Chapter 1
The Basics of Risk Management
1. 銀行的組織

● 銀行獲利的方法
  ■ Providing services to customers
  ■ Taking risk (本課程主要討論此部分)
    ◆ More risk brings more return, but also increases the danger that the bank could lose badly and be forced out of business.
    ◆ Except to generate profit, how to stay in business is another concern of a bank.

*直接金融（銀行賺service fee）vs. 間接金融（銀行賺risk premium）
• **What is Risk Management?**
  - ensure the total risk being taken is matched to the bank’s capacity for absorbing losses in case things go wrong
  - 帮助 CEO 如何利用公司稀少资源，在最小风险下，赚得最大利益 (allocate resources to various risk units based on a trade-off between risk and revenue potential)

• **銀行之組織與其功能 (p.2~4 Figure 1-1)**
  - 商業銀行 vs. 投資銀行 vs. 金控
    - In 1933, the Glass-Steagall Act generally prohibited commercial banks from underwriting securities
    - In 1999, the Financial Services Modernization Act repealed Glass-Steagall barriers between commercial and investment banks
2. 銀行所遭遇之風險

- **Market Risk**
  - Arising from the possibility of losses from unfavorable market movements
  - Examples:
    - 1929 ~ 1932, Great Depression
    - 1980s, Saving and Loans
      - Lending long-term fixed-rate mortgage and borrowing short-term deposits
    - Oct 19, 1987, Black Monday
    - 1998, Russian Default (Chase vs. LTCM)
      - LTCM 買俄元 (賭俄元會回升)，賣相關貨幣 (若俄元default，相關貨幣貶值，剛好可以用来避險) → 但最後俄元default，相關貨幣沒貶值
Credit Risk

- Arising from defaults, when an individual, company, or government fails to honor a promise to make a payment
- Gray area between market risk and credit risk
- Examples:
  - Loan Credit Risk (借給公司，而公司倒了)
  - Issuer Credit Risk (銀行或公司發債，自己還不出來)
  - Counterparty Credit Risk (衍生性商品之交易對手違約)
  - Settlement Credit Risk (Herstatt Risk)
    - 1974，德國銀行 (Herstatt Bank) 與美國交易對手 (時差或是假日問題)
    - 券商之買賣交割
• Operating Risk
  ■ The risk of direct or indirect losses resulting from inadequate or failed internal processes, people and systems or from external events.
  ■ Examples:
    ◆ Using the wrong data in pricing model
    ◆ Trader can control customers’ account

• Blends of Risks
  ■ For example, Nick Leeson and Barings Bank (trade Nikkei 225 in 1994~1995) is the case of both the market risk and operating risk.
Three levels for measuring and managing risk:

- Transaction level
- Business-unit level
- Corporate level

* 本書主要關心前兩種level
* Corporate level之風險管理主要由董事會決定
3. 董事會如何管理風險

- Deciding the target credit rating
  - Target rating vs. Actual rating (by credit rating agencies)
  - High rating vs. Low rating

- Determining the amount of available capital
  - Available Capital = assets market value – liability market value
    = nominal asset value – provisions - liabilities

- Allocating risk limits
  - Risk capacity = prob. of default × available capital
  - 考慮各單位之預期報酬目標，並考慮各單位間風險分散的程度，將risk capacity分配到各單位，使得整體報酬最大