International Finance

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International debt financing

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In 2010, Reliance Industries, an energy company and India's biggest company by market value, raised $1.5 billion in the global bond markets, helped by two American banks (Bank of America Merrill Lynch and Citibank) and two British banks (HSBC and RBS). The banks directly approached investors in Singapore, Hong Kong, London, and the United States, and demand for the bonds was overwhelming, allowing aggressive pricing. This **global bond** deal was lauded as one of the corporate bond deals of the year in the February 2011 issue of *Euromoney*, a magazine specializing in international finance. The deal vividly illustrates how large companies use the international debt markets to pull in as many investors as possible to meet their financing needs. If Reliance had tried to raise $1.5 billion in India, it would have faced a much higher cost of funding, and it might not have been able to raise nearly as much capital at the same terms.

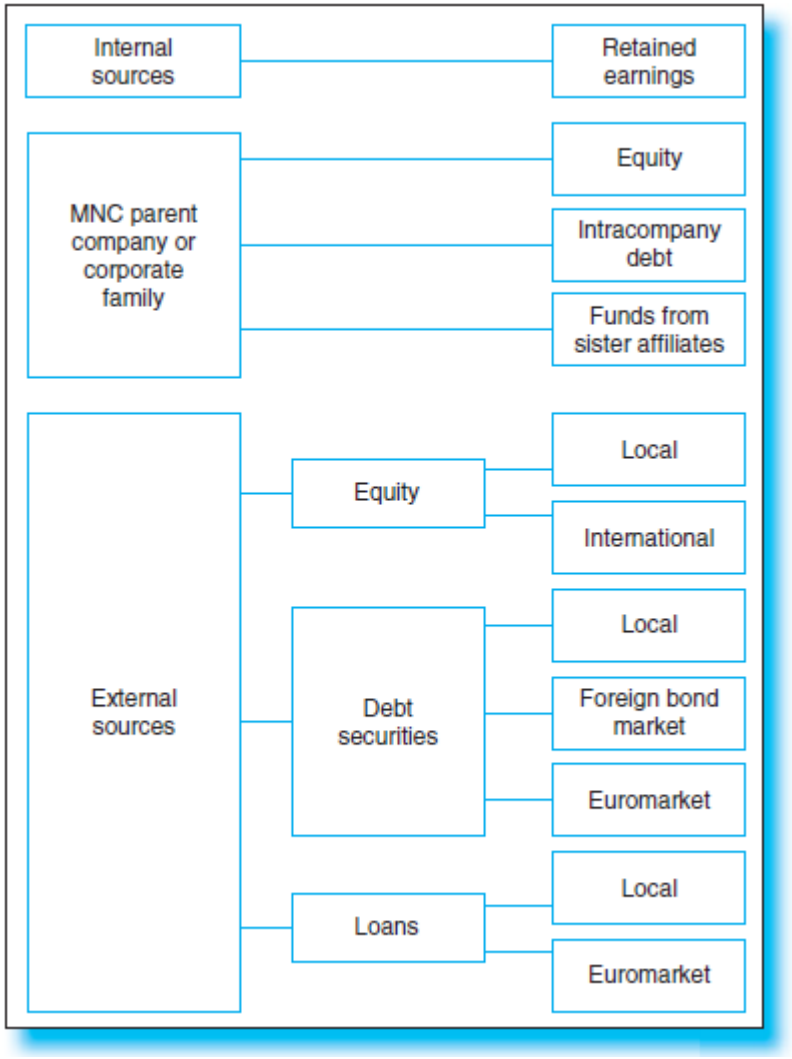
International debt financing

Deuda financiera del sector corporativo privado como proporción del PIB

Fuente: Banrep

International debt financing

THE GLOBAL SOURCES OF FUNDS FOR INTERNATIONAL FIRMS



The charachteristics of debt instruments

International debt financing

The Characteristics of Debt Instruments

The main characteristics differentiating debt instruments are their currency of denomination, their maturity, the nature of their interest payments, their tradability, and their international character. This large variety of debt instruments arose as companies sought various ways to minimize their debt payments and avoid financial distress.

Financial distress occurs when debt repayment is stopped or has become difficult. Although financial distress need not always lead to bankruptcy, it may make it more difficult and more costly for a firm to get financing, and it can adversely affect a firm's share price and the demand for its products.

International debt financing

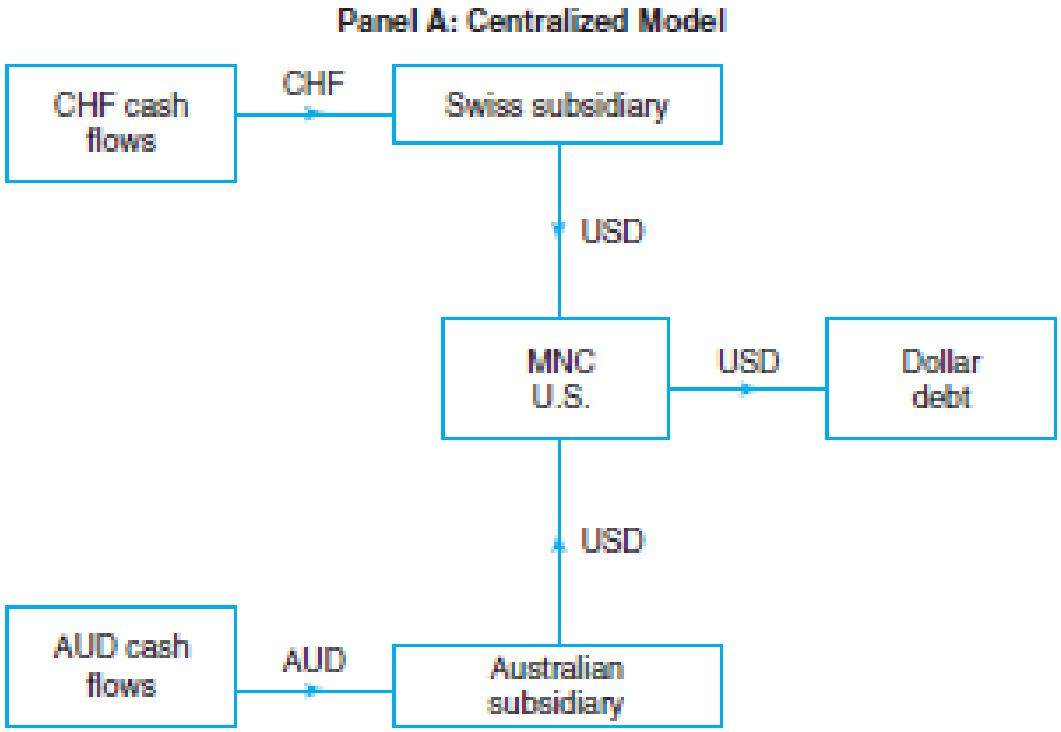
Currency of Denomination

When a purely domestic company issues debt denominated in a foreign currency, it faces the risk that the foreign currency will appreciate relative to the domestic currency, which would increase the cost of repaying the debt. However, for an MNC, it is quite natural to borrow in different currencies because the firm's revenues are also likely denominated in foreign currencies.

Centralized Versus Decentralized Debt Denomination

A U.S.–based MNC may, for example, prefer incurring dollar-denominated debt and, therefore, "centralize" its debt financing. We illustrate this **centralized debt denomination**, using the example of a U.S. MNC with Swiss and Australian subsidiaries. Note that the debts for both the parent company and its foreign subsidiaries are denominated in dollars.

International debt financing



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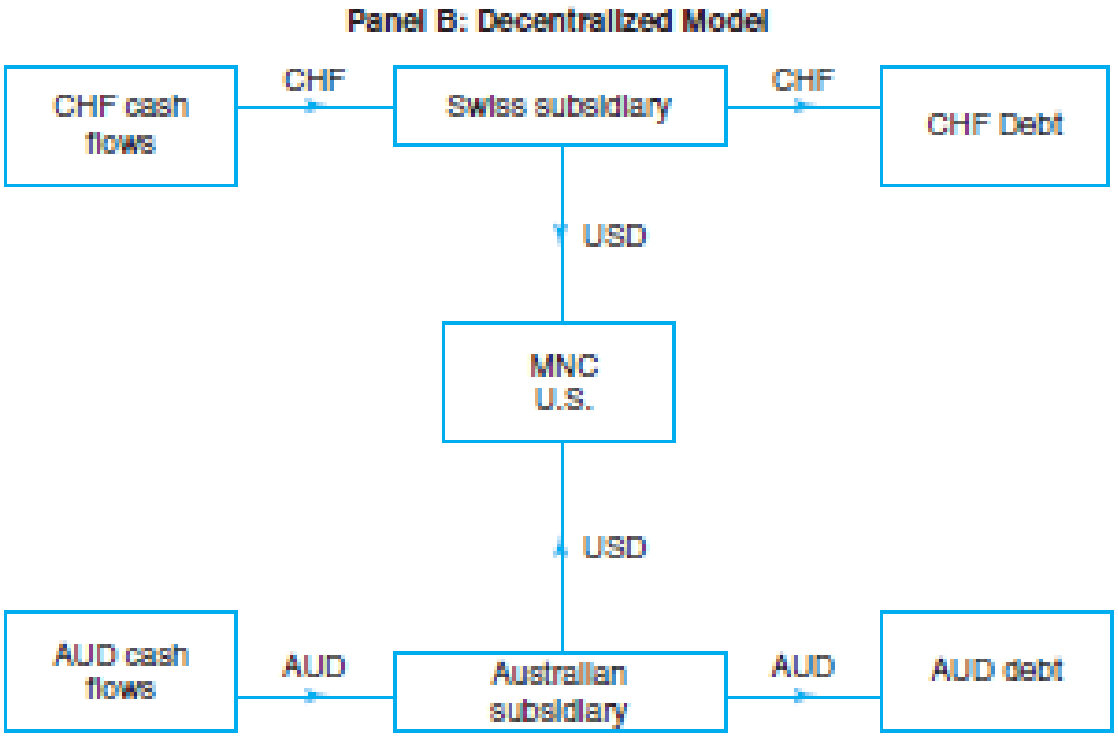

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Maturity

Companies tend to structure their borrowing so that large principal repayments are not clustered together. That helps limit their refinancing risk: They do not have to come up with a large amount of cash at a point in time when cash flows are potentially low and market conditions for issuing more debt are unfavorable. For example, Almeida et al. (2009) show that firms whose long-term debt was largely maturing in the 2008 to 2009 credit squeeze reduced investment by 25% more than otherwise similar firms without such refinancing needs. To avoid such problems, firms spread out the due dates on loans and debt instruments. Some firms engage in maturity matching. They attempt to finance current assets (such as accounts receivable and inventories) with short-term debt and to finance fixed assets (investments) with long-term debt.

Interest rate curve*

International debt financing

The Nature of Interest Rate Payments: Fixed-Rate Versus Floating-Rate Debt

Borrowers pay the interest on debt instruments at regular intervals (for example, annually or semiannually), and the amount may be fixed (fixed-rate debt), or it may vary, or float, over time (floating-rate debt), based on changes in the prevailing reference interest rate, typically a short-term borrowing rate in the interbank market such as LIBOR.

When to Use Floating-Rate Debt

The choice between fixed-rate and floating-rate debt depends on a variety of factors. When short-term interest rates are below long-term interest rates, you might be tempted to conclude that MNCs should choose floating-rate debt to reduce their immediate funding costs. However, higher long-term rates likely reflect investors' expectations that short-term rates will rise, so it is not at all clear that ex post the company will save on financing costs. Let's illustrate this with a numeric example.

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Dig-it-up example

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Intermediated and Direct Debt

When debt is intermediated, financial institutions such as commercial or investment banks first attract funds from investors and then make loans, possibly to MNCs. One of the major trends in recent years has been for large MNCs to issue bonds directly to investors.

The process whereby corporate borrowing takes the form of a tradable security issued in the public market, rather than a non-tradable loan provided by financial intermediaries, is called financial disintermediation . Note that even though financial institutions do not provide the funds directly to corporations issuing bonds, they typically still play an intermediary role in selling the securities to the investing public.

International debt financing

Private Placements

Privately placed bonds lie between bank loans and publicly traded bonds. **Private placement bonds** are not sold to the market at large but are placed privately with sophisticated, well-endowed investors, such as pension funds, life insurance companies, or university endowments. Consequently, they are less tradable than standard bonds. In the United States, private placements are regulated by the Securities Act of 1933 and must conform to a number of conditions to ensure that the investors are sufficiently informed and qualified to judge the merits of the investment.

International debt financing

The International Character of Debt

In the long-term debt markets, it is customary to distinguish between **domestic and international bonds.** Domestic bonds are issued and traded within an internal debt market. International bonds are traded outside the country of the issuer.

There are two types of international bonds. **Foreign bonds** are issued in a domestic market by a foreign borrower, denominated in the domestic currency, marketed to domestic residents, and regulated by the domestic authorities. Over the years, various foreign bonds have earned nicknames. For example, there are Yankee bonds in the United States, bulldog bonds in the United
Kingdom, Samurai bonds in Japan, Matadors in Spain, and Rembrandts in the Netherlands.

The other type of international bond is a **Eurobond** , which is denominated in one or more currencies but is traded in external markets outside the borders of the countries issuing the currencies.

International debt financing

We can split up bond issues in a particular country with the following diagram:

	Issued by Residents	**Issued by Non-Residents**
Domestic Currency	A. Domestic bond	B. Foreign bond
Foreign Currency	C. Eurobond	D. Eurobond

The sum of segments B and D comprises the *external*, or *cross-border*, bond market. The international bond market comprises segments B, C, and D. The next section provides much more detail on the international bond market.

International debt financing

Panel A: End of 2000

Country	Total Outstanding	% World Bond Mkt	Government		Corporate		Foreign		Eurobond	
			U.S. $ bn	% of Gov	U.S. $ bn	% of Corp	U.S. $bn	% of For	US $ bn	% of Total
United States	15,417.5	49.1	8,025.9	46.0	4,515.9	57.4	495.4	60.8	2,380.3	45.3
Euroland	6,223.8	19.8	3,125.0	17.9	1,027.7	16.9	0.0	0.0	1,771.1	33.7
Japan	5,549.3	17.7	3,995.6	22.9	973.0	12.4	72.6	8.9	508.1	9.7
United Kingdom	1,065.3	3.4	416.7	2.4	70.6	0.9	122.3	15.0	455.7	8.7
Canada	540.6	1.7	385.0	2.2	103.4	1.3	0.4	0.0	51.8	1.0
Switzerland	277.5	0.9	45.6	0.3	89.1	1.1	113.4	13.9	29.4	0.8
Australia	182.1	0.6	69.7	0.4	80.5	1.0	6.6	0.8	30.3	0.6
Total Developed	29,804.1	95.0	16,314.6	93.5	7,422.5	94.4	815.1	100.0	5,251.9	100.0
Emerging Markets	1,598.7	5.0	1,161.7	6.5	437.0*	5.6	NA	NA	NA	NA
Total	31,402.8	100.0	17,476.3	100.0	7,859.5	100.0	815.1	100.0	5,251.9	100.0

Panel B: End of 2010

Country	Total Outstanding	% World Bond Mkt	Government		Corporate		International	
			U.S. $ bn	% of Gov	U.S. $ bn	% of Corp	U.S. $ bn	% of For
United States	31,841.6	35.7	10,326.9	29.2	14,754.6	52.1	6,760.1	26.4
Euroland	23,871.9	26.7	6,377.0	18.0	6,364.6	22.5	10,559.1	41.3
Japan	12,835.5	14.4	10,536.0	29.8	1,921.0	6.8	378.5	1.5
United Kingdom	4,514.5	5.1	1,223.2	3.5	326.8	1.2	2,964.5	11.6
Canada	1,928.7	2.2	931.4	2.6	405.1	1.4	592.2	2.3
Switzerland	701.5	0.8	115.1	0.3	142.1	0.5	444.3	1.7
Australia	1,393.2	1.6	253.7	0.7	591.0	2.1	548.5	2.1
Total Developed	77,938.3	87.3	30,235.5	85.4	24,931.2	88.0	23,130.8	90.4
Emerging Markets	11,341.6	12.7	5,151.9	14.6	3,390.0	12.0	1,367.3	5.3
Total	89,279.9	100.0	35,387.4	100.0	28,321.2	100.0	25,574.3	100.0

The Types of Debt Instruments in the International Bond Market

International debt financing

The Types of Debt Instruments in the International Bond Market

Three main types of bonds are issued in the international bond market. We discuss them in the order of their relative importance and end the section by discussing the currency denomination of international bonds.

Straight Fixed-Rate Issues

Straight fixed-rate bond issues have a set maturity date at which the issuer promises to repay the principal or face value of the bond. During the life of the bond, fixed coupon payments, which are a percentage of the face value, are paid as interest to the bondholders. These bonds are sometimes called bullet bonds.

A special category of straight fixed-rate bonds is zero-coupon bonds, which are sold at a discount from face value and do not pay any coupon interest. At maturity, the investor receives the full face value.

International debt financing

Floating-Rate Notes

Floating-rate notes (FRNs) constitute about 30% of the total amount of international bonds outstanding. FRNs are typically medium-term bonds, with maturities between 1 and 10 years and with coupon payments indexed to a reference interest rate. Common reference rates are 3-month and 6-month LIBOR, and coupons are paid quarterly or semiannually, consistent with the maturity underlying the reference rate. Most companies pay a spread above the relevant LIBOR rate, which reflects the company's credit risk.

International debt financing

* For example, in February 2011, Anheuser-Busch Inbev, the Belgian beer company, issued a 5-year FRN that paid 55 basis points (0.55%) over the 3-month USD LIBOR at a price of $998.17 per $1,000 face value.

*The discount to face value increased the effective spread. At the beginning of every 3-month period, the next quarterly coupon payment is reset to be 1/4 * (LIBOR + 0.55%) of face value, where LIBOR is an annual percentage rate.

*As an example, suppose the 3-month U.S. dollar LIBOR is 2.5%. Then, the interest paid on a $1,000 face value FRN is

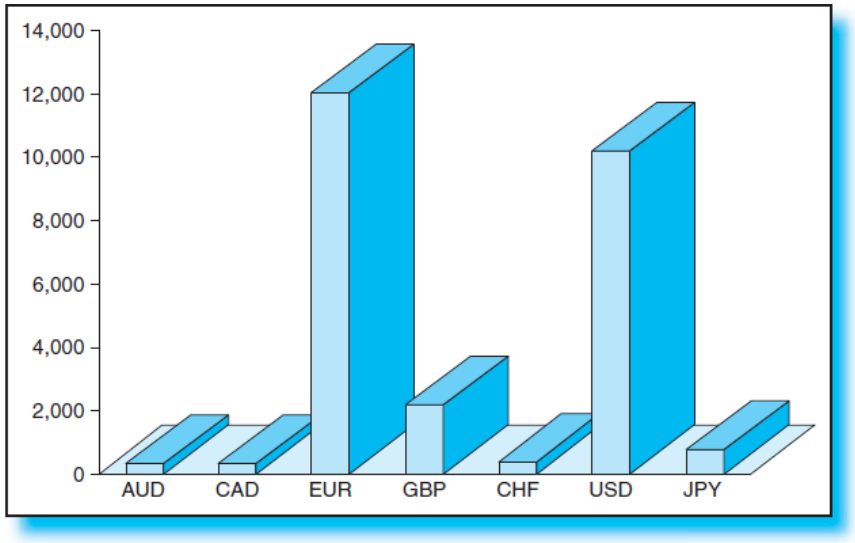
1/4* (0.0250 + 0.0055) * $1,000 = $7.63

International debt financing

Currency of Denomination

Historically, U.S. dollar–denominated bonds dominated international bond markets. Euro-denominated bonds now dominate. The only other currencies in which bonds are widely denominated are the pound, yen, and Swiss franc (in that order).

A special type of international bond is a dual-currency bond , which became popular in the mid-1980s. A dual-currency bond is a straight fixed-rate bond issued in one currency, say yen, which pays coupon interest in that same currency, but the promised repayment of principal at maturity is denominated in another currency, say U.S. dollars.



International Banking

The Largest Banks Ranked by Market Capitalization

Ranking March 2010	Bank	Country	Assets (in billions of USD)	Market Capitalization (in billions of USD)
1	ICBC	China	1,428.46	242.23
2	China Construction Bank	China	1,106.20	184.32
3	HSBC Holdings	UK	2,355.83	178.27
4	Bank of America	USA	2,223.30	167.63
5	JPMorgan Chase	USA	2,031.99	166.19
6	Bank of China	China	1,016.31	147.00
7	Wells Fargo	USA	1,253.65	141.69
8	Banco Santander	Spain	1,438.68	107.12
9	Citigroup	USA	1,856.65	96.54
10	BNP Paribas	France	2,952.22	86.67
12	Royal Bank of Canada	Canada	608.05	78.17
13	Commonwealth Bank	Australia	500.20	75.10
14	Mitsubishi UFJ Financial	Japan	1,999.58	72.17
15	Westpac Banking Group	Australia	519.03	70.99
16	Bank of Communications	China	392.83	57.34
17	Barclays	UK	2,223.04	56.15
18	Toronto-Dominion Bank	Canada	517.28	55.43
19	Banco Bradesco	Brazil	281.40	54.50
20	AZN Banking	Australia	420.52	53.72
21	Lloyds Banking Group	UK	1,650.78	50.25
22	National Australia Bank	Australia	574.41	48.80
23	BBVA-Banco Bilbao Vizcaya	Spain	760.32	48.20
24	Bank of Nova Scotia	Canada	460.93	47.26
25	US Bancorp	USA	281.18	46.89

International Banking

Banks as MNCs

Commercial banks usually develop a complete line of financial services to facilitate the overseas transactions of their customers. In addition to commercial credit, these ancillary financial services include trading in foreign currency spot, forward, option, and swap markets; risk management services; international trade financing; and working capital and cash management.

Unlike domestic banks, international banks participate in the Eurocurrency market and are frequently members of international loan syndicates, lending out large sums of money to MNCs or governments. International banks also underwrite Eurobonds and foreign bonds, which are investment banking activities. Banks that perform both traditional commercial banking and investment banking functions are called merchant banks . Banks that provide a wide array of services, including securities activities, are known as universal banks , or full service banks.

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International Banking

Characteristic	Domestic Bank	Correspondent Bank	Representative Office	Foreign Branch	Subsidiary/ Affiliate Bank	Offshore Bank	International Banking Facility	Edge Act Bank
	International Bank							
Location	Domestic	Foreign	Foreign	Foreign	Foreign	Foreign	Domestic	Domestic
Loans/deposits to foreigners	No	—	No	Yes	Yes	Yes	Yes	Yes
Separate legal entity	No	—	No	No	Yes	No	No	Yes

International Banking

Correspondent Banks

When commercial banks do not have their own banking operation in a major financial center, they establish a correspondent relationship with a local bank to conduct trade financing, foreign exchange services, and other activities on their behalves. Correspondent relationships allow a bank to service its multinational corporate clients without having to locate their banking personnel in many countries. However, the **correspondent bank** may not be able to give the same level of services as it would if it had its own facilities.

International Banking

Representative Offices

A **representative office** is a small service facility that is staffed by parent bank personnel and designed to assist the 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 MNC's foreign customers. Although it does not provide direct banking functions to the MNCs, it represents a higher level of service than pure correspondent banking.

International Banking

Foreign Branches

A **foreign branch** is legally part of the parent bank, but it operates like a local bank. A foreign branch allows the parent bank to offer its domestic, foreign, and international customers direct, seamless service in multiple countries. However, setting up a foreign branch is much more expensive than partnering with a correspondent bank. Foreign branch banks are also subject to both the banking regulations of their home countries *and* the countries in which they operate. However, foreign branches of U.S. banks are not subject to U.S. reserve requirements and are not required to have federal deposit insurance, which guarantees depositors up to $250,000 if the bank fails. Banks fund the Federal Deposit Insurance Corporation (FDIC) by paying insurance premiums expressed as a percentage of their deposits. Hence, both reserve requirements and deposit insurance drive up the cost of funds for banks and would prevent branches of U.S. banks from operating on the same level playing field as the local banks. Conversely, when a foreign bank locates a branch in the United States, the branch is treated like a domestic bank, and it is subject to all the same U.S. regulations.

International Banking

Subsidiary and Affiliate Banks

Like a branch, a **subsidiary bank** is also wholly or partly owned by a parent bank, but it is incorporated in the foreign country in which it is located. An **affiliate bank** is only partly owned but not controlled by a foreign parent bank. Affiliate and subsidiary banks are subject to the banking laws of the countries in which they are incorporated. Prior to the repeal of the Glass Steagall Act in 1999, that meant, for example, that a U.S. parent bank was prohibited from engaging in investment banking activities, but its subsidiaries located abroad were not. Nevertheless, U.S. parent banks generally preferred to expand their operations overseas via branch banks.

International Banking

Offshore Banking Centers[5]

An **offshore banking center** is a center that satisfies most of a number of conditions. First, the bulk of financial activity on both sides of the bank's balance sheet—that is, both borrowing and lending—is offshore, that is with non-residents as counterparties. Second, the transactions are typically initiated outside the financial center. Third, the majority of the financial institutions involved are controlled by non-residents doing business primarily with non-residents. Finally, the centers typically offer low or zero taxation, moderate or light financial regulation, banking secrecy, and anonymity on transactions.

International Banking

International Banking

Edge Act Banks

Edge Act banks are federally chartered subsidiaries of U.S. banks that are physically located in the United States but are allowed to engage in a full range of international banking activities. Such activities include accepting deposits from foreign customers, trade financing, and transferring international funds. Edge Act banks are not prohibited from owning equity in U.S. corporations, as are domestic commercial banks. Consequently, U.S. parent banks own foreign subsidiaries and affiliate banks through an Edge Act setup.

International Banking

Basel III and the Crisis

By 2006, Basel II had been implemented by the European Union; in the United States, the implementation literally ran aground when the global financial crisis hit. The crisis nonetheless laid bare many deficiencies of the old system. For example, the internal-ratings-based approach underestimates true capital needs because most quantitative models overestimate the power of diversification to reduce risk.

International Banking

Basel III and the Crisis

The BIS, together with central banks and supervisory authorities, have tried to draw lessons from the crisis in developing a new capital adequacy framework, called Basel III.

First, core capital is defined more narrowly as retained earnings and common shares, which proved the only real buffer banks had during the crisis, and the amount of such capital banks must hold is being increased from 2% to 4.5%.

Second, Basel III proposes a "capital conservation buffer," also in the form of core capital (2.5% of the bank's risk-weighted assets), as a cushion against future periods of stress.

Third, Basel III recommends that local authorities require a countercyclical capital buffer such that when the economy is doing well and lending is less risky, banks are forced to hold more capital to avoid excessive risk taking and to build up a capital buffer that can be drawn upon in periods of stress.

International Banking

Basel III and the Crisis

Fourth, because the crisis entailed a drying up of market liquidity, regulators want to trace and monitor funding liquidity of banks.

Fifth, leverage played a huge role in the financial crisis. As we noted earlier, the banking sector is the most leveraged industry in the world. There are plans to introduce a maximum leverage ratio.

All of these changes are scheduled to be gradually phased in over several years. In the meantime, many countries worry about inconsistencies between the new international rules and their own, mostly new, banking regulation. In the United States, for example, the Dodd–Frank Wall Street Reform and Consumer Protection Act was signed into law by President Barack Obama on July 21, 2010, and it contains many provisions regarding bank regulation, including capital requirements. Senator Dodd explicitly worried about international regulatory arbitrage with financial institutions shopping for the weakest regulator.

International Banking

Global banks A world of pain: The giants of global finance are in trouble

http://www.economist.com/news/finance-and-economics/21645807-giants-global-finance-are-trouble-world-pain?frsc=dg%7Ca

International Banking

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Credit ratings

Credit ratings

Rating Schemes

The rating schemes used by Moody's and S&P are summarized in Exhibit 11.13. Moody's rates bonds into nine major categories, from Aaa, Aa, A, Baa, and Ba down to C; S&P uses AAA, AA, A, and BBB down to C. Ratings of Aaa to Baa for Moody's and AAA to BBB for S&P are known as investment-grade ratings. For these issues, interest payments and principal appear safe at the time of the rating. Many prominent institutional investors such as pension funds are only allowed to purchase investment-grade bonds. As a result, MNCs have a huge incentive to achieve investment-grade ratings. For bonds rated lower than investment grade, investors should assign some substantial probability to future payment problems, and hence, these issues are called "speculative." Within each of the nine categories, Moody's has three numeric modifiers, 1, 2, and 3, to place an issue, respectively, at the upper, middle, or lower end of the category, whereas S&P uses + and − modifiers.

Credit ratings

Credit Quality	Standard & Poor's	Moody's
Investment Grade		
	AAA	Aaa
Highest quality	AA+	Aa1
	AA	Aa2
High quality	AA−	Aa3
	A+	A1
Highest middle quality	A	A2
	A−	A3
	BBB+	Baa1
Middle quality	BBB	Baa2
	BBB−	Baa3
Speculative Grade		
	BB+	Ba1
Predominantly speculative	BB	Ba2
	BB−	Ba3
	B+	B1
Low quality	B	B2
	BB−	B3
Very low quality	CCC	Caa
Highly speculative	CC	Ca
Lowest quality	C	C
In Default		
	D	

Note: Data are from the Web sites of Standard & Poor's and Moody's.

International equity financing

International equity financing

Developed Markets		Emerging and Frontier Markets	
Australia	119.25	Argentina	18.21
Austria	34.41	Bermuda	25.19
Canada	138.80	Brazil	76.38
Euronext	73.05	Chile	171.60
Germany	43.25	China	70.11
Greece	22.16	Colombia	73.65
Hong Kong	1,197.13	Cyprus	30.04
Ireland	29.58	Egypt	38.87
Israel	113.10	Hungary	21.95
Italy and United Kingdom	84.12	India	225.76
Japan	76.05	Indonesia	51.85
Luxembourg	193.87	Iran	25.64
Norway	71.41	Jordan	113.77
OMX Nordic	104.86	Korea	110.71
Singapore	297.74	Malaysia	186.66
Spain	89.42	Malta	53.76
Sweden	85.23	Mauritius	222.40
Switzerland	235.31	Mexico	45.25
United States	118.18	Peru	67.31
		Philippines	83.21
		Poland	43.34
		Russia	64.27
		Slovenia	20.21
		South Africa	261.00
		Sri Lanka	41.30
		Taiwan	196.35
		Thailand	88.84
		Turkey	42.12

International equity financing

The Organization and Operation of Stock Markets

Legal Organization

Legally, stock markets can be organized as private or public organizations, called bourses or exchanges. A **private bourse** is owned and operated by a corporation founded for the purpose of trading securities. In many countries, several private exchanges compete with one another. This is the situation in the United States and Japan, but in most markets, one dominant exchange has emerged. In **public bourses**, the government appoints brokers, typically ensuring them a monopoly over all stock market transactions. While historically many exchanges, especially in Europe (Belgium, France, Spain, and Italy, for instance), started out as public bourses, waves of deregulation in the 1980s and 1990s resulted in the dismantling of this structure in most countries. Today, most bourses are private, although China's exchanges are quasi-state institutions. In all countries, however, bourses are typically subject to substantial government regulation.

International equity financing

The Globalization of Exchanges

Cross-listing, in which companies like Nokia list their shares on several exchanges around the world, has contributed substantially to the globalization of exchanges. Exchanges have also globalized simply by extending trading hours to make their markets more accessible to foreign traders located in other time zones. In addition, several exchanges have merged or created alliances with foreign exchanges to automatically cross-list their stocks.

International equity financing

Trading Practices

The trading practices of a market directly affect price discovery and liquidity. Price discovery is the process by which information is revealed. A good trading process leads to "fair," or "correct," prices that cannot be manipulated to the advantage of individual traders. However, stock market manipulation still exists, as the following *Stock Market Manipulation in China* box illustrates. In a liquid market, trading happens quickly, and large quantities of securities can be traded without the price being affected. Transaction costs are also low in liquid markets.

International equity financing

There are two major trading arrangements used by international stock markets: **price-driven trading systems** and **order-driven trading systems**. In a price-driven system, market makers stand ready to buy at their bid prices and sell at their ask prices, as in the foreign exchange market, but similar price- or quote-driven trading systems also exist for stocks. In an **order-driven trading system**, orders are batched together and then auctioned off at an equilibrium market price. Such an auction may happen once per day, a few times per day, or more continuously (e.g., facilitated by a computer). To match orders, a number of precedence rules are typically employed, such as the following:

- ***Price priority:*** The highest bid (buy) and the lowest ask (sell) have priority over other orders.
- ***Time priority:*** Orders at the same price are treated on a first-come, first-served basis.
- ***Order priority:*** Market orders (orders to buy or sell at the market price) have priority over limit orders (orders to buy or sell at a maximum or minimum price).

International equity financing

American Depositary Receipts

An **American Depositary Receipt (ADR)** represents a specific number of shares in the home market that are held in custody by a U.S. depositary bank. The depositary bank converts all dividends and other payments into U.S. dollars and charges a small custodial fee for its services. The Bank of New York Mellon (BNY Mellon) dominates the ADR custodial market, but JPMorgan Chase, Citigroup, and Deutsche Bank are also important players.

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	Description	Trading Location	GAAP Requirement
Level I	Unlisted	OTC pink sheets	No GAAP reconciliation required
Level II	Listed on major U.S. exchange	NYSE, AMEX, or NASDAQ	Only partial reconciliation for financials
Level III	Offered and listed on major U.S. exchange	NYSE, AMEX, or NASDAQ	Full SEC compliance, including full U.S. GAAP reconciliation for financials
Rule 144A (RADR)	Private U.S. placement to qualified institutional buyers (QIBs)	U.S. private placement market using PORTAL	No U.S. GAAP reconciliation required