

**Global Banking  
&  
Capital Markets  
REVIEW II**

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**What is Global Banking and Capital Markets?**

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The International Financial Markets

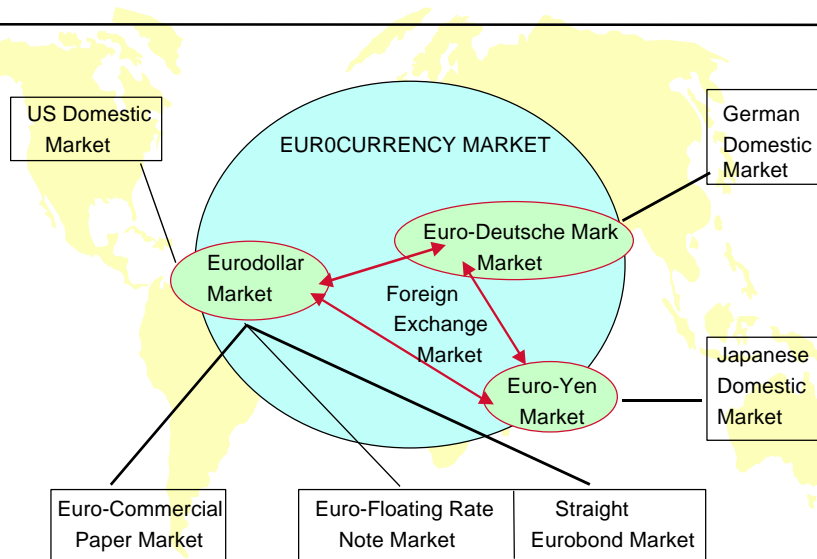
- ◆ Money and foreign exchange; derivatives; international bonds & equities; loan trading
- The Global Banking Business
  - ◆ Lending; trading and transactions; underwriting; M&A; project financing; asset management; advisory services; etc

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### What are the Global Financial Markets?

- The Foreign Exchange Market
- Domestic and International Money Markets
- Domestic and International Capital Markets
- The Derivatives
- International Equity and M&A
- Using the Global Capital Markets: Global Banking Strategy and Implementation

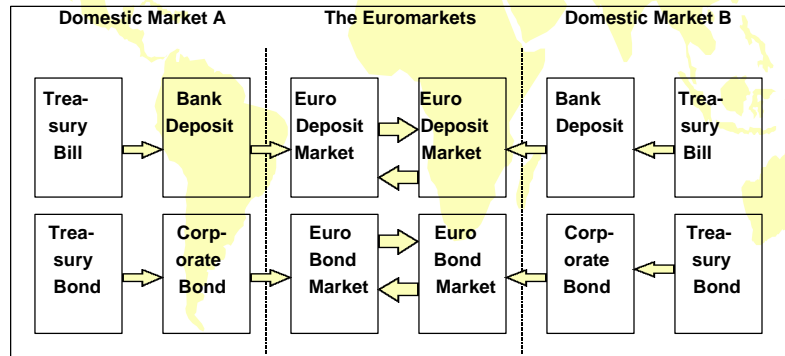
### Where the Eurocurrency Market Fits In



## Interest Rate Linkages in the International Money Market

Two stories to tell:

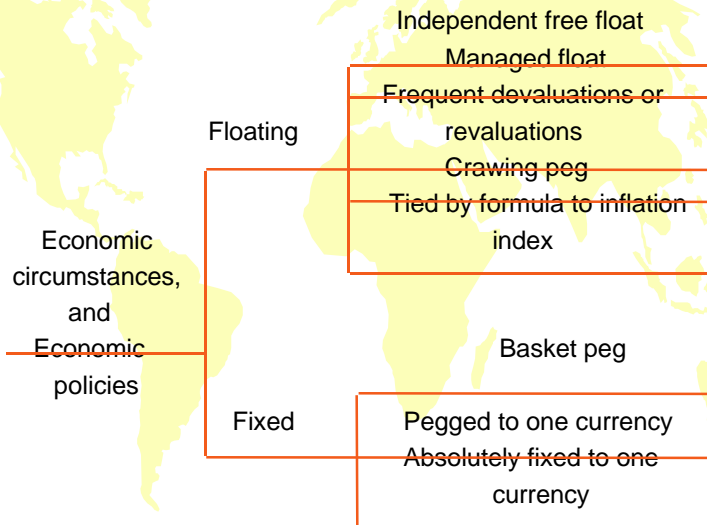
- Domestic vs. Euro
- Eurocurrency A vs. Eurocurrency B



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## To Fix or To Float, That is the Question

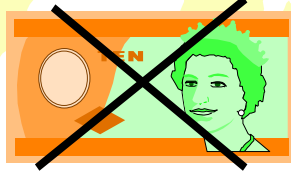


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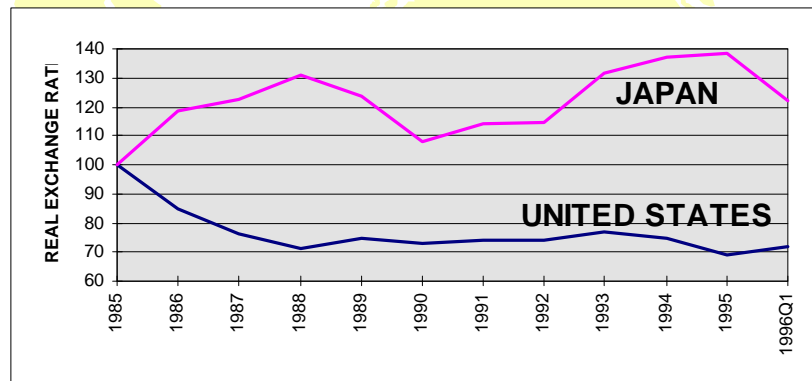
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### Implication of EMU

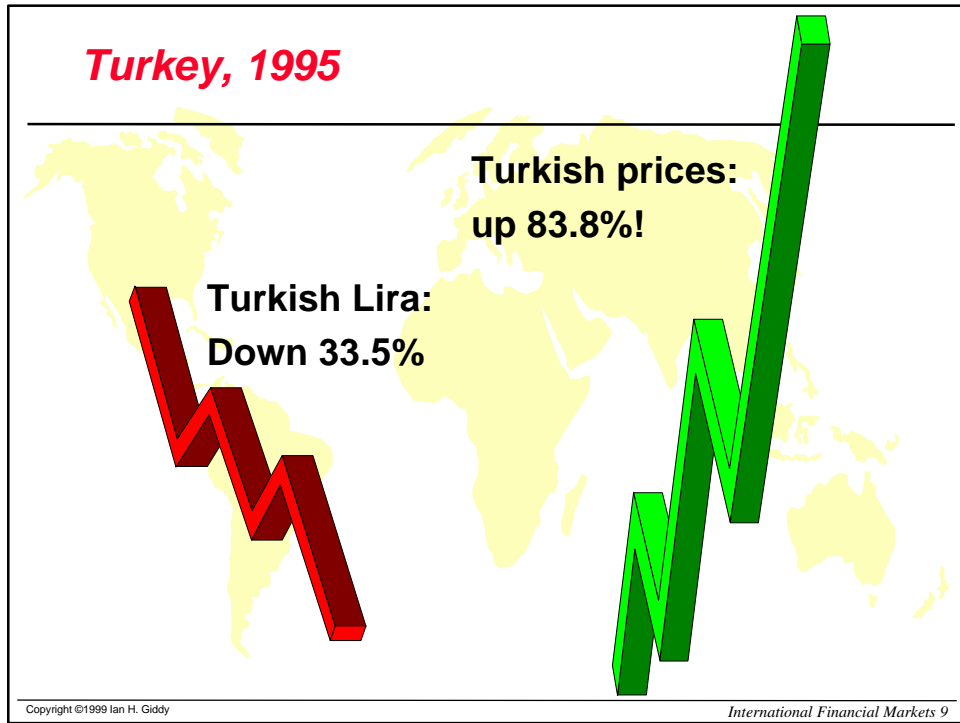
- Only Eurofed creates money
- Central banks can no longer print money to finance public deficits
- Only a nation's creditworthiness determines ability to run a fiscal deficit



### Deviations from Purchasing Power Parity



Source: JP Morgan. Index of real effective exchange rate versus 18 industrial country currencies, adjusted for change in relative wholesale price of domestic manufactures. A fall in the index indicates improved international competitiveness.



### Foreign Exchange Dealing

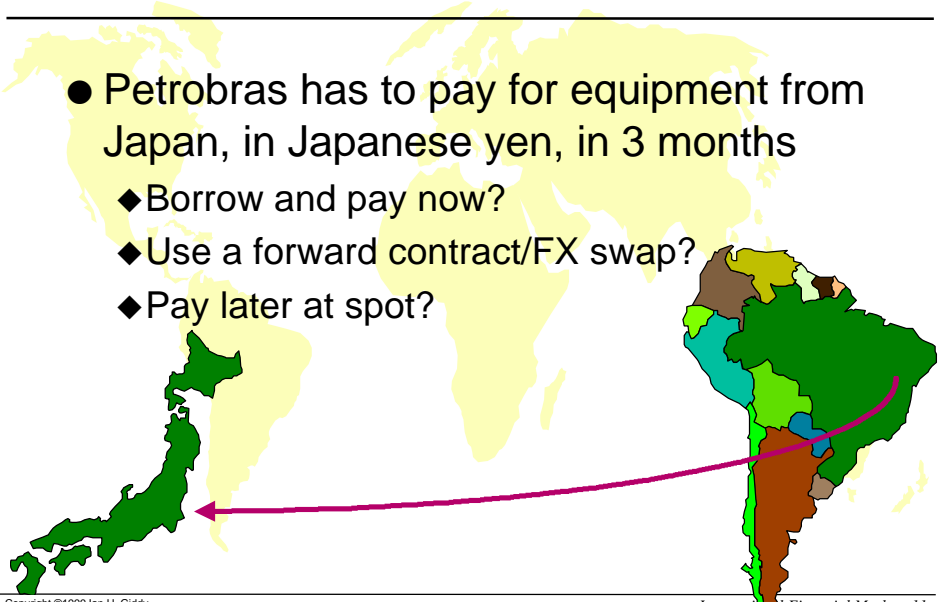
**Mercados Financieros**

Foreign Exchange Advisory Services?

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### Tools for Hedging

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- Petrobras has to pay for equipment from Japan, in Japanese yen, in 3 months
  - ◆ Borrow and pay now?
  - ◆ Use a forward contract/FX swap?
  - ◆ Pay later at spot?

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### Cost of Hedging

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Type of Hedge	Cost of Hedging
Forward	Forward premium
Money Market Hedge (Borrow to match assets)	Interest rate differential
Do nothing	Expected rate of change of exchange rate

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## ***Forwards vs Futures vs Options***

- Good credit: Forward usually best
- Sometimes, Money Market Hedge better
  - ◆ Perfect market: same (covered int. arb.)
  - ◆ Imperfect market: MMH may be better
- Credit problem: Futures
  - ◆ But: limited and standardized
  - ◆ Requires margin and daily settlement
- Uncertain future cash flows:
  - ◆ Liquid instrument (futures/forwards to assure flexibility)
  - ◆ Options sometimes advisable

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## ***Diagram of a Dealing Room***

Foreign exchange and Eurocurrency dealing are interrelated activities and so are done on the same trading floor.

### ***The Dealing Room***



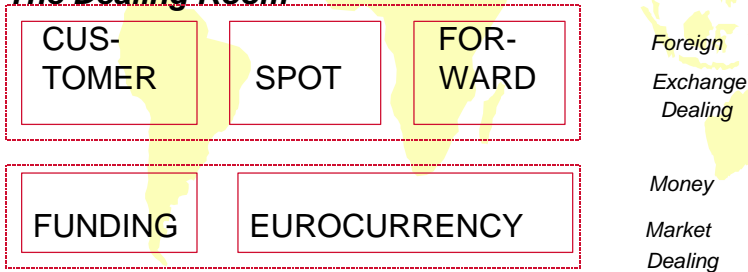
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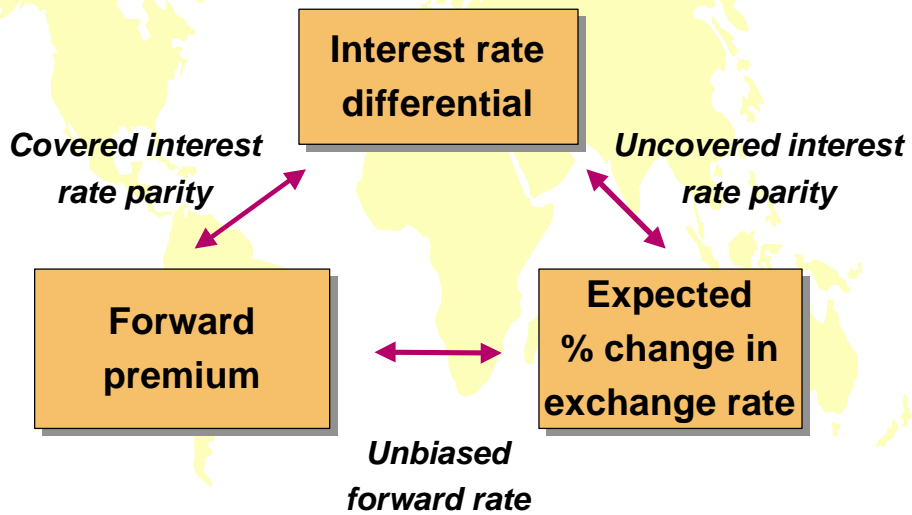
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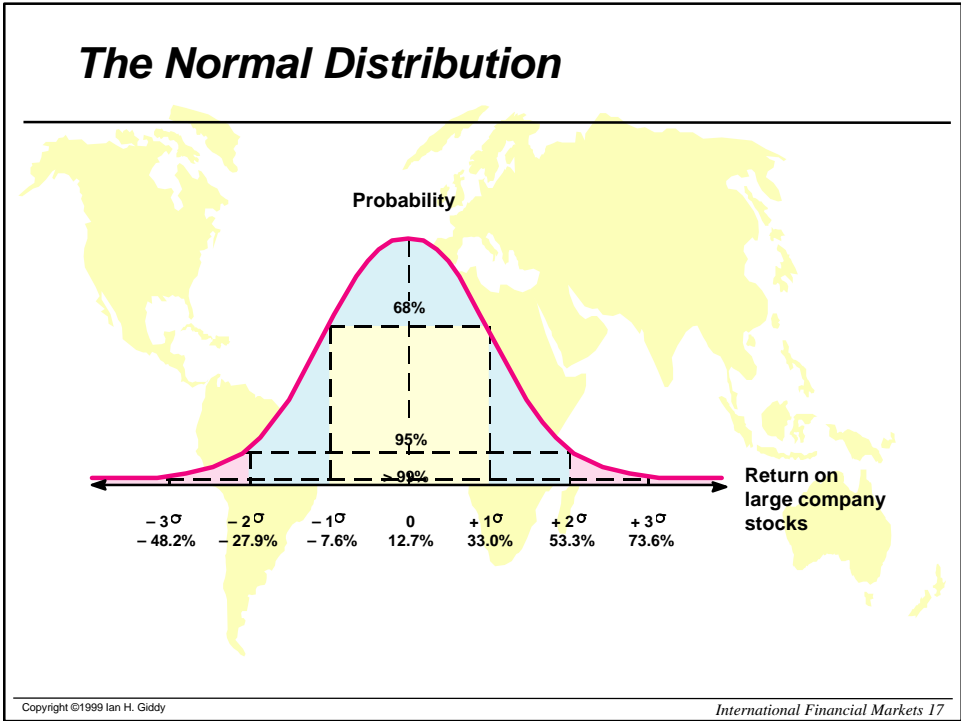
#### The Dealing Room



### Linkages Between Eurocurrency Rates







**Money & Capital Market  
Instruments**

## Present Values: Summary

### Single amount:

the amount times the *present value of interest factor*, or  $PVIF_{r,n}$  :

$$PV_{r,n} = FV \times PVIF_{r,n} = FV \times \frac{1}{(1+r)^n}$$

### Annuity:

the periodic payment times the *present value of annuity factor*, or  $PVIFA_{r,n}$  :

$$PVA_{r,n} = PMT \times PVIFA_{r,n} = PMT \times \frac{1 - 1/(1+r)^n}{r}$$

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## Returns on Money Market Instruments

- Bank discount rate method

$$BDR = \frac{\text{Discount}}{100} \times \frac{360}{\text{Days}}$$

- Add-on yield

$$AOY = \frac{\text{Interest}}{100} \times \frac{360}{\text{Days}}$$

- Bond equivalent yield or yield to maturity

solve the following equation for  $r$ , the yield to maturity:

$$P = \frac{C/m}{r/m} [1 - (1+r/m)^{-rm}] + \frac{FV}{(1+r/m)^{mn}}$$

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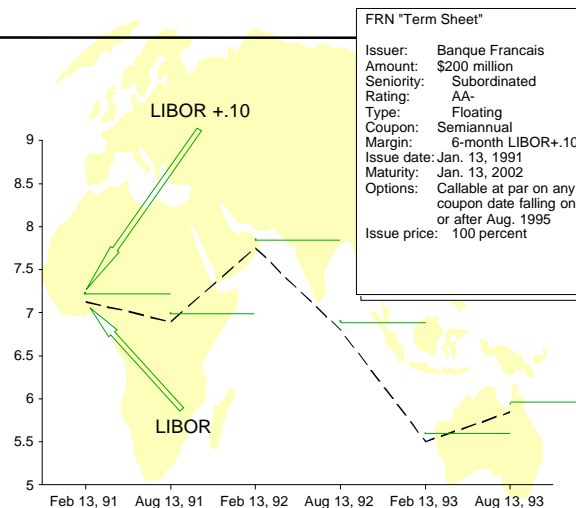
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## Floating-Rate Notes

- While all FRNs have a coupon that is reset at fixed interval in accordance with some preset formula, there are many variations on this theme.
- Major common features include:
  - ◆ The Reference Rate. (usually LIBOR)
  - ◆ The Margin. The margin is the spread between the coupon payment and LIBOR.
  - ◆ The Reference Rate Period.
  - ◆ Frequency of Reset. The period between coupon reset dates. Normally coincides with the reference rate period.
  - ◆ Coupon-payment Frequency. The interval between coupon payments. Normally coincides with the coupon reset periods.
  - ◆ Maturity.

## Pricing FRNs

At each reset period, the rate is raised or lowered to match the prevailing market rate. So credit risk changes aside, its price should return to 100.



### Interest-Rate Parity

$$\$1 (1 + i_{E\$}) = (\$1 / S_t) (1 + i_{EBP}) F_t^n$$

where  $S_t$  is the spot exchange rate (dollars per British Pound) and  $F_t^n$  is the forward rate.

Or, to a close approximation,

$$(i_{E\$} - i_{EBP}) = [(F_t^n - S_t) / S_t] (365/n) 100$$

**Interest-rate differential = forward premium or discount**

### Trading and Transferring Loans

#### ASSIGNMENT

**FULL ASSIGNMENT**  
The sale of *all* of the originating lender's or assignor's rights and interest in a credit facility to a purchaser or assignee.

#### ASSIGNMENT WITH NOVATION

#### PARTICIPATION

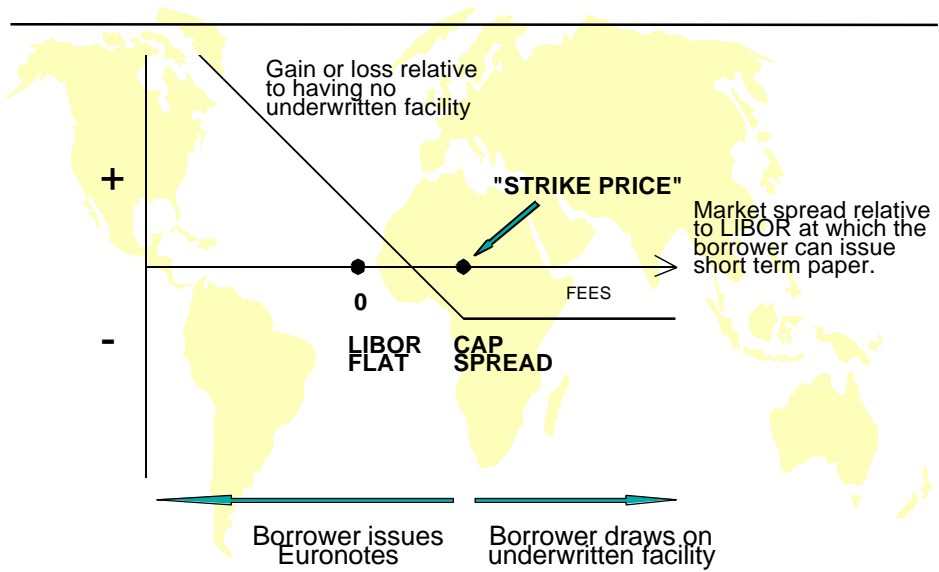
**PARTICIPATION**  
*Participants have derivative rights, not direct rights against (or obligations to) the borrower.*

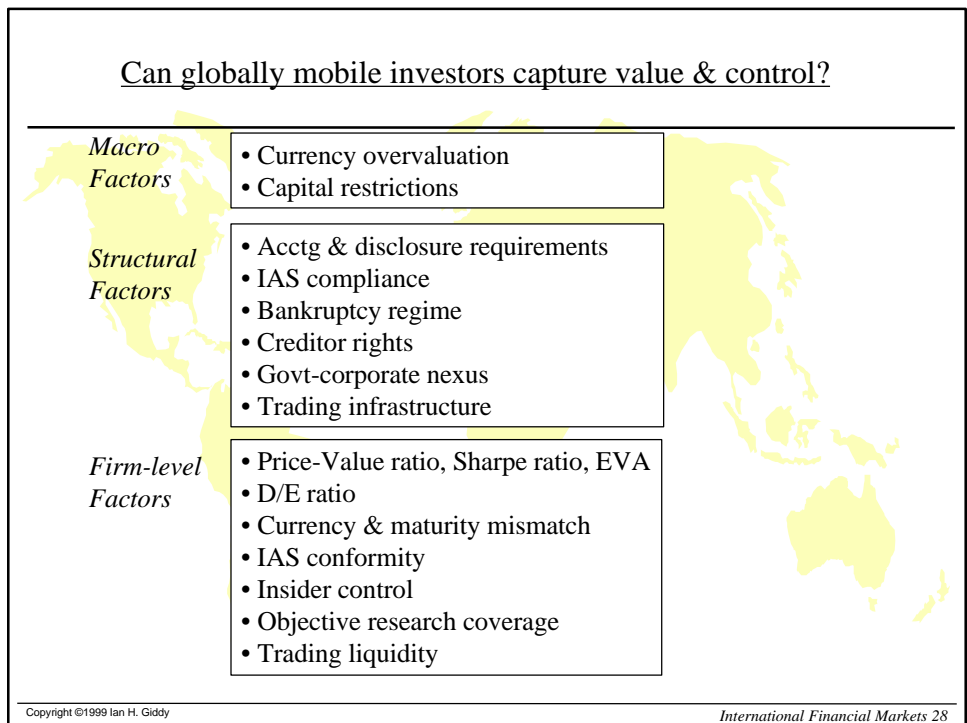
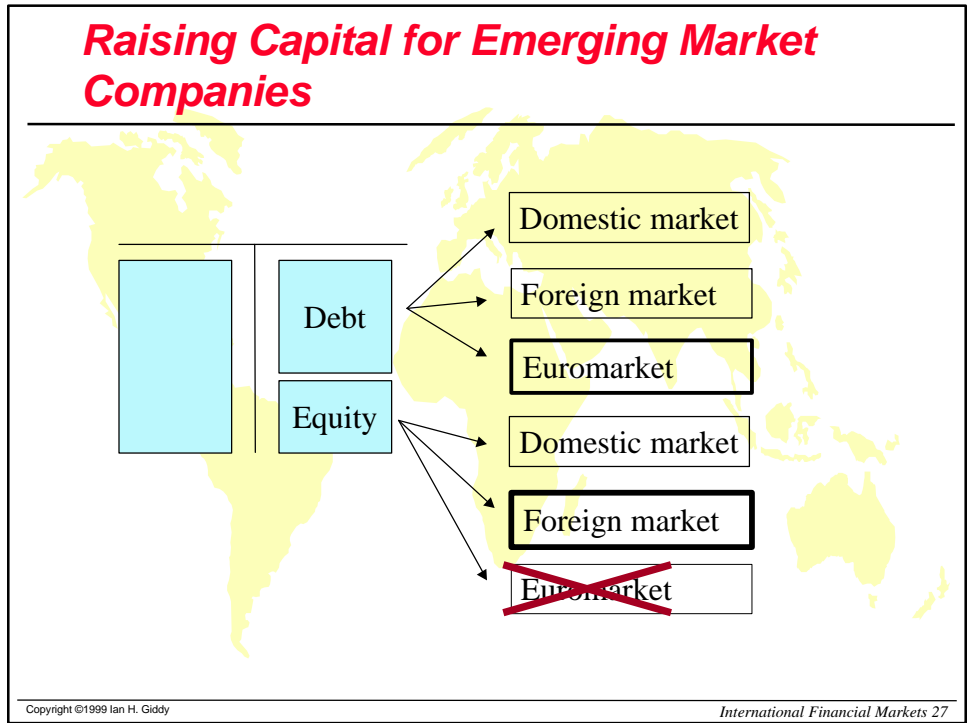
- LIMITED VOTING PARTICIPATION
- FULL VOTING PARTICIPATION
- FULL PASS-THROUGH PARTICIPATION

### Note Issuance Facilities

- A Note Issuance Facility has two tiers
- Tender panel members (who provide funds)
  - Underwriters (commit to the availability of credit)

### Comparison of RUF to Put Option



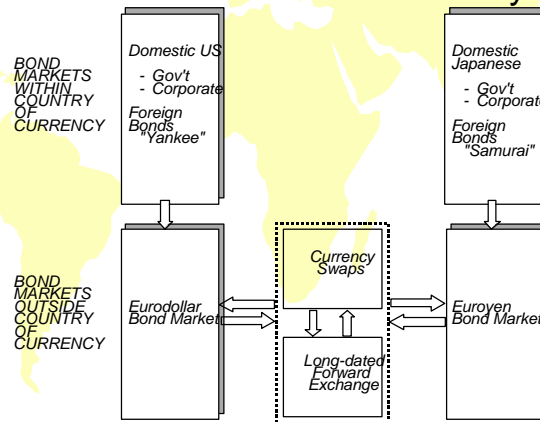


## Brady Bonds

- Origin?
- Types?
- Ecuador's Bradies
  - ◆ Discount
  - ◆ Par
  - ◆ Past due interest
  - ◆ Interest equalization
- What next?

## International Bond Markets are Linked

- Issuers and investors compare terms in the domestic and Eurobond markets, which are linked across currencies via currency swaps



## Characteristics of Eurobonds

- Issued outside country of currency
  - Not subject to domestic registration or disclosure requirements
  - In most cases take form of private placements
  - Placed through syndicates in many countries who sell principally to nonresidents
  - Bonds are structured so as to be free of withholding tax
  - Bearer form
- But...
- Eurobonds usually influenced de facto by government and banks of country of currency

## Who Gets What

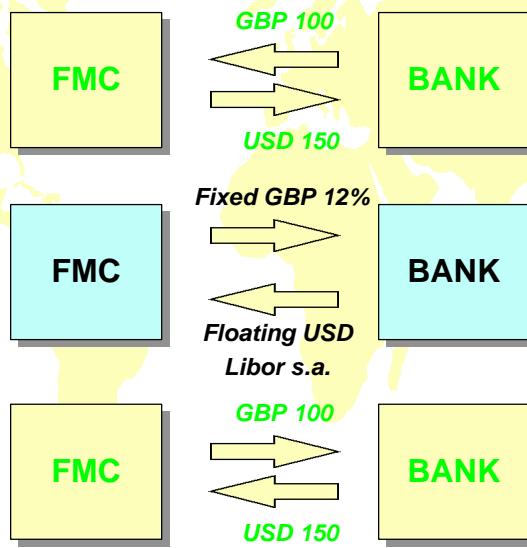
	Fees, percent	Fees, amount	Net price
Price paid by investor (in theory)			101.50
Price paid by member of selling group	60%	0.90	100.60
Price paid by member of underwriting group	60%+20%	0.90+0.30	100.30
Price paid by managers (plus "praecipium" paid to lead manager)	60%+20%+20%	0.90+0.30+0.30	100.00



### Equity-Linked Eurobonds

- Eurobonds with warrants
  - ◆ Marui
- Convertible Eurobonds
  - ◆ Battle Mountaingold
- Index-linked Eurobonds
  - ◆ Bank of Montreal

### Three Parts of a Currency Swap



### How Swaps are Quoted

US\$ INTEREST RATE SWAPS			CURRENCY SWAPS	
Years	Treasury Curve Benchmark Semi-Annual Yields	Spread [b.p.] to AA Counterparties	DEM/USD Annual	JPY/USD Annual
2	8.02	62-66	7.00-7.10	5.35-5.45
3	8.01	70-75	7.00-7.10	5.35-5.45
4	8.01	72-76	7.00-7.10	5.35-5.45
5	8.02	78-81	7.00-7.10	5.35-5.45
7	8.13	77-81	7.02-7.12	5.40-5.50
10	8.14	78-81	7.02-7.12	5.45-5.53

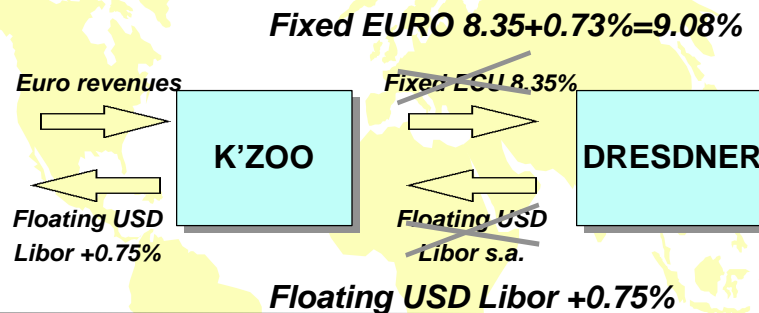
  

CURRENCY SWAPS				
Years	CHF/USD Annual	GBP/USD Annual	ECU/USD Annual	AUD/USD Annual
2	6.60-6.70	12.80-12.90	9.20-9.30	15.65-15.80
3	6.20-6.30	12.35-12.45	9.15-9.25	15.25-15.40
4	6.05-6.10	11.90-12.00	9.10-9.20	15.15-15.30
5	6.00-6.10	11.75-11.85	9.05-9.15	14.78-15.13
7	5.95-6.05	11.50-11.60	9.05-9.15	NA
10	5.95-6.05	11.26-11.36	9.05-9.15	NA

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### Kalamazoo



- 75bpUSD=73bpEuro; swapped cost is 9.08%
- ST rate: no effect. LT rate rise: value of swap will change by duration. K'zoo gains, Dresdner loses.
- Amortize the up-front fee of 0.75% over the period of the financing, and add it to swapped cost..

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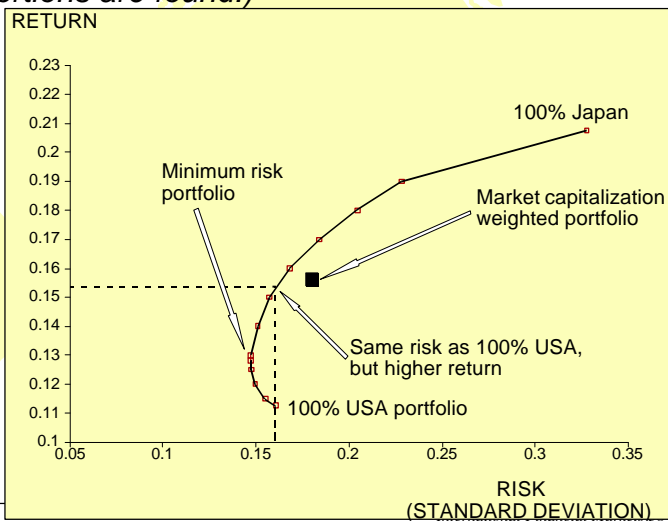
### The International Capital Market

- Floating rate notes
- Eurobonds, foreign bonds and global bonds
- “A Day in the Life”
  - ◆ The secondary market
  - ◆ The primary market
- The international equity market

### International Portfolio Optimization: Passive vs Active Portfolios

*(Let the proportions of all possible assets vary until the optimal proportions are found.)*

The results of letting the computer find the best proportions for various levels of return:



### **Summary: International Capital Market**

- Floating rate notes
- Eurobonds, foreign bonds and global bonds
- “A Day in the Life”
  - ◆ The secondary market
  - ◆ The primary market
- The international equity market
- *Next: Structured securities issuance*

### **Principles of Innovation Through Financial Engineering**

- Bundling and unbundling basic instruments
- Exploiting market imperfections (sometimes temporary)
- Creating value added for investor and issuer by tailoring securities to their particular needs

*Key:* For the innovation to work, it must provide **value added** to both issuer and investor.

