

Finance 319 Lecture 04.02.01

Course Website

<http://www.citi.umich.edu/u/galka/319>

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Plan of Today's Lecture

✍ Homework

✍ Levich, Chapter 13

- Swap agreements are derivative securities
redundant securities
- Main types of swap agreements
- Why do we have them?
[who could gain from them]
- What drives the demand for swaps?

Players & Terminology

- ✍ Players: Industry & Financial Companies, Regulators & Central Banks
[- `The Usual suspects`]
- ✍ Terms [Jargon]:
 - Plain vanilla swaps & Exotic swaps
 - Netting agreement & net exposure [Levich, p. 509]
- ✍ Main types of swap agreements [Levich, p. 476]
 - » currency or interest rate
 - » fixed-rate or
 - » floating rate or
 - » fixed-floating interest rate swaps

An example: IBM & World Bank

✍ Millman, p. 179: How IBM & World Bank circumvented Swiss and German government controls

[see also Levich, pp. 483 - 485, & Box 13.1]

- 1981: Interest rates:

- » US \$ about 17%
- » Swiss Francs -- 8%
- » German Marks -- 12%

✍ 1987 creation of "swaption" [Millman, p. 181].
The volume is 20\$ billion in one year

Swaps: market characteristics

- ✍ Why to have swaps? [& who gains from using them] [Levich, pp. 489 - 492]
 - Hedgers [to reduce risks]
 - Speculators [to capture arbitrage opportunities]
- ✍ Examples of Speculations, Millman, pp. 182 -183
 - Dell:
 - » 1991 yearly earnings were \$52 million
 - » 1992: currency contracts for over \$1 billion a week
 - Albany International:
 - » 1988 - \$ 4 Million loss on a swap
 - » 1989 - \$14 Million profit

Pricing the Swaps

- ✍ What drives the demand for swaps?
 - Capital controls
 - Transaction costs
 - Differences in parties' comparative advantage, [Levich, pp. 482-483] [Market segmentation & asymmetric information]
- ✍ How do we price them?
 - Net present value approach
 - Via calculation of the expected discounted cash flow
- ✍ Risks associated with Swaps are:
 - ✍ Asymmetric
 - ✍ Time varying

Regulatory requirements

- ✍ 1988: Bank for International Settlements (BIS) imposed **capital requirements** [Levich, pp. 507- 507, Table 13.7]
- ✍ BIS capital requirements are determined as
Notational swap value X Conversion factor X Risk weights
- ✍ Advantageous: Simple & easy to implement; Transparent
 - ✍ Risk weights [Levich, p. 507]
 - ✍ Conversion factors [Table 13.7, Levich, p. 507]
 - ✍ Notational swap value
- Drawbacks [disadvantages]:
 - ✍ No fine tuning
 - ✍ regulatory costs

Summary of the Lecture

✍ Main subject: swap agreements:

[currency or interest rate]

- Swaps are used for:

Cheap [& Quick]

currency and interest rate risks management

- Why do we have them?

- Who uses them? [corporations]

- How to price them? [NPV]

Next two lectures

- ✍ Portfolio management
 - Bonds (ch. 14), 04.04.01
 - Equity (ch. 15), 04.08.01
- ✍ To read: Levich, ch. 14 - 15
- ✍ New Technology & the Resulting Trends in Industrial Organization of International Financial Markets