMF is to ensure the stability of the international monetary and financial system.

international parity conditions Collective name for covered interest rate parity, uncovered interest rate parity, purchasing power parity, and the Fisher hypothesis. If all these relationships hold, real interest rates are equalized across countries.

International Swap and Derivatives Association (ISDA) A derivatives trade organization, whose members include most of the world's major financial institutions, that sets standards for derivative transactions.

intertemporal budget constraint The idea that the present value of expenditures must be balanced by the present value of revenues.

intrinsic value The immediate revenue generated from exercising an option.

investment barriers Direct or indirect investment restrictions that limit or prevent foreign investors from investing in a country.

investment trust The U.K. version of a closed-end fund.

irrevocable D/C A documentary credit that cannot be revoked unless all parties, including the exporter, agree to the revocation.

joint venture An organizational form in which two or more independent firms form and jointly control a different entity, which is created to pursue a specific objective.

lagging payment A payment delayed beyond what is usual.

lag operation An exporter's method of profiting from international trade by collecting payment after a rise in the value of a foreign currency (for example, by lengthening the maturity of trade credits).

law of one price The idea that the price of a commodity in a particular currency should be the same throughout the world.

L/C (letter of credit) *See* D/C.

leading payment A payment made earlier than usual.

lead manager The main bank in a syndicate, organizing the issuance of a bond.

lead operation An importer's method of profiting from international trade by prepaying for goods before a fall in the value of the local currency.

leptokurtosis *See* fat tails.

Level I ADR An ADR that trades over the counter in New York—in what is called pink sheet trading—and is not listed on a major U.S. stock exchange.

Level II ADR An ADR that trades on the NYSE, NASDAQ, or AMEX and hence must satisfy the exchange's listing requirements.

Level III ADR An ADR that trades on one of the major exchanges in the United States and is also issued to raise capital in the United States.

leverage The use of borrowed money (or derivative securities) to increase capital at risk beyond capital owned when investing. Using leverage in a trading strategy scales up both its returns and its risk. Leverage also refers to a firm's use of debt to finance its assets.

licensing Method to enter foreign markets in which the multinational corporation gives local firms abroad the right to manufacture the company's products or provide its services in return for fees, typically called royalties.

licensing fees Fees paid to a firm for the use of a technology, copyright, or patent.

liquidating dividend The final payment to shareholders when a firm goes out of business.

liquidity The property of a market in which buyers and sellers are easily matched, making the transaction costs of trading low.

London Interbank Offer Rate (LIBOR) The external currency interest rate in London, which is the most important reference rate in international loan agreements.

lookback option An option in which the payoff depends on the difference between the spot rate at maturity and the minimum spot rate during the life of the option.

MacPPP The idea that the exchange rate quoted as domestic currency per foreign currency should equal the ratio between the domestic currency and foreign currency prices of McDonald's Big Macs.

maintenance margin The minimum value that a margin account can have before an investor gets a margin call and must bring the margin account back to the initial margin.

managed floating Currency system in which currencies in principle freely float, but where the monetary authorities nonetheless often intervene in the foreign exchange market.

margin account Deposits of cash and other assets from which losses on futures contracts are deducted and to which profits are added.

marginal cost The cost of producing the last unit of output.

marginal revenue The revenue from selling the last unit of output.

margin call A notification to an investor that his or her margin account is below the maintenance margin.

market efficiency A financial concept in which the market prices of assets reflect information available to investors such that assets offer expected returns that are consistent with rational behavior and no arbitrage possibilities. In efficient capital markets, investors cannot expect to earn profits over and above what the market supplies as compensation for bearing risk. An inefficient market is one in which profits from trading are not associated with bearing risks and are therefore considered extraordinary.

market impact The effect of a large trade on the price of a security.

market maker (in the forex market) A trader who stands ready to buy and sell particular currencies.

market portfolio The portfolio that contains all securities in proportions equal to their market values as percentages of the total market value.

market risk The exposure of a return to fluctuations in the return on the market portfolio that cannot be diversified away.

market risk premium The expected excess return on the market portfolio.

market variance The variance of the return on the market portfolio.

marking to market The process of crediting and debiting daily profits and losses on futures accounts to margin accounts.

mean The expected value of a probability distribution of a random variable, which is the probability-weighted average of future events.

mean absolute error (MAE) The average of the absolute values of forecast errors.

mean reversion The property of a time series in which the expected change in the process would move the random variable toward an unconditional mean.

mean–standard deviation frontier The locus of the portfolios in expected return–standard deviation space that have the minimum standard deviation for each expected return. Also known as the minimum-variance frontier.

mean-variance-efficient (MVE) portfolio The one portfolio on the efficient frontier that maximizes the Sharpe ratio and hence is the optimal risky portfolio for all investors with mean-variance preferences.

mean-variance preferences Representation of an investor's preferences that depend positively on the expected return of the investor's portfolio and negatively on the portfolio's variance.

median The value of a random variable for which 50% of the values will be greater and 50% will be less.

menu costs Costs of changing prices that are a source of sticky prices.

merchandise trade balance The value of exports of goods minus imports of goods on a country's balance of payments.

merchant bank A bank that performs both traditional commercial banking and investment banking functions.

minimum-variance frontier *See* mean–standard deviation frontier.

Modigliani–Miller proposition A proposition that states that a corporation's financial policies, such as issuing debt, hedging foreign exchange risk, and other purely financial risk management activities, do not change the value of the firm's assets unless these financial transactions lower the firm's taxes, affect its investment decisions, or can be done more cheaply than individual investors' transactions can be done.

monetary approach A model of exchange rate determination that highlights the relative demands and supplies for monies as assets.

monetary base The sum of a central bank's liabilities (that is, currency in circulation plus total reserves of banks at the central bank).

monetary union A system in which several countries use a common currency by official agreement, with monetary policy administered by one central bank.

money market hedge The process of acquiring foreign currency liabilities or assets in the money markets to offset underlying exposures to foreign currency receivables or payables.

monopolist The sole seller of a good or service who consequently faces a downward sloping demand curve.

moving-average crossover rule Technical trading rule that uses moving averages of the exchange rate to predict trends. An n-day moving average is just the sample average of the last n trading days, including the current rate. The strategy goes long (short) in the foreign currency when the short-term moving average crosses the long-term moving average from below (above).

Multilateral Development Banks (MDBs) Institutions that provide financial support and professional advice for economic and social development activities in developing countries. The term typically refers to the World Bank Group and four regional development banks: the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, and the Inter-American Development Bank.

Multilateral Investment Guarantee Agency (MIGA) Part of the World Bank Group established in 1988 to promote development by facilitating investment in emerging and transitioning economies (for instance, by providing political risk insurance).

multilateral netting system A payment system in which only the net amounts of what is mutually owed are transferred.

multinational corporation (MNC) A company engaged in producing and selling goods or services in more than one country.

national government saving *See* government budget surplus.

national income and product accounts (NIPA) Government statements of the sources of income and the value of final production for a country.

nationalization A government takeover of a private company.

negotiable bill of lading The most common shipping contract, which can be used to transfer title or ownership of goods between parties.

net exporter A firm that has more exports than imports and benefits from a real depreciation of the home currency.

net foreign assets *See* net international investment position.

net foreign income Income that accrues to domestic residents from ownership of foreign assets and from working abroad minus the income that accrues to foreign workers who are employed domestically and to foreign owners of domestic assets.

net importer A firm that has more imports than exports and benefits from a real appreciation of the home currency.

net international investment position The difference between the value of a country's ownership of foreign assets and the value of foreign ownership of the country's assets at a given point in time. Also known as net foreign assets.

net operating profit less adjusted taxes (NOPLAT) Earnings before interest and taxes (EBIT) minus taxes on EBIT.

net present value A valuation method that discounts expected future profits and subtracts the value of investment expenditures.

net present value of financial side effects (NPVF) The firm value created by the ability to issue debt, including the value of interest tax shields and the value of interest subsidies but minus the costs of financial distress.

net private saving The difference between private saving and the private sector's expenditures on investment goods.

net working capital The value of short-term assets minus short-term liabilities necessary to run a firm.

nominal price The amount of money that is paid for a good or service.

non-sterilized intervention The buying or selling of foreign exchange by a central bank in the currency markets, which affects the money supply because the central bank does not use offsetting open market operations.

non-systematic variance The part of the variance of a return that can be diversified away. Also called idiosyncratic risk.

normal distribution A probability distribution characterized by a symmetric bell-shaped curve that is completely described by its mean and variance.

North America Free Trade Agreement (NAFTA) A free trade agreement between Canada, the United States, and Mexico.

note purchase *See* forfaiting.

notional principal The conceptual principal amount that controls the cash flows of an interest rate swap.

null hypothesis A hypothesis that is tested using data and a test statistic.

offer price *See* ask rate.

official international reserves Assets of the central bank that are not denominated in the domestic currency, that is, the sum of foreign exchange reserves, gold reserves, and IMF-related reserve assets.

official reserves account *See* official settlements account.

official settlements account The account of the balance of payments that records changes in the official reserves of a country's central bank. Also known as official reserves account.

offset The requirement of an importing country that the effective cost of its imports be offset in some way by the exporter, who must contract to purchase items from the importing country; common in large expenditure contracts for weapon systems and power-generating facilities.

offshore banking center A center that primarily services the borrowing and lending needs of foreigners. Transactions are typically initiated outside the banking center whose location is in a country with low or zero taxation, moderate or light financial regulation, banking secrecy, and anonymity of transactions.

OLS (ordinary least squares) estimator A statistical methodology that estimates the relationship between a dependent variable and one or more independent variables by minimizing the sum of squared residuals.

on-board bill of lading A shipping contract that indicates that goods have been placed on a particular vessel for shipment.

open-end fund An investment fund that grows in size with new investments and shrinks with redemptions.

open interest The total number of contracts outstanding for a particular derivative contract.

open market operation The purchase or sale of government bonds by the central bank, which is done to affect the money supply.

open price The first price at which a transaction is completed on an exchange.

operating currency hedge The process of shifting a company's operations across countries to provide a better balance between the costs and revenues denominated in different currencies.

operating exposure *See* real exchange risk.

optimal portfolio A portfolio that maximizes the utility function of an investor.

optimum currency area A collection of countries for which a monetary union is optimal in that it balances the microeconomic benefits of perfect exchange rate certainty against the costs of macroeconomic adjustment problems.

option premium The price the buyer of an option must pay to the seller or writer of the option.

order bill of lading A shipping contract that legally consigns goods to a party named in the contract.

order-driven trading system A trading system in which orders are batched together and then auctioned off at an equilibrium market price.

Organization for Economic Cooperation and Development (OECD) A group of 30 relatively rich countries that examines, devises, and coordinates policies to foster employment, rising standards of living, and financial stability.

outright forward contract A forward contract that contains only one transaction to buy or sell foreign currency.

outsourcing The shifting of non-strategic functions, such as payroll, information technology, maintenance, facilities management, and logistics, to specialist firms, sometimes in other countries, to reduce costs.

overhead management fees Fees paid by a subsidiary to a parent corporation for managerial activities such as accounting.

Overseas Private Investment Company (OPIC) The U.S. government's political risk insurance company.

overvalued currency A currency with larger external purchasing power than internal purchasing power.

packing list A description of merchandise to be exported, including the contents of each container and the total number of containers.

parallel loan A situation in which two corporations have headquarters in two different countries and each makes a loan of equivalent value to the subsidiary of the other company that operates in its country.

"pecking order" theory of financing A theory of how firms finance their investments with the least information-sensitive sources of funds: first using internally generated cash, then using debt, and finally using equity.

pegged currency A currency whose value relative to other currencies is set by the government; a currency in a fixed exchange rate system. Also known as a fixed currency.

P/E (price–earnings) ratio The ratio of stock price to earnings per share.

performance bond Assets in a margin account.

peso problem A phenomenon that arises when rational investors anticipated events that did not occur during the sample or at least did not occur with the frequency the investors expected.

pink sheet trading Over-the-counter trading of Level I ADRs in New York.

pip Trader jargon for the fourth decimal point in a currency quote.

plowback ratio The fraction of operating profits that management chooses to reinvest in a firm.

political risk The possibility of a government adversely affecting the return to a foreign investment or the cash flows of a multinational corporation (for example, by imposing exchange controls or taxes on foreign investments, or by outright expropriation).

political risk insurance Insurance against political risk provided by private firms, governments, and international organizations.

precautionary demand for money Money balances held because of the uncertain timing of future cash inflows and outflows.

present value The current value of an expected future payment, which requires discounting of the expected future payments at an appropriate risk-adjusted discount factor.

price-driven trading system A trading system in which market makers stand ready to buy at their bid prices and sell at their ask prices.

price index The ratio of the price level at a particular time to the price level in a base year multiplied by 100.

price level The price of a consumption bundle of goods and services.

pricing-to-market A situation in which a firm charges different prices for the same good in different markets.

primary market A market in which corporations raise funds by issuing securities (equities or bonds).

private bourse A stock market that is privately owned and operated by a corporation founded for the purpose of trading securities.

private equity firm A company that raises money from investors and invests in a number of individual companies, which are mostly private (that is, not traded on a stock market). Such firms typically control the management of their companies, often bringing in new teams that focus on making the overall company more valuable.

Private Export Funding Corporation (PEFCO) A private corporation whose mission is to make dollar loans to foreign purchasers of U.S. exports.

private placement bonds Bonds that are not sold to the market at large but that are placed privately with sophisticated, well-endowed investors such as pension funds, life insurance companies, or university endowments.

private saving The difference between the disposable income and consumption of the private sector.

probability distribution A description of possible future events associated with a random variable and their respective probabilities of occurrence.

project finance Financing of a particular industrial project in which the providers of the funds receive a return on their investment primarily from the cash flows generated by the project.

public bourse A stock market where the government appoints brokers, typically ensuring them a monopoly over all stock market transactions.

purchasing power The amount of goods and services that can be purchased with an amount of money.

purchasing power parity (PPP) A simple theory of the determination of exchange rates in which the exchange rate adjusts to equate the internal and external purchasing powers of a currency.

pure discount bond A bond that promises a single face value payment at the maturity of the bond.

put–call parity The fundamental no-arbitrage relationship that links the forward rate to the spot rate, the prices of European put and call options at a common strike price, and the domestic currency interest rate.

put option *See* foreign currency put option.

random walk A time series process in which the change in the variable is unpredictable. The model states that the best predictor for the future exchange rate is today's exchange rate, and the best prediction for the change in the exchange rate is zero.

range forward contract A contract that allows a company to specify a range of future spot rates over which the firm can transact in foreign currency at the future spot rate without any other cash flow. If the future spot rate falls outside of the range, the firm transacts at the limits of the range.

ratio analysis The use of financial ratios in the valuation of firms.

rational expectations Expectations of investors that do not involve systematic mistakes or systematically biased forecasts.

real appreciation An increase in the real exchange rate of the denominator currency.

real depreciation A decrease in the real exchange rate of the denominator currency.

real estate investment trust (REIT) A corporation that invests in real estate and reduces or eliminates corporate income taxes because it is required to distribute a large majority of its income to investors who pay tax on the income they receive.

real exchange rate A nominal exchange rate that is adjusted by the ratio of the price levels in the two countries.

real exchange risk A change in the profitability of a firm due to changes in real exchange rates. Also known as economic exposure and operating exposure.

real money balances A nominal amount of money divided by the price level.

real option The ability of management to strategically alter the future cash flows from a project in response to realizations of certain contingencies.

real profitability The purchasing power of nominal profits.

received-for-shipment bill of lading A shipping contract that indicates only that the merchandise is at the dock awaiting transport.

regression analysis A statistical methodology that tries to find the best fit between a dependent (or explained) variable (denoted y) and an independent (or explanatory) variable (denoted x). Most popular is the linear regression model, where $y = a + bx + e$, and e is the non-explained part, or residual.

relative price The nominal price of a specific good divided by the price level, which consequently has units of general goods per specific good.

relative purchasing power parity The idea that the rate of change of the exchange rate should offset the difference in the rates of inflation between two countries.

representative office A small service facility staffed by parent bank personnel that is designed to assist clients of the parent bank in their dealings with the bank's correspondents or with information about local business practices and credit evaluation of the multinational corporation's foreign customers.

required reserves The amount of a bank's deposit liabilities that it is required to hold as assets at the central bank.

resistance level In technical analysis, any chart formation in which the price of an instrument has trouble rising above a particular level.

return on investment (ROI) The change in a firm's future operating profit divided by its current investment.

revaluation A change in a fixed exchange rate that increases the value of the domestic currency relative to foreign currency.

reversal The process of selling a foreign currency in the forward market and buying it forward with a synthetic forward contract.

revocable D/C A documentary credit that arranges payment without guaranteeing payment and that indicates that the importer has a working business relationship with a reputable bank.

Ricardian equivalence The idea that the timing of taxes is irrelevant because individuals will increase their saving in response to a reduction in current taxation because they know that they will be taxed more in the future to pay the interest and principal on the government's debt.

right of offset A clause in swap agreements and back-to-back loans that stipulates that if one party defaults on a payment, the other party can withhold corresponding payments.

risk-averse entrepreneurs Individuals who start a company and have a substantial amount of their wealth invested in the non-diversified assets of the company and who therefore desire to lower the variability of the company's cash flows.

risk management The use of derivative securities to take positions in financial markets that offset the underlying sources of risks that arise in a company's normal course of business.

risk premium The expected return on an asset in excess of the return on a risk-free asset.

root mean squared error (RMSE) The square root of the average squared forecast errors. It has the same units as a standard deviation.

royalties Fees paid to the owner of intellectual property for the right to use a copyright, a patent, a trademark, an industrial design, or procedural knowledge.

Rule 144 ADR (RADR) A capital-raising ADR in which the securities are privately placed with qualified institutional investors, such as pension funds and insurance companies.

Rule 144A Enacted in 1990 to allow institutional investors in the United States to invest in private placement issues that do not necessarily meet the information disclosure requirements of publicly traded issues.

sales on open account An international trade method in which an exporter establishes an account for an importer, who is allowed to order goods with payment based on an invoiced amount.

sample mean The average of the observed values of a random variable.

sample variance The average of the squared deviations of a random variable's observed values from the sample mean.

Sarbanes-Oxley Act (SOX) Legislation in the United States, passed in 2002 in response to corporate scandals, to improve corporate governance. It covers issues such as auditor independence, corporate governance, and enhanced financial disclosure.

secondary market A market in which securities are sold by and transferred from one investor or speculator to another, in contrast to the primary market in which firms sell securities to investors to raise capital.

securitization The packaging of designated pools of loans or receivables into a new financial instrument that can be sold to investors.

segmented market A security market where local investors, not global investors, price securities.

seigniorage The real resources the central bank obtains through the creation of base money.

sensitivity analysis Use of alternative scenarios other than the expected value to determine how the discounted present value of a firm or project changes with important variables that drive firm value.

settle price An average of the last traded futures prices. Used to mark positions to market.

Sharpe ratio The ratio of the excess return of a security divided by its volatility.

shelf registration A process through which an issuer in the United States can preregister a securities issue and then shelve the securities for later sale when financing is needed.

Siegel paradox The idea that if the forward rate equals the expected future spot rate when exchange rates are expressed as domestic currency per foreign currency, then when exchange rates are expressed as foreign currency per domestic currency, the forward rate cannot equal the expected future spot rate.

sight draft A document indicating that an importer's bank will pay a certain amount to an exporter when the exporter presents the document to the bank after the exporter fulfills its contractual obligations.

SINOSURE The China Export and Credit Insurance Corp., which is a specialized financial intermediary established to help facilitate Chinese exports.

Society of Worldwide Interbank Financial Telecommunications (SWIFT) A computer network in which member banks throughout the world send and receive messages pertaining to foreign exchange transactions, payment confirmations, documentation of international trade, transactions in securities, and other financial matters.

sovereign borrower A government borrower in international debt markets.

sovereign risk The risk that a government may default on its bond payments.

sovereign wealth fund State-owned investment fund that manages a global portfolio much like a pension fund would do. Many of these funds are located in countries with substantial oil revenues.

special drawing right (SDR) A unit of account created by the IMF, consisting of particular amounts of the U.S. dollar, the euro, the pound, and the yen.

speculating The act of intentionally taking positions in financial markets that are exposed to potential losses in the hope of making profits.

spot interest rate The interest rate on a deposit when there are no intervening cash flows between the time the deposit is made and the maturity of the deposit.

spot market The market for the immediate exchange of currencies.

standard deviation The square root of the variance, also called the volatility of a financial variable.

standard normal random variable A normal random variable with mean 0 and standard deviation 1.

Standard Portfolio Analysis of Risk (SPAN) System used by many exchanges, clearing organizations, and regulatory agencies throughout the world that calculates performance bond (margin) requirements for portfolios of positions using simulations of market prices.

statistical discrepancy A technical term for the balancing item in the balance of payments to make credit and debit items sum to zero, which is also called errors and omissions.

sterilized intervention An intervention in the foreign exchange market that is offset by an open market transaction in the domestic bond market that restores the monetary base to its original size.

sticky prices The idea that prices of goods and services are slow to adjust compared to asset prices like exchange rates.

straight bill of lading A bill of lading that is not title to the goods but indicates that a carrier has received merchandise from a shipper and will deliver the merchandise to a designated party.

strategic alliance An agreement between legally distinct entities to share the costs and benefits of what is hoped to be a beneficial activity.

strike price The exchange rate in an option contract at which the buyer can transact. Also called the exercise price.

subsidiary bank A bank that is at least partly owned by a foreign parent bank but that is incorporated in the country in which it is located.

support level In technical analysis, any chart formation in which the price has trouble falling below a particular level.

surplus In balance of payments accounting, the idea that credits on a particular account are greater than debits on that account.

swap An agreement between two parties to exchange a sequence of cash flows.

swap points Basis points that must be added to or subtracted from spot exchange rates to obtain outright forward rates.

swap spread An amount of basis points added to the yield to maturity on a government bond corresponding to that maturity to get the fixed interest rate of an interest rate swap.

switch trading The entry of a third party who facilitates the eventual clearing of a trade imbalance between two partners to a bilateral clearing arrangement.

syndicate A group of banks that take different roles in the debt-arranging process for a single borrower.

synthetic forward contract A forward contract manufactured using a spot contract and borrowing and lending, or using put and call options with the same strike price to create an uncontingent purchase or sale of foreign currency at maturity.

systematic risk The part of the uncertainty of an asset's return that gives rise to risk premiums because it creates a covariance of the return with the return on the market portfolio and thus cannot be diversified away.

systematic variance The part of an asset's return that can be explained by pervasive factors in the economy, especially the market return.

target zone system An exchange rate system in which the exchange rate can fluctuate within a fixed band of values.

tax-loss carry-forward A tax benefit that allows current business losses to be used to reduce tax liability in future years.

tax planning The process of minimizing tax by choosing when to repatriate funds.

technical analysis Technique that uses past exchange rate data and perhaps some other financial data, such as the volume of currency trade, to predict future exchange rates.

terminal value The value of a firm attributable to the future beyond an explicit forecasting period.

term structure of interest rates The relationship between the maturities of different zero-coupon bonds and their corresponding (spot) interest rates.

theta The negative of the derivative of a call option with respect to maturity, which describes how the option price will evolve as the time remaining until maturity decays.

time draft A document that indicates that an importer's bank will pay a certain amount to an exporter at a future point in time, after the exporter fulfills its contractual obligations.

time value The difference between the current price of an option and its intrinsic value.

time value of money The price for transferring money between the present and the future, that is, the nominal interest rate.

trade acceptance A draft signed ("accepted") by the importer in a documents against acceptance collection.

trade account An account on the balance of payments that collects all items on the current account, excluding those associated with flows of investment income.

trade balance The difference between credits and debits on the trade account of the balance of payments.

trade finance The collection of methods by which exporters and importers finance and insure themselves.

trade-weighted real exchange rate An average of all the bilateral real exchange rates of a country using the relative amount of trade between countries as weights.

trading costs Costs of buying a security, which include a brokerage commission, the bid–ask spread, and potentially, market impact.

transaction demand for money Money balances held because a firm or an individual predicts having some expenditures that will be incurred in the near future.

transaction exchange risk The possibility of loss in a business transaction due to adverse fluctuations in exchange rates.

Trans-European Automated Real-time Gross Settlement Express Transfer (TARGET) An electronic payment system that transfers funds and settles transactions in euros.

transfer prices The prices set within a firm when buying or selling goods and services between related entities of the firm.

transfers Monetary transactions between residents of a country and foreigners, such as gifts and grants, that do not involve purchases or sales of goods, services, or assets.

triangular arbitrage An arbitrage process involving three currencies that keeps cross-rates (such as British pounds per euro) in line with dollar exchange rates.

trilemma Theory postulating that there is an intrinsic incompatibility between perfect capital mobility (that is, no capital controls on international financial transactions), a fixed exchange rate, and domestic monetary autonomy (that is, using monetary policy to achieve domestic policy goals). Only two of these three policies are possible. Also called the impossible trinity.

tripartite arrangement A contractual arrangement under which an export factor services an exporter, who assigns any credit balances due from the factor to a financial intermediary that provides funds to the exporter.

turnover The total volume of trade done on an exchange, or for a particular firm, during a time period divided by the exchange's (firm's) total market capitalization.

two-fund separation The property that the minimum-variance frontier can be spanned (or generated) by any two portfolios on the minimum-variance frontier.

unbiased forecast A forecast for which the average forecast error is zero.

unbiasedness hypothesis The proposition that the forward rate equals the expected future spot rate corresponding to the maturity of the forward rate.

unbiased predictor The property of a forecast that has no systematic errors.

uncovered foreign money market investment An investment in a foreign money market in which the currency exposure is not hedged.

uncovered interest rate parity A theory that holds that the expected rate of return on an unhedged investment of domestic currency in the foreign money market equals the domestic interest rate.

underinvestment A situation in which managers, acting in the interests of shareholders, do not make investments that would increase the overall value of the firm because too much of the increase in the firm's value is captured by the bondholders.

undervalued currency A currency with smaller external purchasing power than internal purchasing power.

underwriting discount A form of payment to investment banks that issue securities equaling the difference between the value that investors pay for the securities and the value that the firm receives.

United Nations Conference on Trade and Development (UNCTAD) A permanent intergovernmental body that was established in 1963 as part of the United Nations General Assembly to deal with issues related to international trade, investment, and development.

universal bank A bank that provides a wide, comprehensive array of services, including securities activities.

utility function A function that mathematically links the consumption of units of real goods to a level of satisfaction.

value at risk (VaR) A measure of the loss that a given portfolio position can experience with a specified probability over a given length of time.

variance The probability-weighted average of the squared deviations of a random variable from its mean.

vehicle currency A currency that is actively used in many international financial transactions around the world.

volatility *See* standard deviation.

volatility clustering A property of many financial variables, such as rates of appreciation of currencies and stock returns, in which periods of high or low variance persist over time.

warrant A certificate that grants the bondholder the right to purchase a certain amount of common stock of the company at a specified price. Bonds with warrants are similar to convertible bonds, as both give the investor an equity option, but a warrant is detachable and can trade separately from the bond.

weighted average cost of capital (WACC) A capital budgeting approach that finds the value of the levered firm by discounting forecasts of the all-equity free cash flows with a weighted average of the required rates of return to the firm's debt and equity.

working capital The collection of cash, marketable securities, accounts receivable, and inventories held by a firm at any point in time to facilitate its business.

World Bank An institution created in 1944 to facilitate postwar reconstruction and development, but whose focus is now poverty reduction in developing countries, through advisory services, loans, and grants. The IDA and IFC are part of the World Bank Group.

world CAPM The CAPM that uses a large internationally well-diversified portfolio of securities as the market portfolio.

World Trade Organization (WTO) An international organization based in Geneva, Switzerland, that establishes rules for how international trade is conducted and resolves disputes among its 150 member states.

***x*% rule** Technical trading rule that goes long foreign currency after the foreign currency has appreciated relative to another currency by *x*% above its most recent trough (or support level) and that goes short foreign currency whenever the currency falls *x*% below its most recent peak (or resistance level).

yield curve The relationship between the maturities of coupon-paying bonds and the yields to maturity on those bonds.

yield to maturity The single common discount rate that equates the present value of a sequence of coupon payments and the final, face-value payment to the current price of the bond.

zero-coupon bond *See* pure discount bond.