

## ***International Financial Management: Review***

Prof. Ian Giddy  
New York University

## ***International Financial Management***

1. Management, Markets and Linkages
2. Exchange Rate Determination and Forecasting
3. Hedging Tools: Forwards vs Futures vs Options
4. Measuring and Managing Risk
5. Managing Corporate Financial Structure
6. Swap-Linked Financing
7. Bank and Money Market Financing
8. Long Term Financing in Intl Capital Markets
9. Hybrids and Structured Finance
10. Integrated Multimarket Financing



## ***What Is So Special about Corporate Finance in the Int'l Environment?***

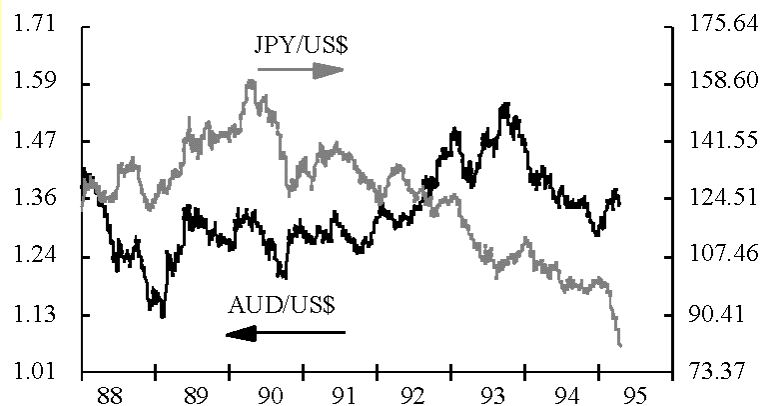
- λ Financial Markets Are Partially Linked / Partially Separated
- λ Exchange Rates Fluctuate
  - ◆ Risks - Eg currency exposure measurement and management
  - ◆ Opportunities - such as deviations from purchasing power parity
  - ◆ Analytical Tools - like exchange rate determination and hedge pricing

Copyright ©2002 Ian H. Giddy

Review #

## ***Currency Fluctuations***

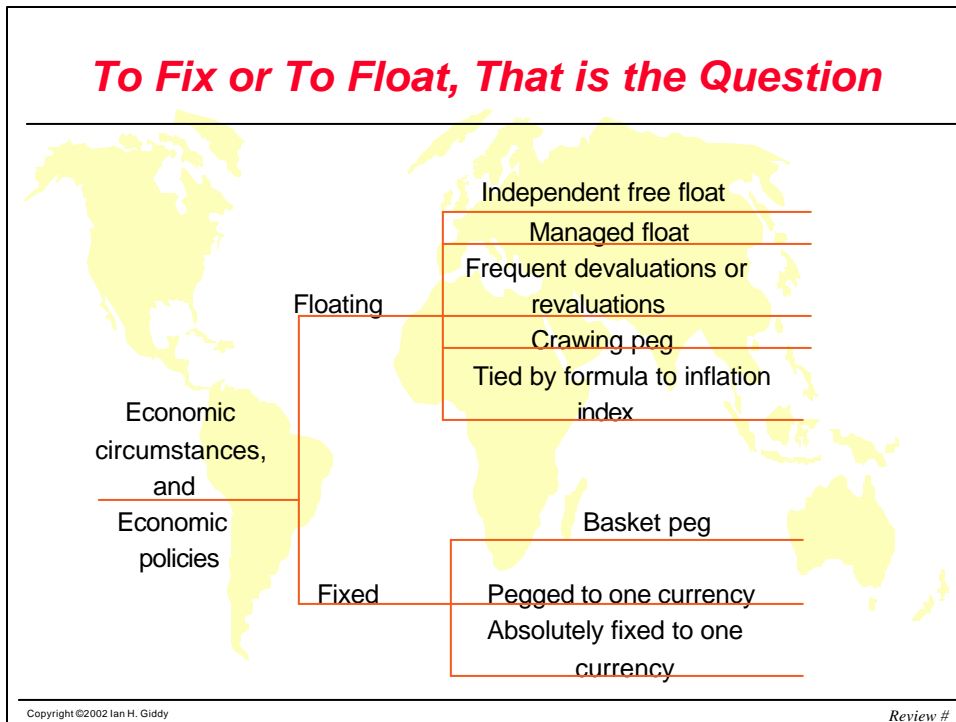
JPY/USD and AUD/USD exchange rate history



Copyright ©2002 Ian H. Giddy

Review #

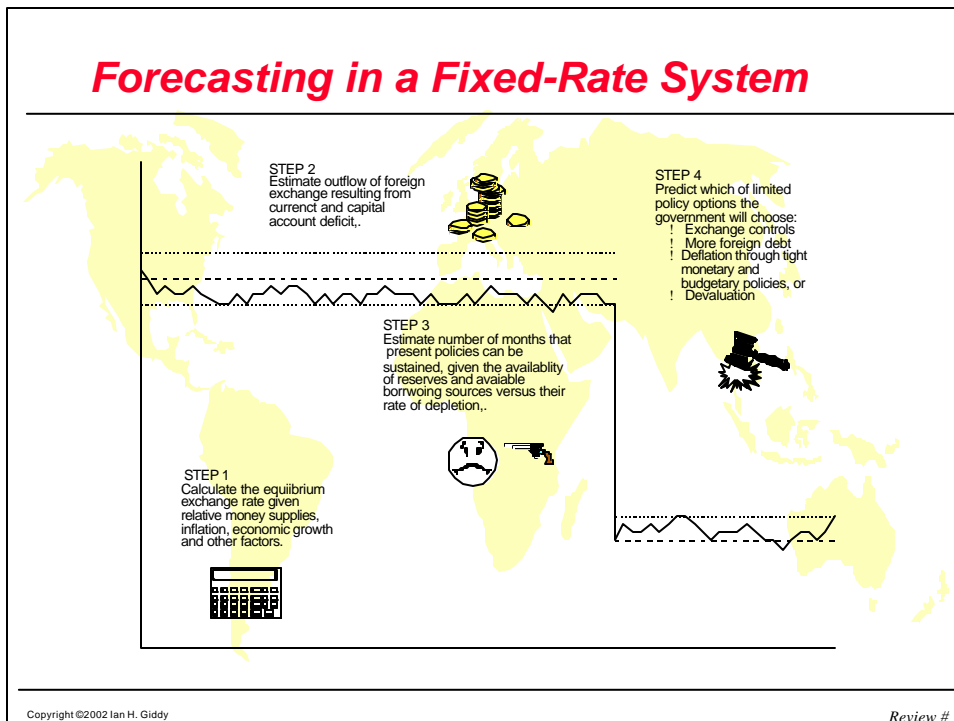
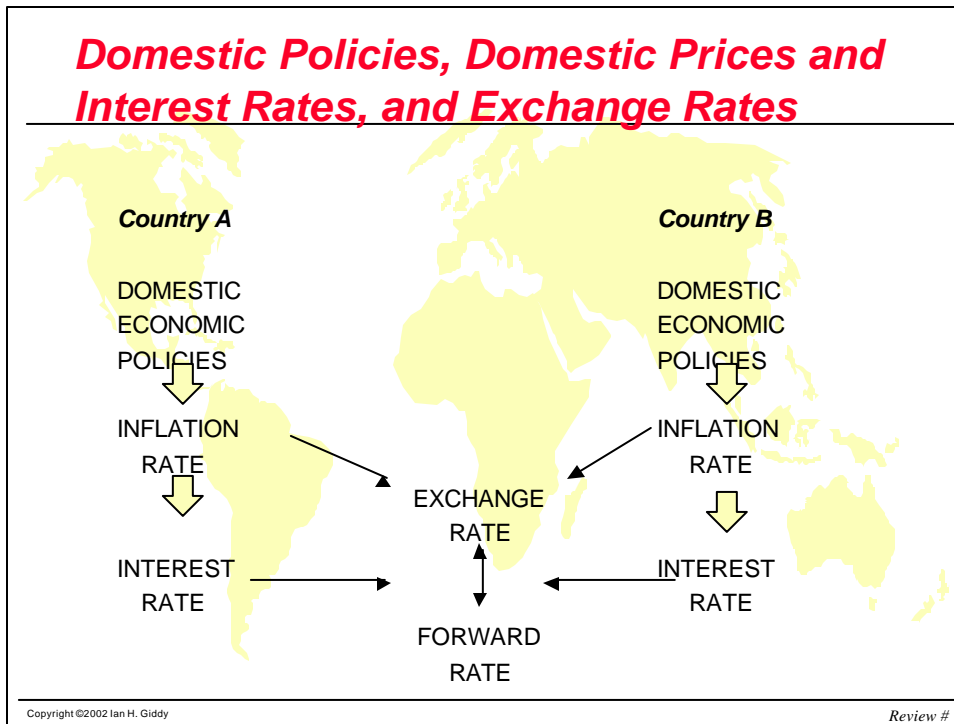
## To Fix or To Float, That is the Question



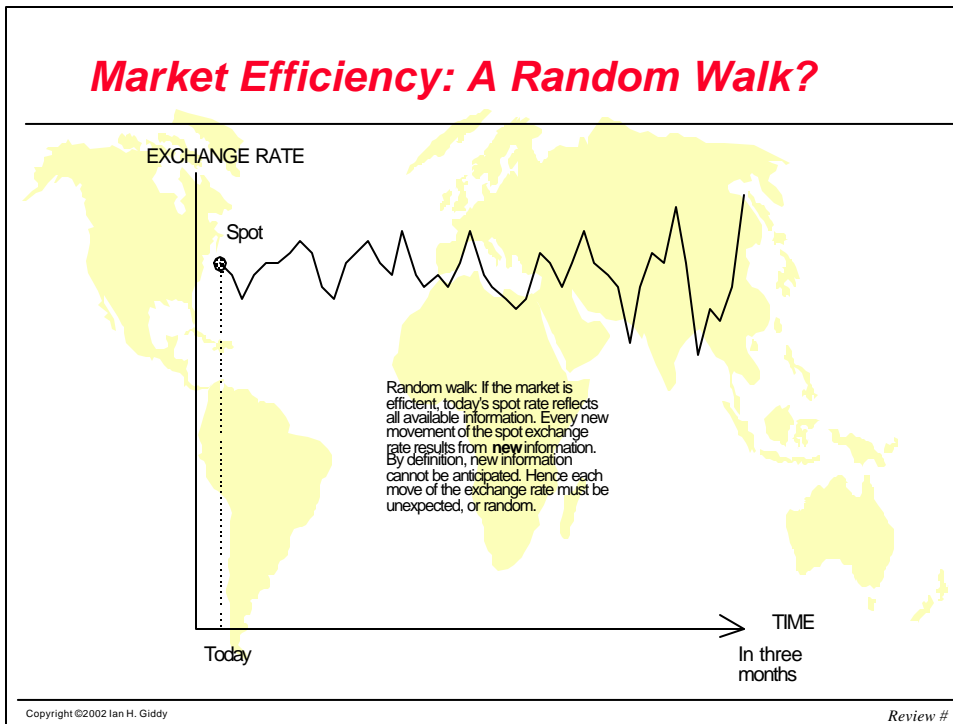
## Implication of EMU

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

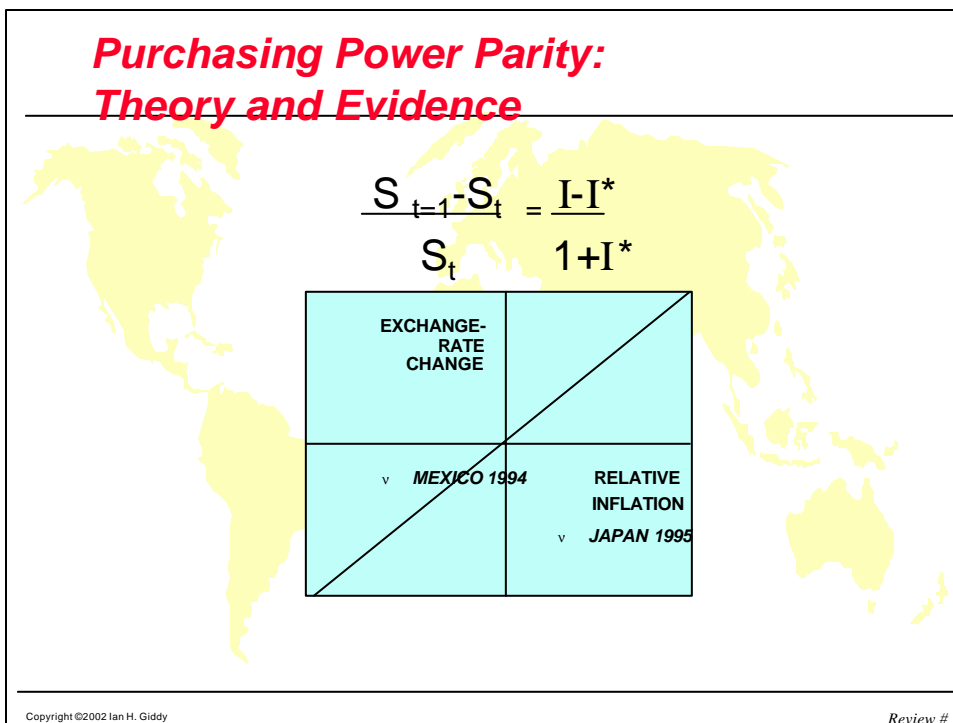


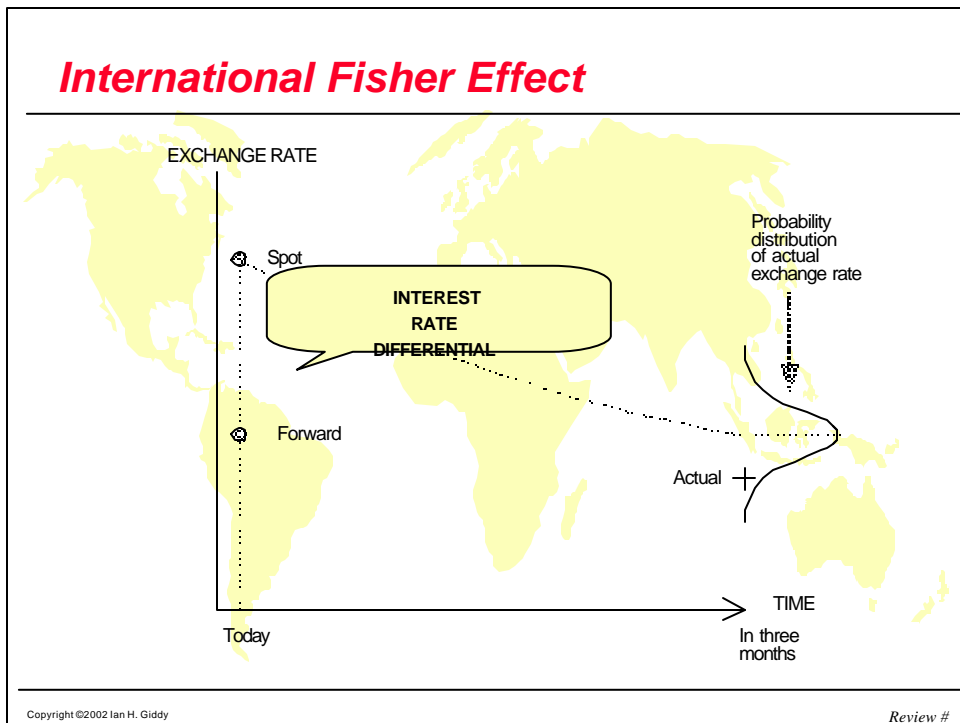
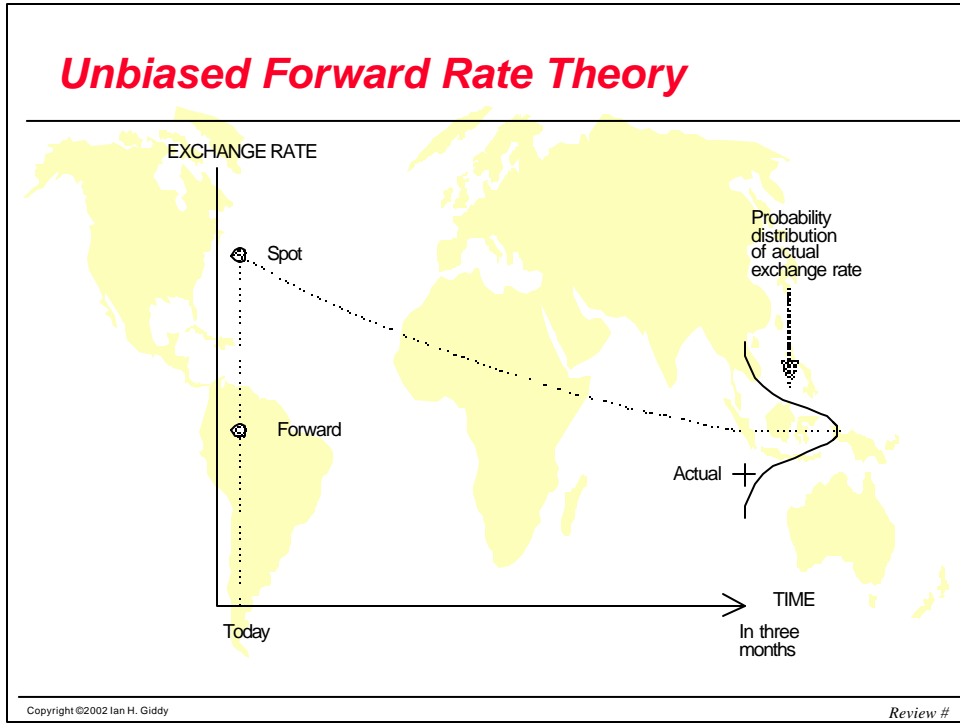


### Market Efficiency: A Random Walk?



### Purchasing Power Parity: Theory and Evidence





### Interest-Rate Parity

$$\$1 (1 + i_{\$/\text{£}}) = (\$1 / S_t) (1 + i_{\text{£BP}}) F_t^n$$

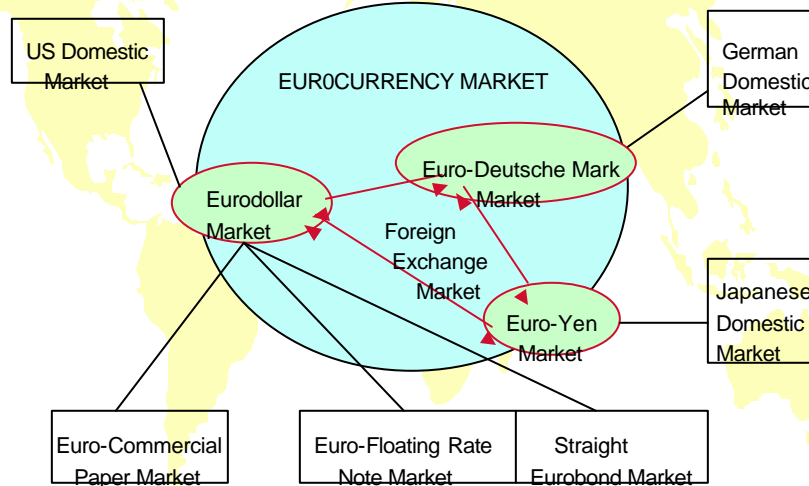
where  $S_t$  is the spot exchange rate (dollars per British Pound) and  $F_t^n$  is the forward rate.

to a close approximation,

$$(i_{\$/\text{£}} - i_{\text{£BP}}) = [(F_t^n - S_t) / S_t] (365/n) 100$$

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

### Where the Eurocurrency Market Fits In



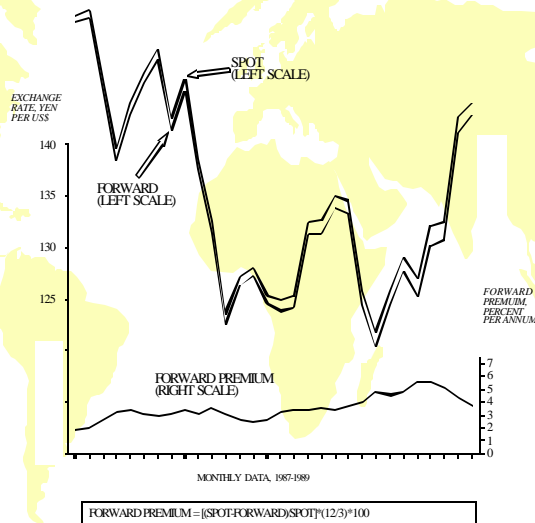
## Hedging Transactions Exposure

- λ Types of exposure
- λ One-shot exposure
- λ Hedging approaches:
  - ◆ Open
  - ◆ Forward
  - ◆ Money market
  - ◆ Futures
  - ◆ Options
- λ Ongoing transactions exposure

Copyright ©2002 Ian H. Giddy

Review #

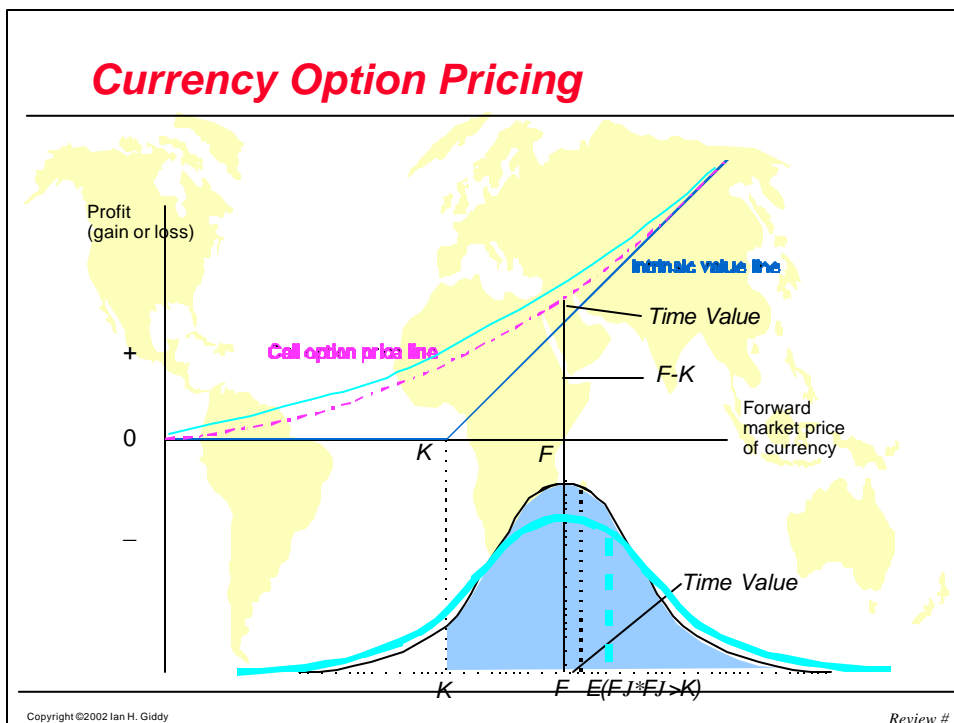
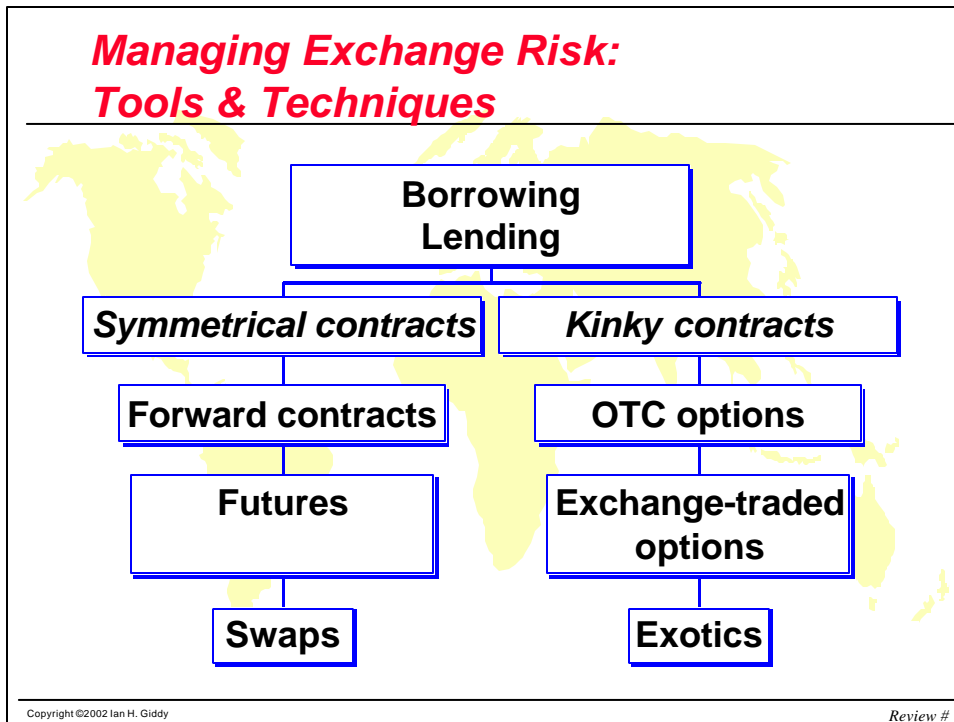
## The Forward Rate Tracks the Spot Rate



Copyright ©2002 Ian H. Giddy

Review #





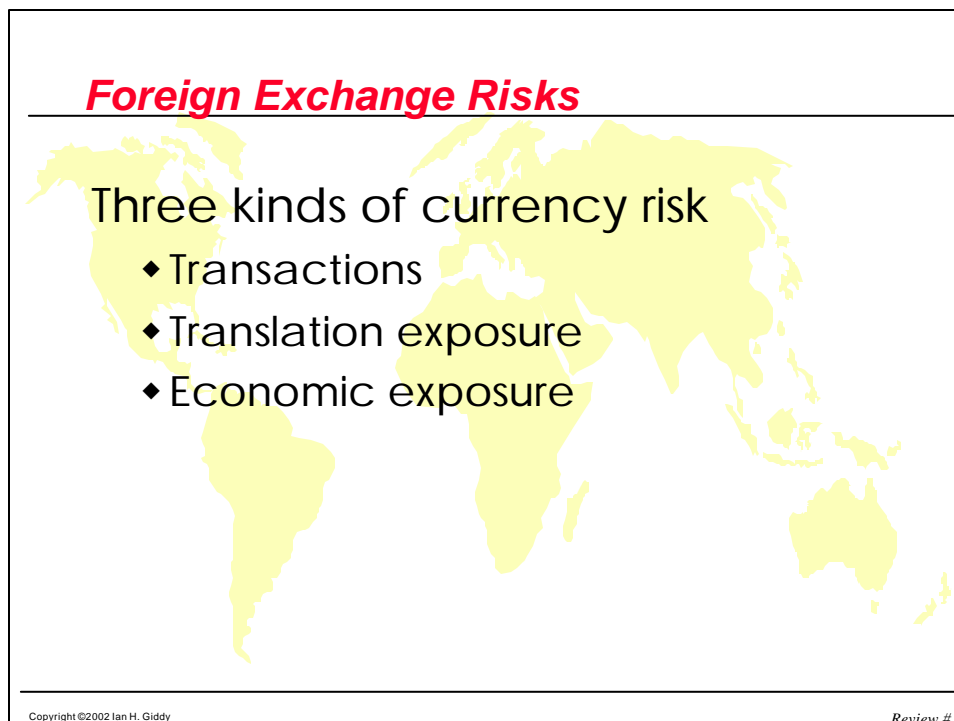
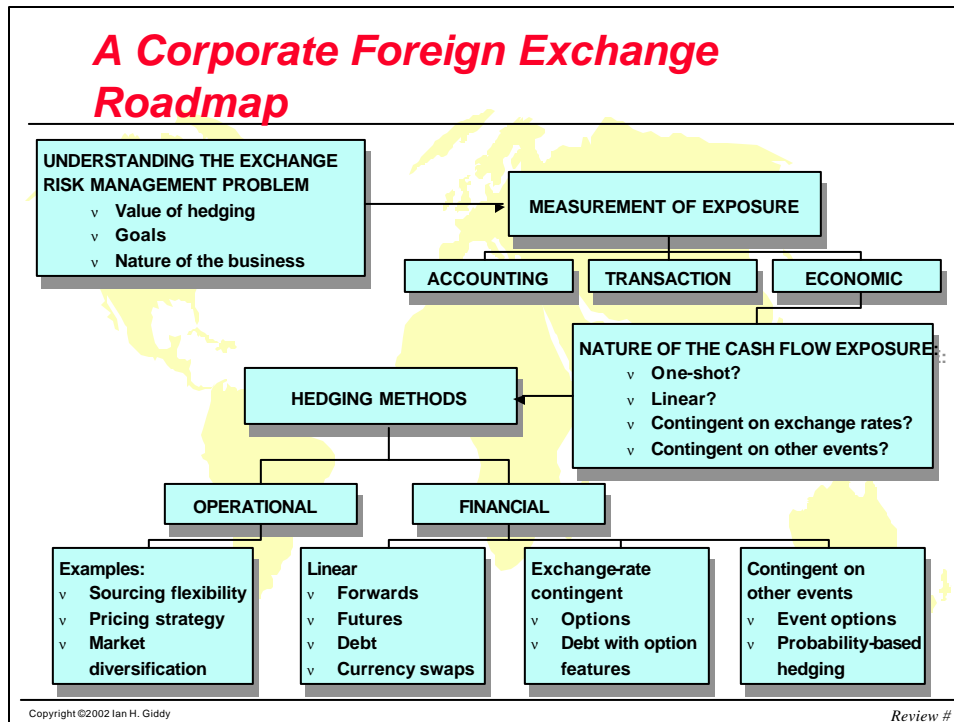
### View on Direction, Volatility or Both?

Copyright ©2002 Ian H. Giddy Review #

### Which Instrument?

Identifiable exposure	Debt, swaps, forward contracts
Uncertain exposure	Instruments with flexibility, such as forwards and futures
Exposure that threatens financial distress	Deep-out-of-the-money options
View on direction <i>and</i> volatility	At-the-money options

Copyright ©2002 Ian H. Giddy Review #



### Transactions Exposure: Hedging

- λ Reeves International (CT) has a subsidiary in Italy. It makes printing blankets for sale in Europe.
- λ Reeves Italy has to pay a dividend of approximately ITL 24 m. in December.  
How should Reeves hedge this?
  - ◆ Forwards?
  - ◆ Futures?
  - ◆ Money market hedge?
  - ◆ Do nothing?

Copyright ©2002 Ian H. Giddy

Review #

### Measures of Translation Exposure

	All Current	Current/ noncurrent	Monetary/ nonmonetary	Temporal (US GAAP)
<b>Assets</b>				
Cash	C	C	C	C
A/R	C	C	C	C
Inv.	C	C	H	H
Fixed	C	H	H	H
<b>Liabilities</b>				
Current	C	C	C	C
Long term	C	H	C	C
Equity	Residual	Residual	Residual	Residual

Copyright ©2002 Ian H. Giddy

Review #

## Economic Exposure

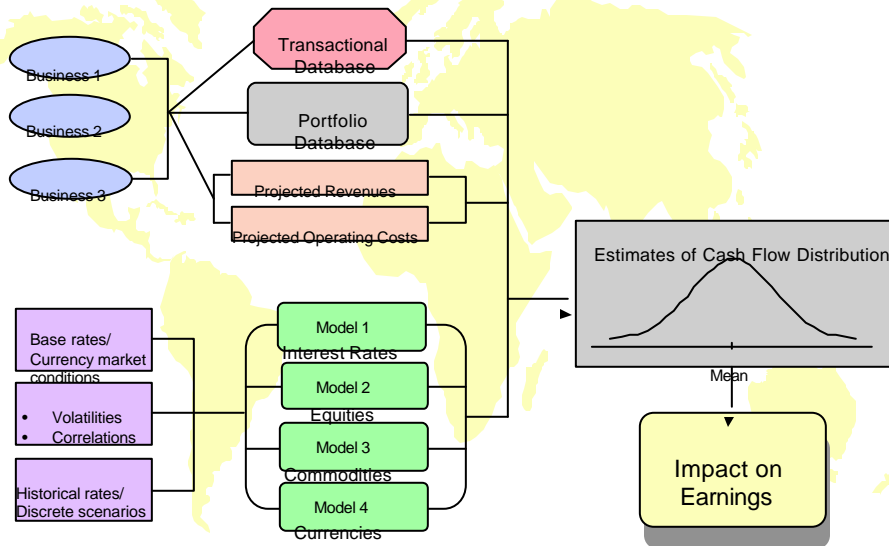
*“Change in the economic value of the firm resulting from unanticipated exchange rate changes”*

- λ Contractual vs noncontractual cash flows
- λ Cash flow projections based on elasticities, etc.
- λ Anticipated vs. unanticipated changes
- λ Exposure and the parity assumptions: “In the long run, we are not exposed”
- λ The “cost of hedging”
- λ Currency of denomination vs. currency of determination

Copyright ©2002 Ian H. Giddy

Review #

## Value at Risk for a Corporation



Copyright ©2002 Ian H. Giddy

Review #

### Corporate Value at Risk: Farmco

**FARMCO VALUE-AT-RISK COMPUTATION**  
 BASED ON CORRELATIONS BETWEEN SPOT EXCHANGE RATES, JP MORGAN DATA, Feb 1995

CURRENCY	FARMCO WORLDWIDE	WEIGHT (%)	VOLATILITY (%)	\$ AT RISK
AUD	\$0	0.00%	2.84	\$0
BEF	\$6,165	1.04%	3.69	\$376
CAD	(\$200,758)	-34.03%	1.79	\$5,939
DKK	(\$5,835)	-0.99%	3.62	\$349
FFR	(\$96,626)	-16.38%	3.75	\$5,985
DEM	\$22,365	3.79%	3.82	\$1,411
ITL	(\$69,650)	-11.81%	3.67	\$4,219
JPY	(\$15,688)	-2.66%	3.71	\$961
NLG	\$10,605	1.80%	3.79	\$662
ESB	\$47,660	8.08%	3.35	\$2,632
SEK	\$6,826	1.16%	3.97	\$447
CHF	\$6,500	1.10%	4.28	\$459
GBP	(\$101,277)	-17.17%	3.18	\$5,309
TOTAL	\$589,954	100.00%		\$28,749

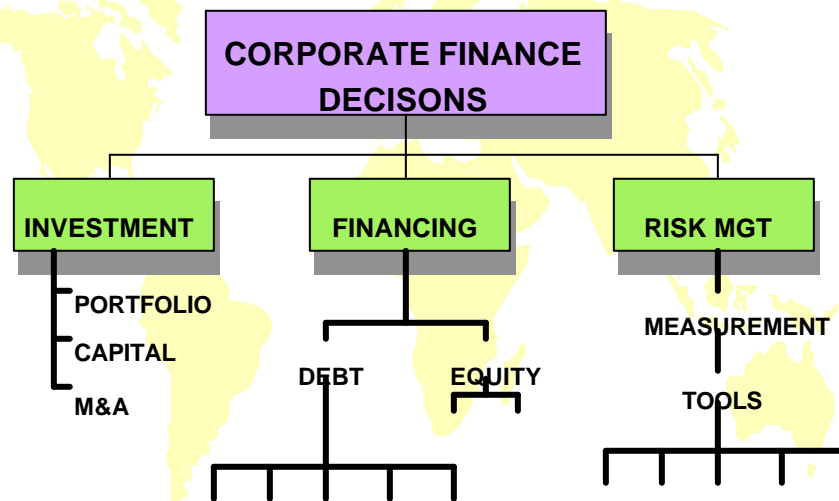
**FARMCO: DOLLARS AT RISK**  
 (95% PROBABILITY LOSS WON'T EXCEED THIS AMOUNT) In 1 month **\$ 10,709**

*WITH DIVERSIFICATION*

Copyright ©2002 Ian H. Giddy

Review #

### Corporate Finance



Copyright ©2002 Ian H. Giddy

Review #

### Getting the Financing Right

#### Step 1: The Proportion of Equity & Debt

The diagram features a world map in the background. On the left, there is a large light blue rectangle. To its right, there are two smaller light blue rectangles stacked vertically, labeled 'Debt' and 'Equity'. A bracket on the right side of these two boxes points to a grey callout box containing the following text:

- v Achieve lowest weighted average cost of capital
- v May also affect the business side

Copyright ©2002 Ian H. Giddy Review #

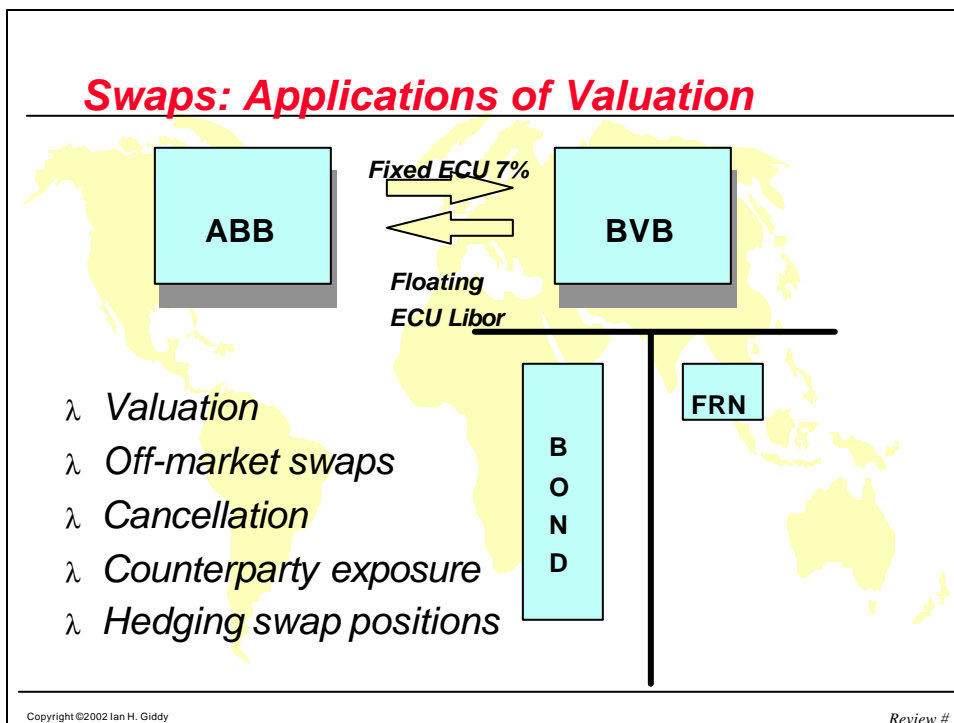
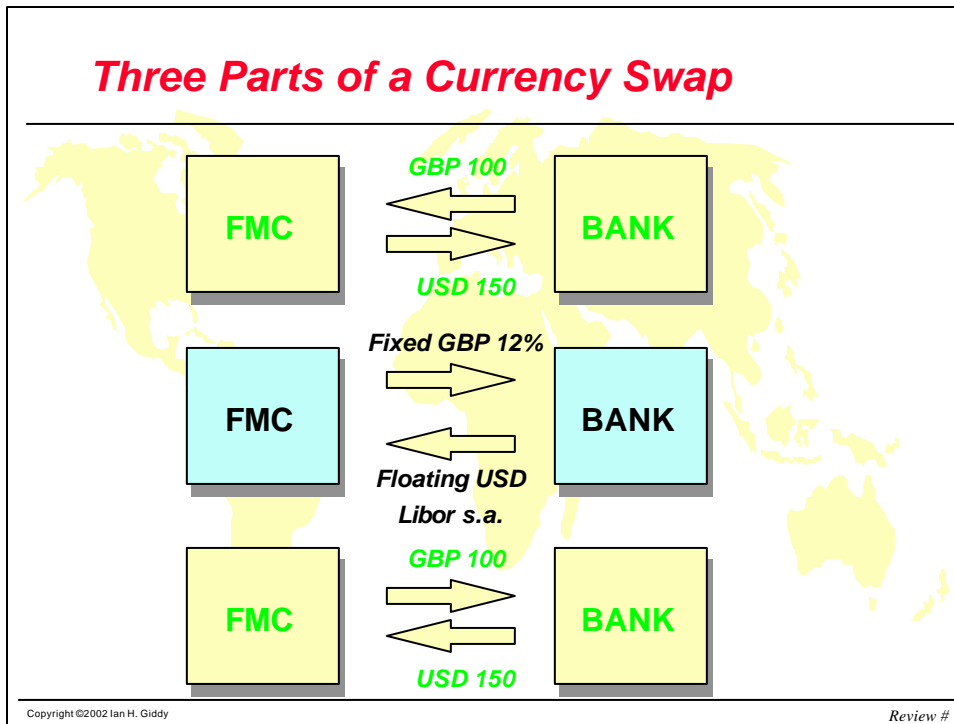
### Getting the Financing Right

#### Step 2: The Kind of Equity & Debt

The diagram features a world map in the background. On the left, there is a large light blue rectangle. To its right, there are two smaller light blue rectangles stacked vertically, labeled 'Debt' and 'Equity'. Lines from the 'Debt' and 'Equity' boxes point to a grey callout box containing the following text:

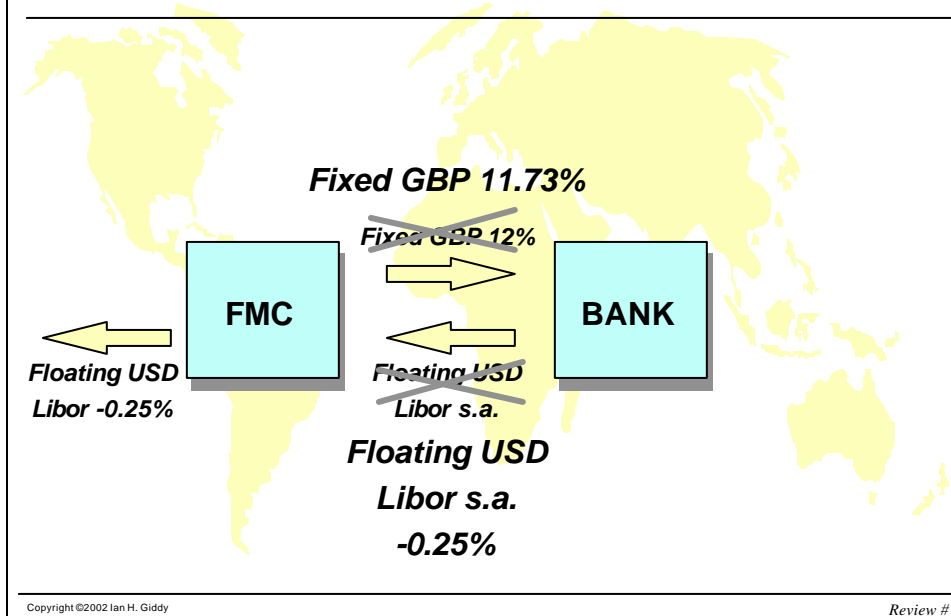
- v Short term? Long term?
- v Baht? Dollar? Yen?
- v Bonds? Asset-backed?
- v Convertibles? Hybrids?
- v Debt/Equity Swaps?
- v Private? Public?
- v Strategic partner?
- v Domestic? ADRs?
- v Ownership & control?

Copyright ©2002 Ian H. Giddy Review #





## Estimating the Cost of Funds in a Swap



## Banks and the Money Market

1. Short-term financing techniques, such as commercial paper
  2. Syndicated lending
- Copyright ©2002 Ian H. Giddy Review #

## The International Capital Market

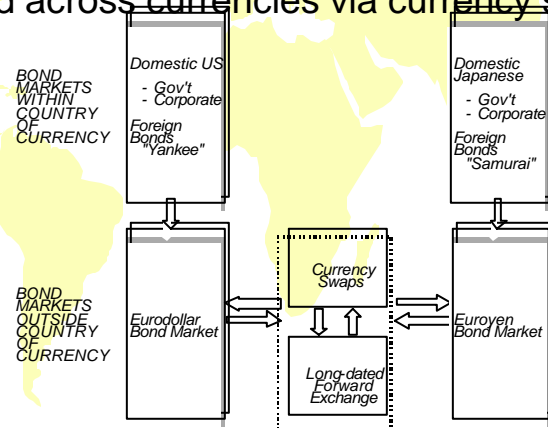
1. Eurobonds, foreign bonds and global bonds
2. The international equity market
3. Structured finance

Copyright ©2002 Ian H. Giddy

Review #

## International Bond Markets are Linked

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



Copyright ©2002 Ian H. Giddy

Review #

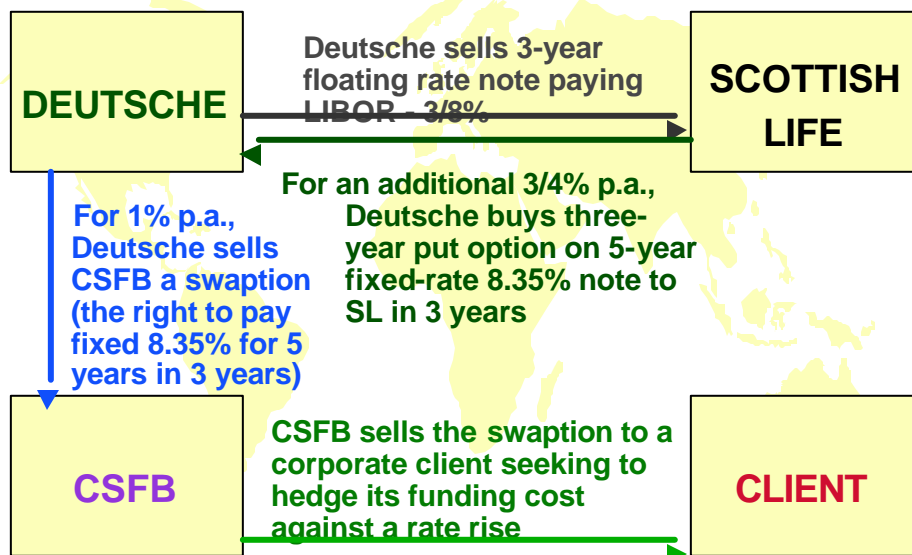
### **“Hybrid” Features of A Bond Issue**

- λ Conversion Feature - compound option
  - λ Warrants - two instruments
  - λ Index-linked bonds
  - λ Call Feature
    - ◆ Bond value = straight bond value - call value
- These are all example of hybrid bonds and should be priced by decomposition*

Copyright ©2002 Ian H. Giddy

Review #

### **The Deutsche Deal**



Copyright ©2002 Ian H. Giddy

Review #

### Financing Ciba

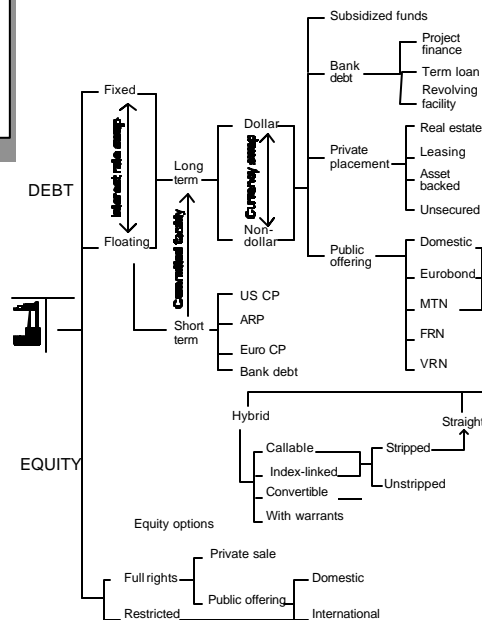
- 1) What is Ciba's **debt-to-equity ratio**, and what might one advise the company about what it should be?
- (2) How much of Ciba's debt is **fixed-rate borrowing**, and should this proportion change?
- (3) How much of the company's debt should be **long term**?
- (4) What is the composition, by **currency**, of Ciba's debt? What should it be?

Copyright ©2002 Ian H. Giddy

Review #

**Debt?**  
**Equity?**  
**What kind?**

#### FINANCING ALTERNATIVES AVAILABLE TO MAJOR CORPORATIONS



***Ian H. Giddy***

Stern School of Business, NYU  
44 West 4th Street  
New York, NY 10024

Tel 212-998-0426  
ian.giddy@nyu.edu  
<http://giddy.org>

Copyright ©2002 Ian H. Giddy

Review #