



May 19 2011 Liberec

Rating of Firms

: Probability of Survivals

Merton Model

Logistic Regression and Discriminant Analysis

: Loan or Corporate Bond: prime or LIBOR interest rate +spread.

: Credit Default Swap (CDS) and Financial Crisis.

: Weather Derivatives and Hedge effect for Companies

: Gosou-Sendan Houshiki with implicit derivatives, (before &after 1990).

“Basic View of Financial Securities”

in my lectures

4th.Floors. Variety of Derivatives.

3rd.Floors : Options (Call, Put)

2nd. Floor : Forwards, Futures, Swaps

1st. Floor : **Stock, Bond, Commodity.**

Currency Exchange. Loans.

Ground: Economic Activities (Firms,Individuals,Government)

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Financing : its Function and Instruments.

Financial Risk

Default Risk (Credit risk):

Market Risk :

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Operational Risk.

Liquidity Risk.

Model Risk.

Systemic Risk.

Others.

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: Basel committee and BIS. And Regulators.

: need systematic measurement? : Regulation side and Banks

1. Rating companies

: New York: Moody's. S&P.

: London: Fitch.

: Tokyo: R&I (Japanese)

Others.

Ratings and Probability of Failure (Survival)

Table for transition of ranking

**: A ranking of a firm may change next year.
(with what probability?)**

2. Merton Model

: a simple model. One period model

: start a firm with Debt and Stock and see the value of the firm at the end of the time interval, either survived or failed.

3. Statistical Methods

: Logistic Regression

: Discriminant Analysis

: Database = Financial statements of firms

4. Credit Derivatives.

: CDS (Credit Default Swap).

cash-flow design

= Good quality bond + spread (and default possibility).

: comments on a statistical model === copula function

: Insurance company(ies?) sold this too much?

Were they aware of the risk ?

For what the insurance company exist ?

5. Weather derivatives

: **Underlying variables** are Temperature, Snow and etc. which are not “traded” assets in a market.

So, it requires a different pricing theory than cases for usual financial assets.

: **Count the number of days the temperature was above a prefixed level (or below a prefixed level).**

6. Japanese Gosou-Sendan Houshiki

: during period of economic growth 1950 (?) –1990 (?)

: Help (collaborate) each other within a group.

Is it a package of implicit credit default derivatives?

: agreement in a form of “contract”? ,or not.

Thank you.

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