International Debt and Equity Financing

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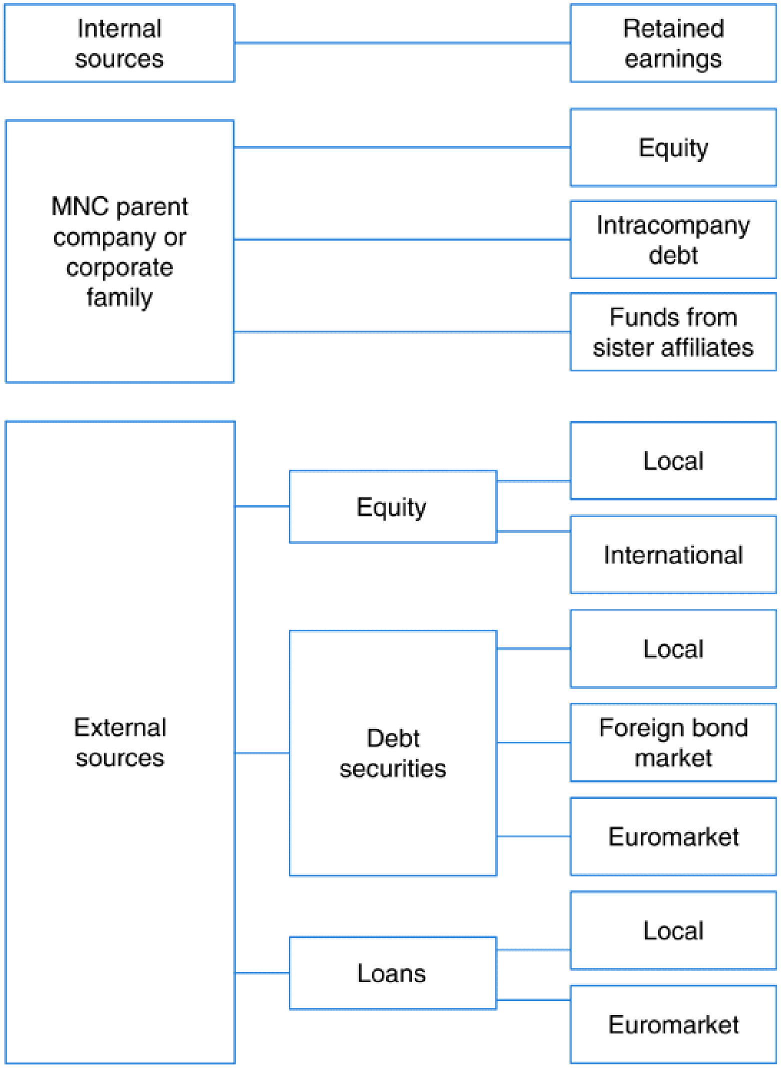
Sources of Funds for International Firms

- Internal – retained earnings
- External – debt/equity/hybrids
- External - loans
- All 3 can be raised domestically or internationally
- MNC foreign affiliates can also raise money from within the MNC

Sources of Long-Term Capital for a Multinational Corporation



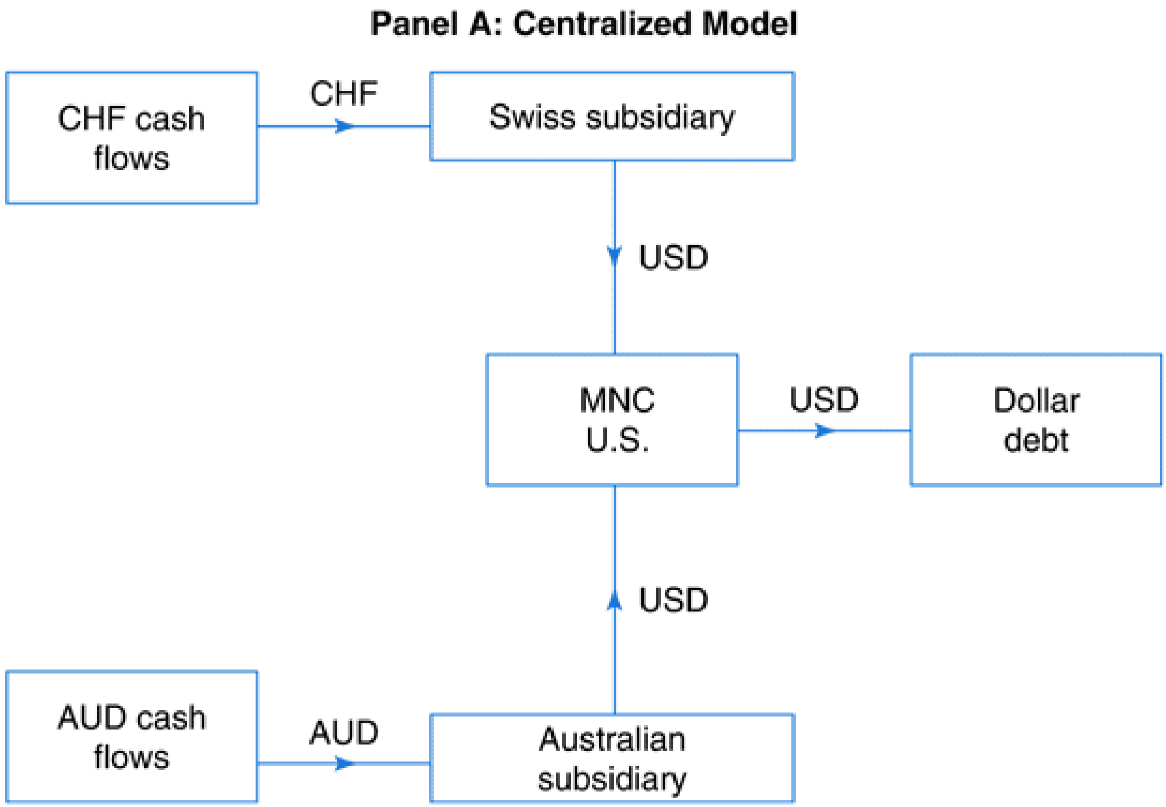
International Debt Markets & Instruments

- **International Bank Loans and Syndicated Credits** (floating-rate, short- to medium-term)
  - International Bank Loans
  - Eurocredits
  - Syndicated Credits
- **Euronote Market** (floating-rate, short- to medium-term)
  - Euronotes and Euronote Facilities
  - Eurocommercial Paper (ECP)
  - Euro Medium-Term Notes (EMTNs)
- **International Bond Market** (fixed and floating-rate medium- to long-term)
  - Eurobond
    - straight fixed-rate issue
    - floating-rate note (FRN)
    - equity-related issue
  - Foreign Bond

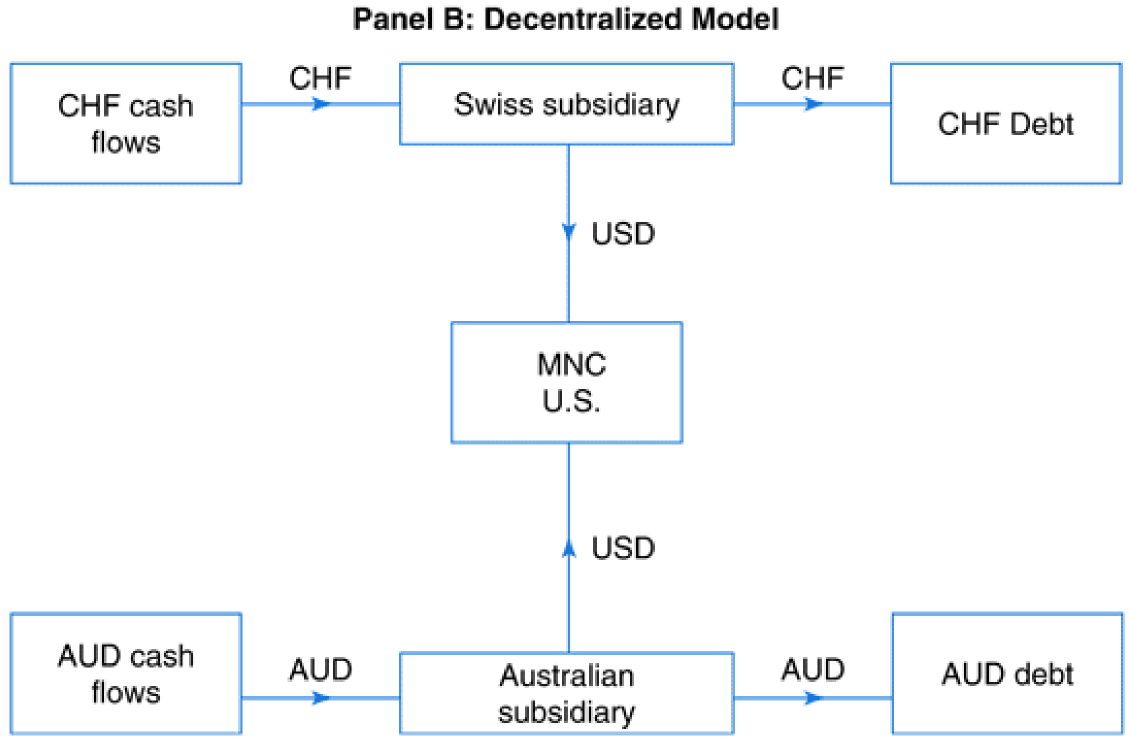
The Characteristics of Debt Instruments

- Characteristics
  - Currency of denomination – can affect how much they have to repay; can match their revenue base though
  - Maturity
  - Nature of their interest payments
  - Tradability
  - International character – domestic vs. international
- Centralized versus decentralized debt denomination
  - Centralized debt denomination – borrow in $’s (headquarter’s currency)
  - Decentralized debt denomination – borrow in different currencies of subsidiaries
  - Balance-sheet hedge – balance foreign assets/liabilities

Centralized Debt Denomination



Decentralized Debt Denomination



Note: The arrows indicate the direction of payment flows, either revenues or interest payments going from one entity to the other.

Borrowing in Low Interest Rate Environment

- Is issuing debt in low-interest countries a good idea?
  - If UIRP holds, the cost should be the same as domestic loan
    - Assuming that you believe this then no because for the same cost you now assume forex risk
  - If UIRP does not hold, loan is cheaper! Forex risk can actually help – if currency that loan is denominated in depreciates you pay less of the principal back!
  - Credit spreads
    - Risk premium paid above the risk-free rate
    - Can differ across countries offering savings
    - Tax differentials can offer incentives to take on debt in different markets

Tradability of debt

- Intermediated and direct debt
  - Financial disintermediation – corporate borrowing takes the form of a tradable security issued in the public market rather than a non-tradable loan provided by a financial institution
- Private placements
  - Regulated by Securities Act of 1933 (in U.S.)
  - Must be sold to a limited number of large and sophisticated investors
  - Investors must have access to substantial financial information regarding the company
  - Investors must purchase the securities for their own investment portfolios (not for resale) and must be capable of sustaining any losses

The International Character of Debt

- Domestic bonds – bonds that are issued and traded in domestic market (country is country of currency denomination)
- International bonds – bonds traded outside the country of the issuer
  - Foreign Bonds – issued in domestic market by a foreign borrower (Ex. U.S. company issuing ¥ bond in Japan)
    - Denominated in domestic currency
    - Marketed to domestic residents
    - Regulated by domestic authorities
  - Eurobond – mature in less than 10 years (usually 5)
    - Denominated in one or more currencies
    - Traded in external markets outside the borders of the countries issuing the currencies

Size and Structure of the World Bond Market

- Government bond market – most important in most countries
- Domestic bond markets
  - Regulated by domestic governments
    - Required filing for issuances > $1.5 million (U.S.)
    - New public issues must be approved by MOF (Japan)
  - Most are issued in bearer form (not registered to owner) – owners can avoid paying taxes because they are anonymous
  - Usually annual coupons
- International bond markets
  - Generally regulated by issuer's government, not borrower's
  - Eurobonds – issued simultaneously in capital markets of several nations
    - Need not comply with regulatory restrictions that apply to domestic issuers

The Size and Structure of the World Bond Market (in billions of U.S. dollars)

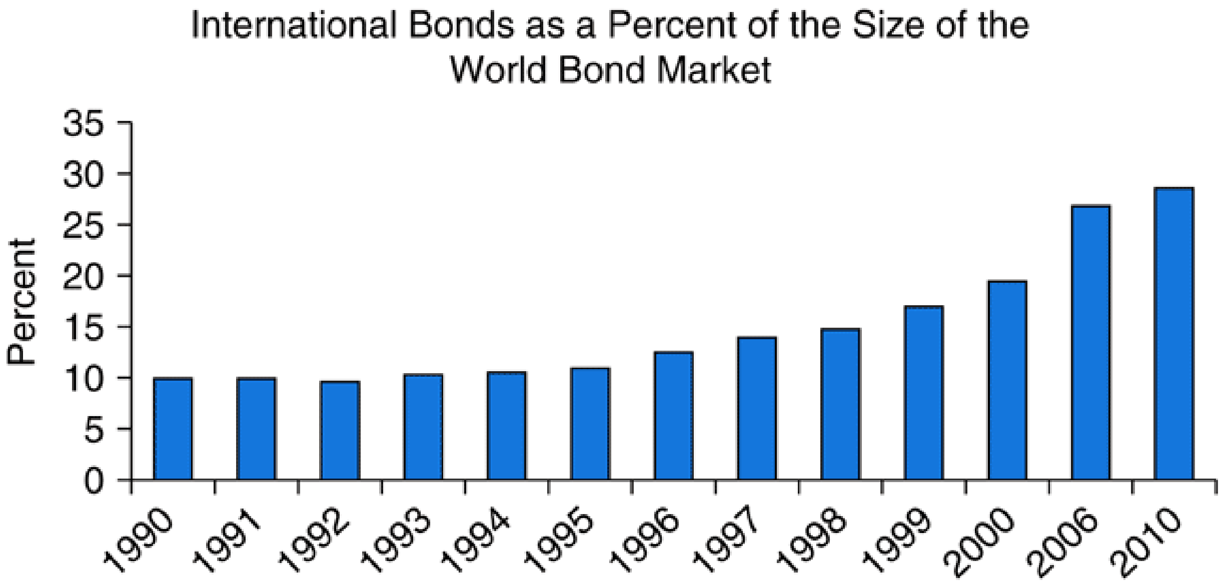
Panel B: End of 2010

Country	Total Outstanding	% World Bond Mkt	Government U.S. $ bn	Government % of Gov	Corporate U.S. $ bn	Corporate % of Corp	International U.S. $ bn	International % 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

Notes: Data for Panel A is from Merrill Lynch, *Size and Structure of the World Bond Market: 2001*, April 2001. In the United States, agency debt is included in the government category. Panel B is compiled from data in the *BIS Quarterly Review*, December 2010, Tables 12–16. Corporate issuance comprises domestic bonds by corporations and financial institutions. International issues by international agencies and offshore centers are not part of the developed or emerging market category totals. The BIS makes no distinction between foreign bonds and Eurobonds. Agency debt is not included in the government category for the United States.

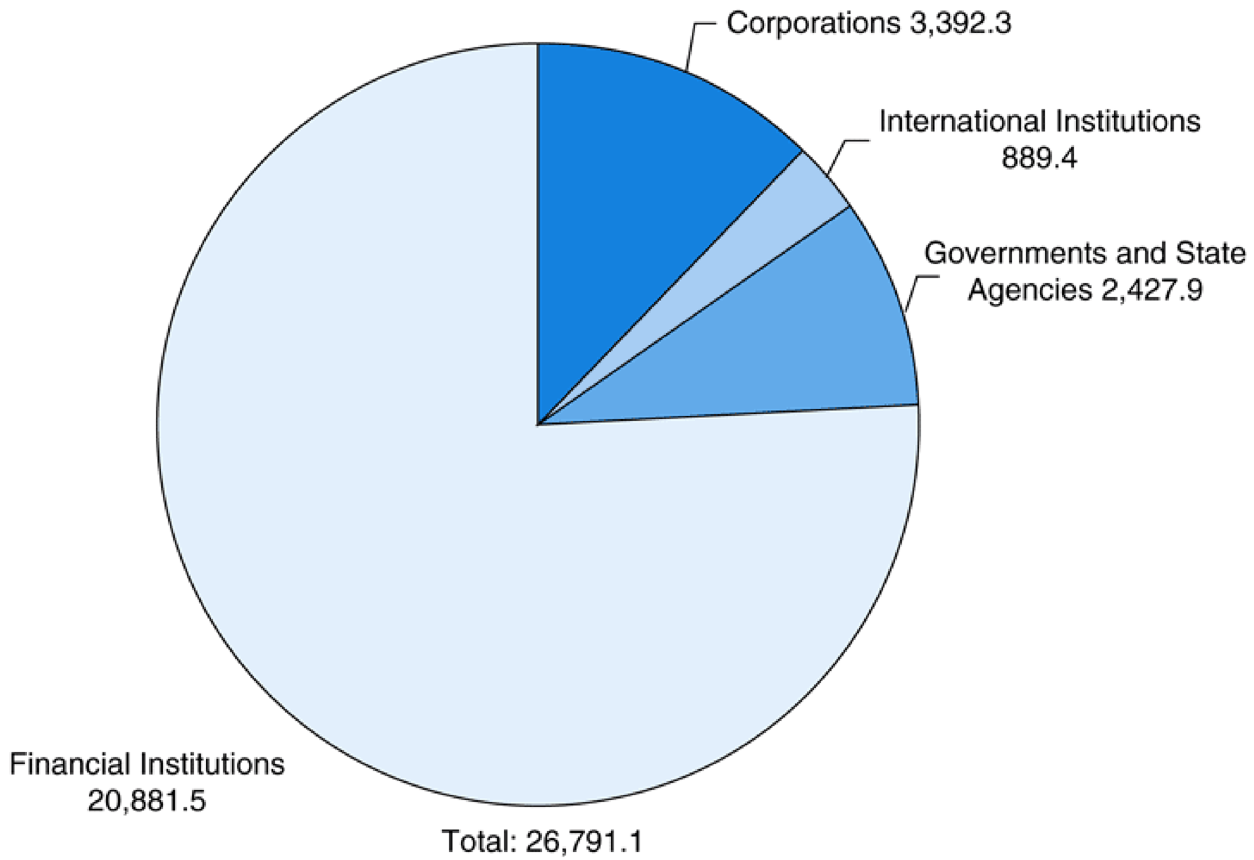
*Asia only.

The Internationalization of the World Bond Market



Source: Merrill Lynch, *Size and Structure of the World Bond Market: 2001*, April 2001, along with author computations based on data from *BIS Quarterly Review*, June 2007 and June 2010.

Borrowers in the International Bond Market (amounts outstanding, Sept 2010, in billions of USD)

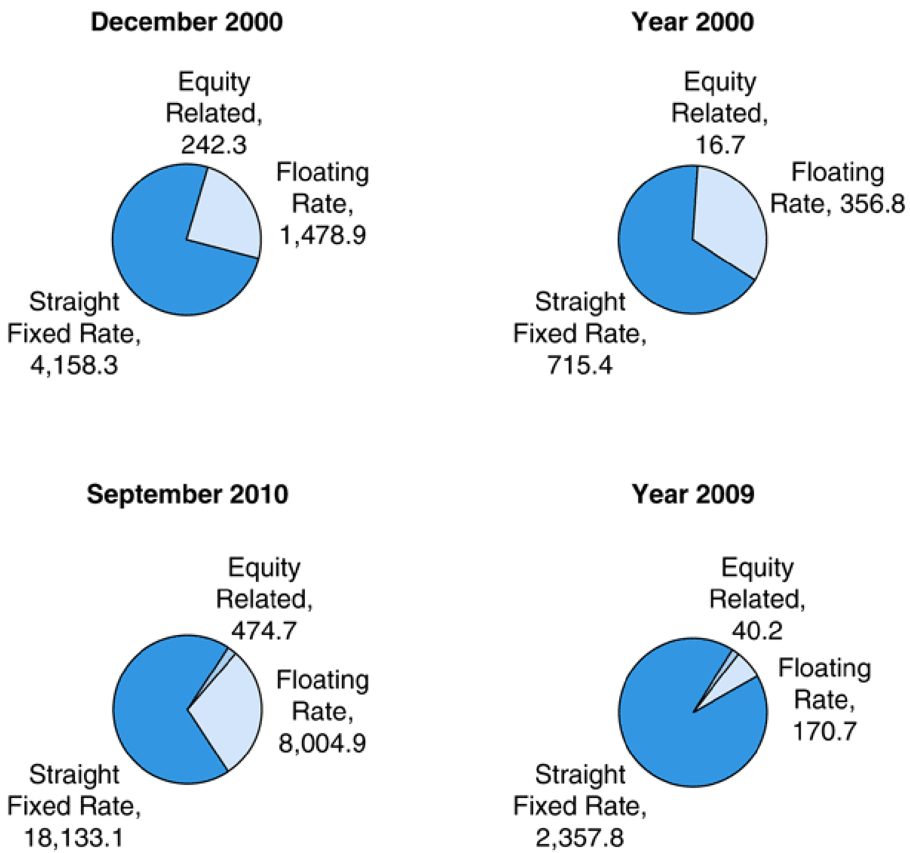


Source: Compiled from *BIS Quarterly Review*, December 2010, Tables 12A–12D.

Types of International Bonds

- Straight fixed-rate issues – coupon fixed
  - Zero coupon bonds or coupon
- Floating-rate notes – coupon based on base rate such as LIBOR or Euribor
- Equity-related bonds
  - Convertible bond – convertible into a number of shares of equity
  - Warrant – grants the bondholder the right to purchase a certain amount of common stock at a specified price

Types of International Bonds Issued in the Marketplace (in billions of US dollars)



Note: The pies on the left represent amounts outstanding, whereas the pies on the right refer to new issues during that particular year.

Source: *BIS Quarterly Review*, December 2010, Table 13B.

International Banking

- Banks as MNCs
  - Merchant banks – banks that perform both traditional commercial banking and investment banking functions
  - Universal/Full-service banks – banks that provide a wide array of services, including securities activities
  - Consolidation via M&A
    - With formation of EU, it was thought banks would consolidate across borders since they only needed a single license; didn't happen though, mostly within country (except central Europe)

International Banking

- Globalization had fundamentally changed banking around the world from localized to one of the most global sectors in the world
  - Banking sector has become a larger part of many economies – perhaps too large (2007-2010 crisis has taught us this)
  - Enables spillover of stress across borders

Types of International Banking offices (1)

- **Correspondent banks** – a bank that allows a commercial bank which doesn't have an operation in a major financial center to conduct trade financing, foreign exchange services, and other activities
- **Representative offices** – a small service facility that is staffed by parent bank personnel and designed to assist the clients of parent bank in their dealings with the bank's correspondents or with information about local business practices and credit evaluation of foreign customers
- **Foreign branches** – legally a part of the parent bank but operates like a local bank
    - Much more expensive than setting up a correspondent
    - Subject to regulations of BOTH countries

Types of International Banking offices (2)

- **Subsidiary and affiliate banks** – wholly or partly owned by a parent bank, but is incorporated in the foreign country where it is located
  - Affiliate is only partly owned but not controlled by a foreign parent bank
- **Offshore banking centers**
  - Bulk of financial activity (borrowing and lending) is offshore
  - Transactions are typically initiated outside of financial ctr
  - Majority of the financial institutions involved are controlled by nonresidents doing business with nonresidents
  - Centers typically offer low or zero taxation
  - Found in Aruba, Bahamas, Bahrain, Barbados, Bermuda, Cayman Islands, Hong Kong, Lebanon, Liberia, the Netherlands Antilles, Panama, Singapore, Vanuata, the West Indies, and others
  - Used for tax avoidance and crime so BIS, OECD and EU have joined forces to supervise activities
- **Edge Act banks** – federally chartered subsidiaries of U.S. banks allowed to engage in full range of international banking activities
- **International banking facilities (IBF)** – a separate set of asset/liability accounts segregated on parent bank books but not separate physically

Organization Structure of International Banking

		International Bank						
Characteristic	**Domestic Bank**	**Correspondent Bank**	**Representative Office**	**Foreign Branch**	**Subsidiary/ Affiliate Bank**	**Offshore Bank**	**International Banking Facility**	**Edge Act 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

Note: This exhibit was inspired by Exhibit 6.2 in Eun and Resnick (1997), p. 145

International Banking Regulation

- Differences across countries, international regulations could give one country an advantage
- International capital adequacy: The 1988 Basel Accord
  - Banks must hold capital equal to at least 8% of a basket of assets measured in different ways according to their riskiness
  - Create ways to measure risk of off-balance-sheet activities
  - Attempts to address both credit AND market risk
- A new capital-adequacy framework on Basel II
  - Banks can follow Basel Accord framework for measuring risk or use own models subject to strict requirements and disclosure
    - Asset securitization – packaging of assets or obligations into securities for sale to third parties
    - Value at risk – model developed by JPMorgan to measure market risk; dollar loss that a given position can experience with 5% probability over time
  - Supervisory review
  - Disclosure requirements

Basel III and the Crisis

- Crisis laid bare many deficiencies in the Basel II
  - Old framework underestimated risk because most models overestimate the power of diversification to reduce risk, especially in times of crisis
  - BIS and central banks/supervisory authorities have new framework
    - Core capital is defined as retained earnings and common shares
    - Reserves increased from 2% to 4.5%
    - Capital conservation buffer – 2.5% of banks risk-weighted assets
    - Local authorities require a countercyclical capital buffer, which decreases (increases) in good (bad) times
    - Tracing/monitoring of liquidity funding
    - Introduction of a maximum leverage ratio

International Bank Loans (1)

- Eurocredits – longer term loans in Eurobank market
  - Types of Eurocredits
    - Term loan – loan with a fixed maturity for a fixed amount
    - Credit line – allows borrower to withdraw as a loan any amount of money up to a fixed limit
  - Syndicates – group of banks that share risk
    - Lead bank negotiates with borrower over terms
    - Participating banks – banks that provide funding
    - Paying agent – the bank that receives the service payments from the borrower and distributes them to participating banks
  - Fees and Borrowing Costs
    - Periodic costs – interest
      - Interest rate (e.g., LIBOR + 1.5%)
      - Commitment fee (0.25% - 0.75%) on unused portion of credit
      - Agent fee
    - Upfront cost – 1% - 2.5% of total; deducted from principal
  - History and Size of Eurocredits
  - The Secondary Market

International Bank Loans (2)

- The Euronote Market
  - Euro-commercial paper and other short-term paper
  - Medium-term notes – maturities from 9 months – 10 years
    - Notes can be offered continuously
    - Can be issued in small denominations
    - Lower costs than a Eurobond issue
    - Not underwritten
    - Amounts/timing of sales are not disclosed – allows for discretion
  - NIF/SNIF/RUF – syndicates of banks committed to distribute or purchase a borrower's Euronotes with maturities of 1,3,6, or 12 months.
- The Major Debt Arrangers
  - The top 15 global banks arrange 60% of all global debt

Comparing the Costs of Debt

- Compare apples to apples
  - Similar amounts
  - Maturity
  - Cash flow patterns (same currency too!)
    - Annual yield = $(1\text{-Semiannual yield})^2 - 1$
  - Interest rate structure
- The All-in-Cost Principle (AIC)
  - The discount rate or internal rate of return that equates the PV of all future interest rate and principal payments to the net proceeds
  - Solve for "i" in $\text{Proceeds} = \Sigma_{n=1}^{N} \text{Coupon}/(1+i)^n + \text{Principal}/(1+i)^N$
  - Cost of loan = Risk-free rate + Credit spread + transaction cost
  - Credit rating – based on current information of risk of default
    - Moody's and Standard & Poor's; European Rating Agency (Eurorating) and Japan Credit Rating Agency (JCR)
    - Ratings differ across agencies

Minimizing the cost of debt internationally

- Why source debt internationally?
  - Evidence suggests credit spreads differ across countries
    - Differing perceptions of credit risk
    - Diversify funding sources
    - Cyclical differences – credit spreads tend to be countercyclical (widens in recessions)
    - Can borrow in countries low interest rates and invest in countries with high interest rates while hedging currency risk
      - CIRP doesn't always hold because transaction costs keep arbitrage from being profitable and there's always default risk
      - Tax loopholes

Credit Ratings for Bond Issuers

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 Stock Markets

- The size of stock markets
  - U.S. stock market was about 31% of the world's stock market capitalization at the end of 2010
  - Relative market capitalization of most exchanges around the world change though
  - Cross-holding – on firm owning shares in another firm – can cause an overstating of market cap
    - Especially common in Japan and many European countries
- Trends
  - Consolidation of exchanges *across* countries
  - The exchanges of some developing nations have become among the largest in the world

Globalization of Exchanges

- Cross-listing – listing on foreign exchanges
  - Exchanges have extended hours
  - Exchanges have merged/created alliances to automate cross-listing
    - In 2000, stock exchanges of Amsterdam, Brussels, and Paris merged to form Euronext (and subsequently absorbed Lisbon and LIFFE)
    - German and Swiss exchanged combined to form Eurex
    - In March, 2007, NYSE and Euronext formed a new company called NYSE Euronext, Inc.
- Demutualization – the process of converting exchanges from nonprofit, member-owned organizations to for-profit investor-owned, and typically publicly-traded companies
  - Examples – Australian SE (98), Toronto SE (00), Euronext (00), NASDAQ (00) and NYSE (05)

Trading Practices (1)

- Directly affects price discovery – how information is revealed
- Should lead to fair and correct pricing that cannot be manipulated for the gain of an individual
- Price-driven trading systems
  - Market makers stand ready to buy at their bid prices and sell at their ask prices
  - Examples – forex market; NASDAQ; SEAQ
- Order-driven trading systems
  - Orders are batched together and then auctioned off at an equilibrium market price
  - Example – Tokyo Stock Exchange
    - Price priority – highest bid and lowest ask have priority
    - Time priority – orders at same price 1st come/1st serve
    - Order priority – market orders have priority over limit orders
- NYSE is a combination of price- and order-driven

Trading Practices (2)

- Automation and electronic trading
  - Trend toward automation; investors get best prices this way
  - 1st was Paris Bourse
- Private electronic communication networks (ECNs) have rapidly developed
  - Lists the prices of securities trading on other exchanges and either lets its subscribers trade directly or uses some form of order-crossing network
  - Off-exchange trading venues
    - Europe – MiFID
    - U.S. – Alternative Trading Systems
  - Facilitate anonymous trading of large blocks of shares – "dark pools"
  - Also promotes the growth of high-frequency trades

Turnover and Transaction Costs

- Turnover – total volume of trade done on an exchange during the year divided by the exchange's total market cap at the end of the year
    - Emerging markets have lower turnover but vary widely
    - Often thought of as a proxy for liquidity
    - Inversely related to trading costs
- Trading costs – costs of trading; includes brokerage commissions and other fees, bid/ask prices, and market impact costs
    - Market impact – impact on price of a large trade in an illiquid market
    - Commission costs are easiest to estimate – decrease with trade size

Trading Costs

Country	2005 (quarter 3)	2010 (quarter 1)
United States (large cap)	40.0	38.8
United States (small cap)	75.0	71.8
United Kingdom	55.0	48.7
Japan	94.0	50.5
Canada	87.4[a]	49.4
Developed Asia (excluding Japan)	54.0	72.9
Developed Europe (excluding United Kingdom)	64.0	43.4
Emerging markets	123.7[a]	89.7
Emerging Asia	110.7[a]	85.7
Emerging Europe	145.2[a]	111.2
Emerging Latin America	150.0[a]	87.3
Emerging Africa and Middle East	145.7[a]	162.3

Notes: The data are taken from ITG's Global Trading Cost Review, 2010 (quarter 1). The trading costs are expressed in basis points.

[a]Data are for 2008, quarter 3.

International Cross-Listing

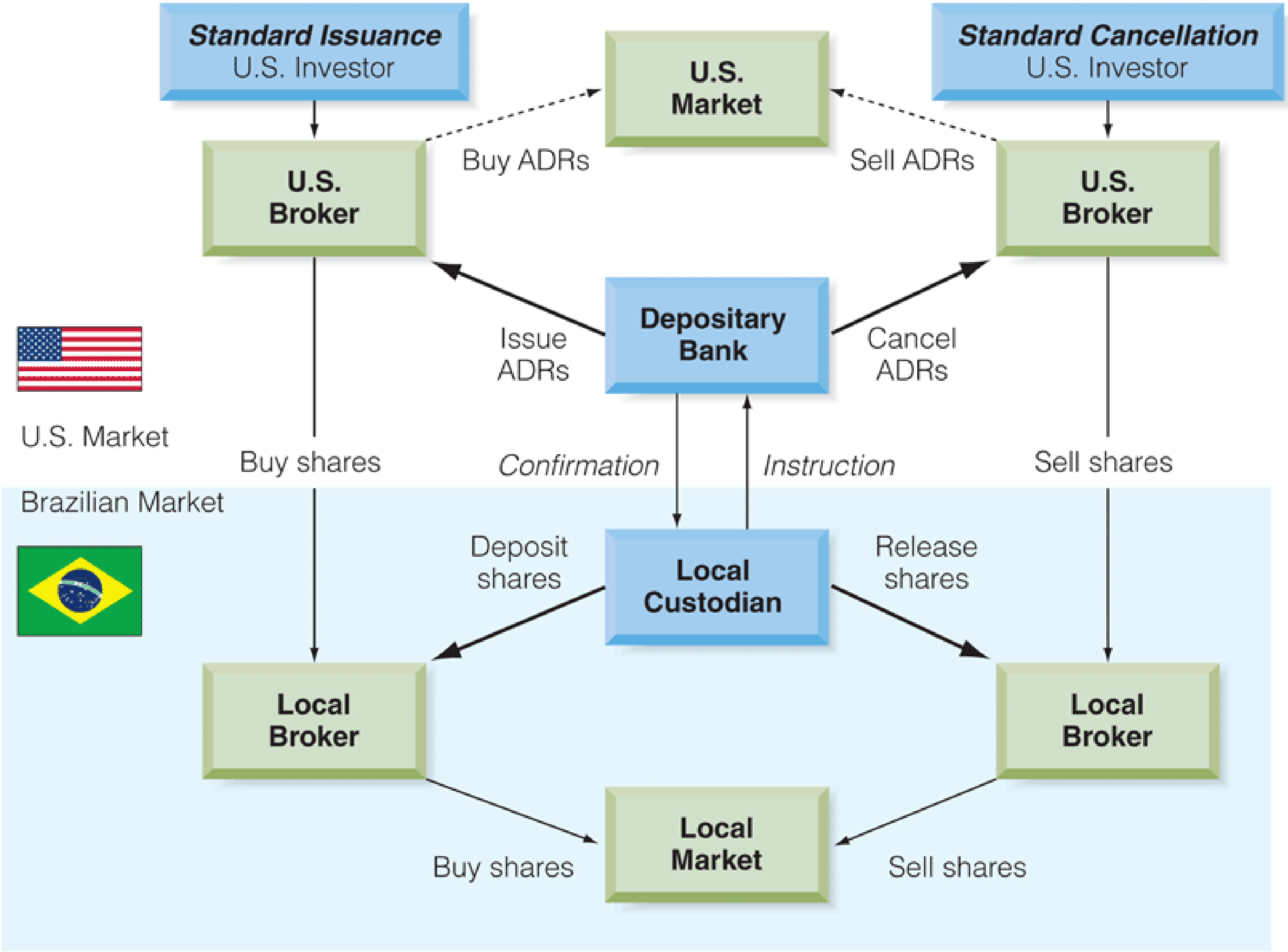
- London is the biggest cross-listing market – 42% of trading pertains to foreign companies
- Other important markets for foreign trading: Switzerland, South Africa, Argentina
- How Do Firms Cross-list?
  - First: Comply with the standards set for listing
  - Second: Adhere to the security regulations
- Depositary Receipt (DR)
  - Represents a number of original shares held in custody by a financial institution in the country of the stock exchange
  - American Depositary Receipts (ADR)
    - Held by Bank of New York (over 50%), JPMorgan Chase, Citibank, and Deutsche Bank

Types of ADRs

	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

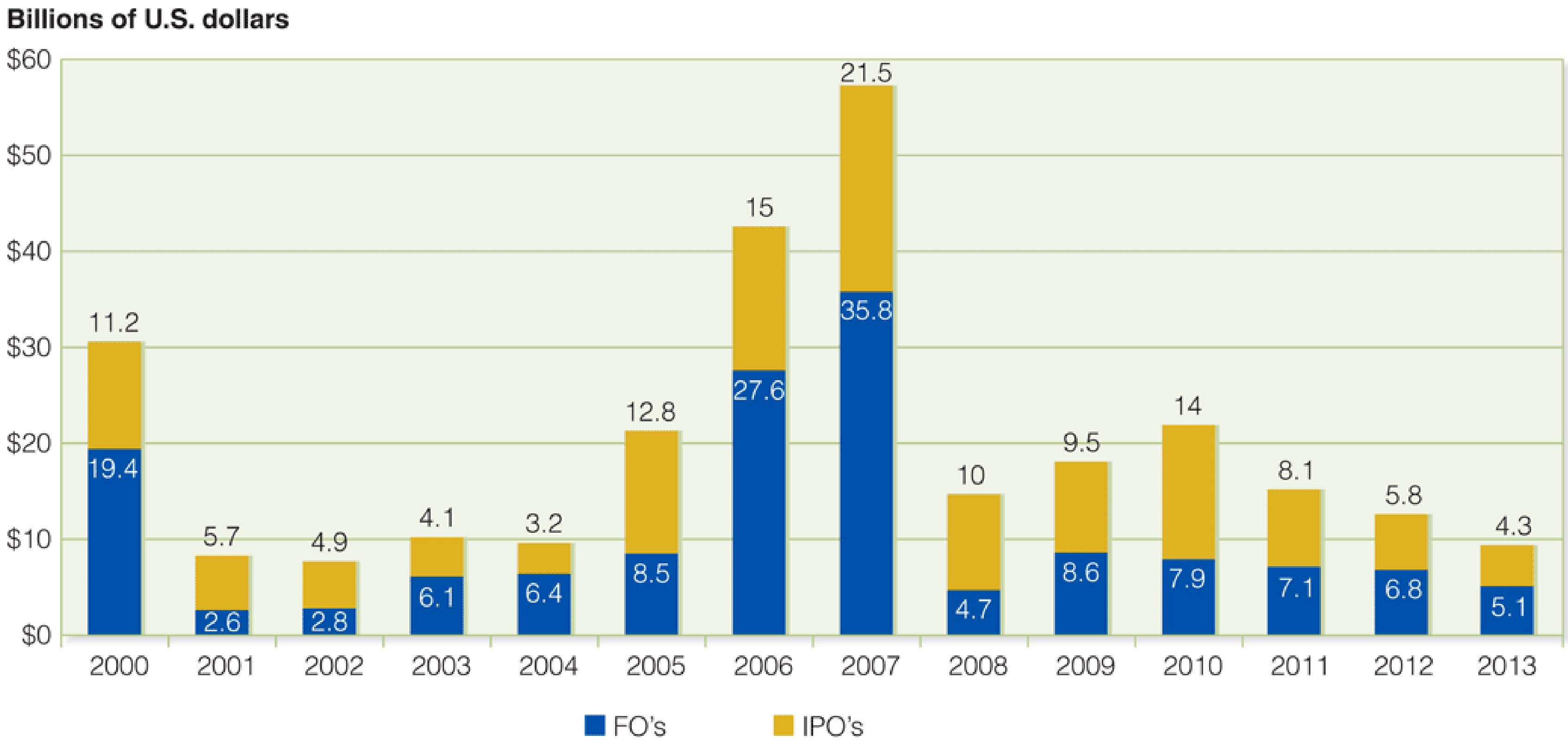
Note: Data are from Miller (2000).

The Structural Execution of ADRs



Source: Based on *Depositary Receipts Reference Guide*, JPMorgan, 2005, p. 33.

Equity Capital Raised Through Depositary Receipts

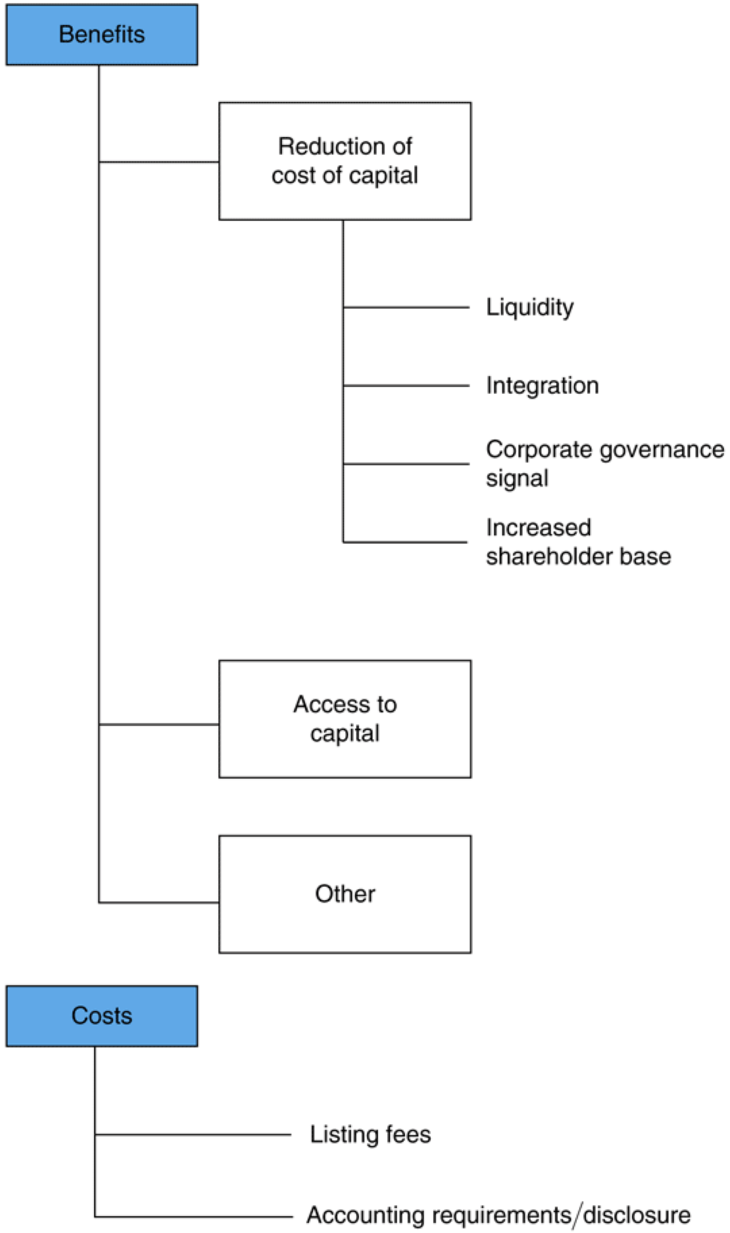


Source: "Depositary Receipts, Year in Review 2013," JPMorgan, p. 5. Data derived by JPMorgan from other depositary banks, Bloomberg, and stock exchanges, January 2014. Reprinted with permission.

Why firms choose to cross-list

- Increased liquidity – an increase in total trading volume and a significant decrease in home market bid-ask spreads
- Wider shareholder base
- Market integration – securities of similar risk have the same expected returns when trading in two markets
- Corporate governance signal – "bonding"
- Capital needs and growth opportunities
- Other benefits of cross-listing
  - Visibility/brand awareness
  - Cross-border acquisitions
  - The flexibility to set up stock option plans for foreign employees

The Costs and Benefits of Cross-listing



The Advantages and Disadvantages of Cross-Listing (1)

- Why firms decide against cross-listing
  - Costs
    - One-time listing and registration fees
    - Ongoing costs of additional reporting and disclosure
  - Relative costs – U.S. exchanges are considered prohibitively expensive by some
    - Sarbanes-Oxley Act increased the costs of corporate governance regulations
    - 3 out of 4 new DR listings in 2006 were on non-U.S. exchanges

The Advantages and Disadvantages of Cross-Listing (1)

- Global Registered Shares (GRS)
  - Pros
    - Does not require the intervention of a depository bank
    - $5 settlement cost paid to the Depository Trust Company (DTC) covers a per-share fee for conversion
    - Ownership is more direct giving investors the same voting privileges, rights to receive dividends, etc.
  - Cons
    - No depository bank to oversee coordination of the transfer, clearing, and settlement procedures
    - No flexibility of bundling a number of home-market shares into a receipt to ensure fair pricing

Strategic Alliances

- Strategic alliance – an agreement between legally distinct entities to share the costs and benefits of what is hoped to be a beneficial activity
  - Joint venture: two or more independent firms form and jointly control a different entity, created to pursue a specific objective
  - Why are these formed instead of doing this internally?
    - Some think it is to pursue risky projects