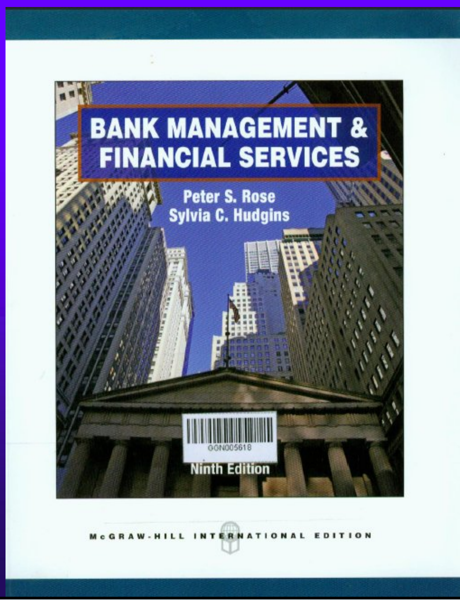
Introduction of course

# Principles of Banking

Prepared by Dinh, T.N. Huy

Dec 2012

# Learning materials




Slides used contents from the book

Chapter 5 (section 1)

# FINANCIAL STATEMENTS AND FINANCIAL FIRM PERFORMANCE

Prepared by Dinh, T.N. Huy

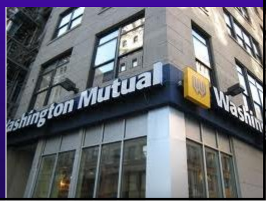
JAN 2013

## Agenda

1. Overview
2. Basic concepts
3. 2 most key F.S
4. Key features
5. Bank balance sheet
6. Income and expense statement
7. Comparison
8. Exercises

## Introduction

- Faulty and misleading financial statements in the collapse of Enron and Lehman Brothers teaching us to be cautious in reading and interpreting the financial statements financial firms publish.




## Basic Concepts

- Unit banks:

  Unit banks offer their full menu of services from only one office, though they may operate any number of drive-in windows, automated teller machines that are linked to the bank’s computer system. These organizations are very common today.

# Basic concepts

- Structure of banks in the US:

+ In 2009, about 2500 US small CBs held assets of less

# 2 most important F.S of F.I

- Balance sheet (Report of condition)
- The income and expense statement (Report of income)

## Key features of F.S of F.I

- Heavily dependence on borrowed funds (deposits, nondeposit borrowings); many F.I uses debt to boost earnings
- Most revenues from interest and dividends on loans and securities
- The largest expense item is the interest cost of borrowed funds, followed by personnel costs

## Key features of F.S of F.I

- The greatest proportion of assets are financial assets (loans, securities)
- A relatively small proportion of assets are plant and equipment (fixed assets). F.I makes limited use of operating leverage
- Some larger F.I gain additional operating leverage by constructing office buildings and leasing office space

## Bank balance sheet

- Report the value of assets held (cash, investment securities, loans, miscellaneous assets), and
- Liabilities (deposits, non deposit borrowings), and
- Capital or stockholder's equity

## Bank balance sheet

| Report of Condition (B.S) | |
|---|---|
| Assets – Uses of Funds | Liabilities &Equity – Sources of Fund |
| Cash and deposits in other institutions (primary reserves) C<br>Securities to provide liquidity (secondary reserves) and for investment (the income-generating portion) S<br>Loans and leases (L)<br>Miscellaneous assets (building, equipment,...) MA | Deposits (demand, NOWs, money market, savings, and time) D<br>nondeposit borrowings NDB<br>Equity capital from shareholders (stock, surplus, and retained earnings) EC |

Total sources of funds = total uses of funds (total assets = L + EC

# Bank balance sheet

- Basic balance sheet identity:

Assets = Liabilities + Equity capital (5-1)

C + S + L + MA = D + NDB + EC (5-2)

# Bank balance sheet example

**BB&T Corporation**

Financial data is from the FDIC Web site for the Bank Holding Company. The dollar amounts represent combined amounts for all FDIC-insured bank and thrift subsidiaries and do *not* reflect nondeposit subsidiaries or parent companies.

| Date<br>Report of Condition (Note: Dollar figures in thousands) | 12/31/2007 | 12/31/2006 |
|---|---|---|
| Total assets | $127,842,377 | $117,257,650 |
| Cash and due from depository institutions | 2,429,275 | 2,478,824 |
| Securities | 21,833,882 | 20,252,725 |
| Federal funds sold & reverse repurchase agreements | 120,365 | 112,425 |
| Gross loans & leases | 89,478,112 | 81,056,420 |
| (less) Loan loss allowance | 894,453 | 802,084 |
| (less) Unearned income | 0 | 0 |
| Net loans and leases | 88,583,659 | 80,254,336 |
| Trading account assets | 427,144 | 1,503,205 |
| Bank premises and fixed assets | 1,498,467 | 1,380,738 |
| Other real estate owned | 164,655 | 70,964 |
| Goodwill and other intangibles | 5,975,457 | 5,537,945 |
| All other assets | 6,809,473 | 5,666,488 |
| Total liabilities and capital | $127,842,377 | $117,257,650 |
| Total liabilities | 114,132,191 | 104,602,389 |
| Total deposits | 86,958,681 | 83,585,769 |
| Federal funds purchased & repurchase agreements | 2,627,903 | 3,431,362 |
| Trading liabilities | 149,897 | 58,251 |
| Other borrowed funds | 19,326,680 | 12,607,454 |
| Subordinated debt | 1,330,248 | 991,739 |
| All other liabilities | 3,738,782 | 3,927,814 |
| Total equity capital | $ 13,710,186 | $ 12,655,261 |
| Perpetual preferred stock | 2,000 | 2,000 |
| Common stock | 26,437 | 26,437 |
| Surplus | 10,363,375 | 9,861,327 |
| Undivided profits | 3,318,374 | 2,765,497 |

## Bank balance sheet

- Assets of the Banking Firm

+ Cash and Due from Depository Institutions

  ++ Cash in the bank's vault

  ++ Deposits at other depository institutions

  ++ Reserve account held with Fed

  ++ Uncollected checks

## Bank balance sheet

- Assets of the Banking Firm

+ Investment securities - liquid

  ++ Investment securities available for sale

  ++ Short term government securities

  ++ Privately issued money market securities (interest-bearing time deposits with other banks, commercial papers)

# Bank balance sheet

- Assets of the Banking Firm

+ Investment securities – income-generating

++ Bonds

++ Notes

(Held to maturity securities)

++ Taxable securities : US government bonds and notes

++ Tax-exempt securities: state government bonds

# Bank balance sheet

- Assets of the Banking Firm

+ Trading account assets

++ Securities purchased to provide short-term profits from short term price movements

# Bank balance sheet

- Assets of the Banking Firm

+ Federal Funds Sold and Reserve Repurchase Agreements (RPs)
 ++ temporary loans (extended O/N, with the funds returned the next day) made to other depository institutions
 ++ RPs : the bank acquires temporarily securities owned by the borrower and holds those securities as collateral until the loan paid off

# Bank balance sheet

- Assets of the Banking Firm

+ Loans and leases
 ++ the largest asset item
 ++ commercial /industrial loans
 ++ consumer loans
 ++ real estate loans
 ++ F.I loans
 ++ Foreign loans, security loans
 ++ Equipment lease

## Bank balance sheet

- Assets of the Banking Firm

+ Specific and general reserves
(loan loss allowance)
++specific reserves cover a particular loan
++ general reserves for protection against current or future loan defaults

## Bank balance sheet

- Assets of the Banking Firm

+ Intl loan reserves
++ Allocated transfer risk reserves (ATRs)
++ help US banks deal with loan losses to lesser developed countries

## Bank balance sheet

- Assets of the Banking Firm

+ Unearned income

  ++Interest income on loans, but not yet earned

+ Nonperforming loans

  ++when any scheduled loan repayment is past due for more than 90 days

## Bank balance sheet

- Assets of the Banking Firm

+ Bank premises and fixed assets

  ++ Banks can use less than 2% of its assets to the physical plant

+ Other Real Estate Owned

  ++ direct and indirect investments in real estate

## Bank balance sheet

- Assets of the Banking Firm

+ Intangible and Miscellaneous assets
  ++Goodwill (acquires another firm and pay more than market value of the acquired firm’s net assets (intangible)
  ++ investment in subsidiary firms (miscellaneous)

## Bank balance sheet

- Liabilities of the Banking Firm

+ Deposits
  ++ Noninterest bearing demand deposits (checking account)
  ++ Savings deposits
  ++ NOW accounts (bear interest, permit draft written)
  ++Money market deposit accounts (pay competitive rates)
  ++Time deposits

# Bank balance sheet

- Liabilities of the Banking Firm

+ Borrowings from nondeposit sources
  ++federal funds purchased and repurchase agreements (banks borrow funds collateralized by securities)
  ++issuing commercial papers
  ++ Long term debt (real estate mortgages)

# Bank balance sheet

- Liabilities of the Banking Firm

+ Equity capital for banks
  ++list total par (face) value of common stock outstanding
  ++surplus account (stock sold more than its par value)
  ++ retained earnings (accumulated undivided N.I), can be contingency reserve protecting against unforeseen losses

## Comparative Balance sheet ratios for Different size Banks

The Composition of Bank Balance Sheets

| Assets, Liabilities, and Equity Capital Items | Percentage of Total Assets for: All U.S. Insured Banks | U.S. Banks with Less than $100 Million in Total Assets | U.S. Banks with $100 Million to $1 Billion in Total Assets | U.S. Banks with More than $1 Billion in Total Assets |
|---|---|---|---|---|
| **Total assets** | 100.00% | 100.00% | 100.00% | 100.00% |
| Cash and due from depository institutions | 4.28 | 4.98 | 3.61 | 4.35 |
| Interest-bearing balances | 1.52 | 1.53 | 0.69 | 1.62 |
| Securities | 16.51 | 22.64 | 19.19 | 16.08 |
| Federal funds sold & reverse repurchase agreements | 5.25 | 6.19 | 3.27 | 5.46 |
| Net loans & leases | 58.59 | 61.30 | 68.41 | 57.38 |
| Loan loss allowance | 0.68 | 0.86 | 0.86 | 0.66 |
| Trading account assets | 6.14 | 0.00 | 0.02 | 6.98 |
| Bank premises and fixed assets | 0.96 | 1.97 | 1.93 | 0.83 |
| Other real estate owned | 0.05 | 0.14 | 0.11 | 0.05 |
| Goodwill and other intangibles | 3.55 | 0.39 | 0.79 | 3.94 |
| All other assets | 4.66 | 2.38 | 2.66 | 4.94 |
| Life insurance assets | 0.93 | 0.59 | 0.77 | 0.95 |
| **Total liabilities and capital** | 100.00 | 100.00 | 100.00 | 100.00 |
| **Total liabilities** | 89.79 | 87.27 | 89.79 | 89.84 |
| Total deposits | 66.71 | 82.75 | 81.52 | 64.67 |
| Interest-bearing deposits | 54.65 | 68.50 | 68.77 | 52.73 |
| Deposits held in domestic offices | 54.88 | 82.74 | 81.39 | 51.24 |
| % insured (estimated) | NM | NM | NM | NM |
| Federal funds purchased & repurchase agreements | 7.13 | 0.87 | 2.41 | 7.80 |
| Trading liabilities | 2.64 | 0.00 | 0.00 | 3.00 |
| Other borrowed funds | 8.62 | 2.88 | 4.84 | 9.17 |
| Subordinated debt | 1.48 | 0.00 | 0.07 | 1.68 |
| All other liabilities | 3.21 | 0.76 | 0.96 | 3.52 |
| Equity capital | 10.21 | 12.73 | 10.21 | 10.16 |
| Perpetual preferred stock | 0.05 | 0.01 | 0.02 | 0.06 |
| Common stock | 0.34 | 2.19 | 0.94 | 0.23 |
| Surplus | 6.20 | 5.47 | 4.36 | 6.43 |
| Undivided profits | 3.62 | 5.05 | 4.90 | 3.45 |

## Comparative Balance sheet ratios for Different size Banks

- Larger banks tend to trade securities for short term profits while smaller, community-oriented banks do not
- Smaller banks hold more investment securities and loans relative to assets than larger depository institutions

## Comparative Balance sheet ratios for Different size Banks

- Smaller community banks rely more on deposits to support their assets, whereas larger institutions make heavier use of money market borrowings

## 2nd Forum

- Analyzing some financial features the F.S of BIDV bank in the 1st case distributed. Each group post the answering, before next Tue.

## Recent Expansion of Off-Balance Sheet Items in Banking

Ex:

- Unused loan commitments: a lender received a fee to lend up to a certain amount of money over a defined period; these fund not yet transffered
- Standby credit agreements: a financial firm receives a fee to guarantee repayment of a loan that a customer has received from another lender

## Recent Expansion of Off-Balance Sheet Items in Banking

Ex: (cont.)

- Derivative contracts: a F.I can make profit or loss on an asset that it presently does not own. Futures, options, swap used to hedge credit risk, interest rate risk, currency risk, commodity risk and risks relating to securities

## Recent Expansion of Off-Balance Sheet Items in Banking

- Off-balance sheet activities can be used to either increase or decrease a financial firm’s risk exposure.

## The problem of Book-Value accounting

- Book-value, or historical, or original cost accounting used by banking industry, despite of some disadvantages:

+ assumes all items held to maturity

+ not reflect changing risk

## The problem of Book-Value accounting

Look at an example:

- Government bonds maturing in 1 year
- Market interest rate 10% presently
- So, a $1000 par-value bond, coupon rate 10%, has a selling market price of $1000
- If market rate rise to 12%, price falls to $980

## The problem of Book-Value accounting

Look at an example:

- If a security is acquired at a discount rate below its par value, the spread b.t the security’s original discounted value and its value at maturity will be amortized over time until the security reaches maturity

## The problem of Book-Value accounting

Look at another example:

- Changes in risk of borrowers will affect MV of loans
- A $1000 loan at rate 10% will fall in MV if financial situation deteriorates
- Rate rises to 12%, MV declines to $980

## The problem of Book-Value accounting

- Held-to-maturity (valued at original cost) or available-for sale (could be valued at market price) securities on the Balance sheet

## Auditing: Assuring Reliability of F.S

- Large US banks ($3b or more in assets), requires at least 2 audit committee members to have prior banking experience
- With the collapse of energy-trader Enron and corporate fraud, SOA Act mandates that CEOs and CFOs of publicly traded firms certify the accuracy of their firms' financial reports.

## The income and expense statement

- Revenue sources for most F.I typically include loan and investment income, and
- Revenue from the sale of fee-generating services
- Major operating expenses include interest payments on borrowed funds, wages, salaries and benefits, taxes and miscellaneous expenses

## The income and expense statement

- Net Income = Total revenue items – Total expense items

## The income and expense statement

- Interest income

From loans and security investments accounts for the majority of revenues for most depository institutions and for many other lenders.

## The income and expense statement

- Interest expenses

Interest on deposits is the number 1 expense item

Interest owed on ST borrowings in the money market (from other depository firms, security repurchase agreements, and LT borrowings: mortgages on the financial firm's property, subordinated notes and debentures)

## The income and expense statement

- Net interest income

= Total interest income – total interest expense

- It is referred to as the interest margin, i.e., the gap b.t the interest income on loans and the interest cost of its borrowed funds

## The income and expense statement

- Loan loss expense

+The provision for loan and lease losses.
+This is a non cash expense
+ annual loan loss provision is deducted from current revenues before taxes are applied to earnings

## The income and expense statement

- Non interest Income:

+ Sources of income other than interest revenues from loans and investments
+ Fees earned from trust services
+ service charges on deposit accounts
+ trading account gains and fees
+ additional non interest income (security,…)

## The income and expense statement

- Non interest Expenses:

 + Wages, salaries, employee benefits
 + Premises and equipment expense (rental fees, maintaining costs)
 + Legal fees, equipment repair cost

## The income and expense statement

- Net Operating Income and Net Income

Pretax net operating income = net interest income + net non interest income

Net non interest income = non interest income – non interest expense – provision for loan losses

Net interest income = interest income – interest expense

## The income and expense statement

- Net Operating Income and Net Income

Income before extraordinary items = pretax net operating income – applicable federal and state income tax +/- securities gains or losses

Note: Bank buys securities per year and have gain or loss against the original cost

## The income and expense statement

- Net Operating Income and Net Income

Stabilizing income by using securities losses to reduce taxable income when loan revenues are high

Stabilizing earnings consist of *nonrecurring sales of assets*, or one time extraordinary income or loss transactions (sell common stocks, real property)

# The income and expense statement

- Net Operating Income and Net Income

Net income = Income before extraordinary items +/- Extraordinary gains/losses

A financial firm may sell real estate or subsidiary firms

# The income and expense statement

**Report of Income for BB&T Corporation**

Financial data is from the FDIC Web site for the bank holding company. (The dollar amounts represent combined amounts for all FDIC-insured bank and thrift subsidiaries, and do *not* reflect nondeposit subsidiaries or parent companies.) Note: all figures are expressed in thousands of dollars.

| Report of Income | 2007 | 2006 | |
|---|---|---|---|
| Total interest income | $7,440,748 | $6,518,742 | Financial inflows |
| Total interest expense | 3,698,401 | 2,922,338 | Financial outflows |
| Net interest income | 3,742,347 | 3,596,404 | |
| Provision for loan and lease losses | 284,172 | 137,864 | Noncash financial outflows |
| Total noninterest income | 2,454,190 | 2,270,172 | |
| Fiduciary activities | 116,984 | 112,721 | Financial inflows |
| Service charges on deposit accounts | 613,111 | 549,430 | |
| Trading account gains & fees | 26,049 | 15,679 | |
| Additional noninterest income | 1,698,046 | 1,592,342 | |
| Total noninterest expense | 1,254,901 | 3,077,217 | |
| Salaries and employee benefits | 1,791,979 | 1,788,183 | Financial outflows |
| Premises and equipment expense | 449,757 | 421,407 | |
| Additional noninterest expense | 1,013,165 | 867,627 | |
| Pretax net operating income | 2,657,464 | 2,651,495 | |
| Securities gains (losses) | –7,618 | –73,271 | Financial outflows (if negative) |
| Applicable income taxes | 862,637 | 863,047 | Financial outflows |
| Income before extraordinary items | 1,787,209 | 1,715,177 | |
| Extraordinary gains (losses)—net | 0 | 0 | Financial inflows |
| Net income | 1,787,209 | 1,715,177 | |

# Comparison to F.S of Leading Nonbank Financial Firms

| Financial firms | Nonfinancial firms |
|---|---|
| *Assets*<br>Loans, other forms of credit<br>Investment securities<br>Cash, near-cash instruments<br>*Liabilities*<br>Deposits<br>Nondeposit borrowings<br>*Revenues*<br>Interest and dividend earnings<br>Fees from services<br>*Expenses*<br>Interest cost on borrowed funds<br>Employee expenses | Assets<br>Plant and equipment<br>Accounts receivable<br>Inventories of goods for sale<br>Liabilities<br>Accounts payable<br>Borrowings from the financial sector<br>Revenues<br>Sales of goods and services<br>Expenses<br>Employee expenses<br>Depreciation of plant and equipment<br>Interest cost on borrowed funds |

# Exercise 1 – Fill in the missing items

| | |
|---|---|
| **Report of Condition** | |
| **Total assets** | **2.500,00** |
| Cash and due from depository institutions | 87,00 |
| Securities | 233,00 |
| Federal funds sold & reverse repurchase agreements | 45,00 |
| Gross loans & leases | ? |
| Loan loss allowance | 200,00 |
| Net loans and leases | 1.700,00 |
| Trading account assets | 20,00 |
| Bank premises and fixed assets | ? |
| Other real estate owned | 15,00 |
| Goodwill and other intangibles | 200,00 |
| All other assets | 175,00 |
| **Total liabilities and capital** | **?** |
| **Total liabilities** | **?** |
| Total deposits | ? |
| Federal funds purchased & repurchase agreements | 80,00 |
| Trading liabilities | 10,00 |
| Other borrowed funds | 50,00 |
| Subordinated debt | 480,00 |
| All other liabilities | 40,00 |
| **Total Equity capital** | **?** |
| Perpetual preferred stock | 2,00 |
| Common stock | 24,00 |
| Surplus | 144,00 |
| Undivided profits | 70,00 |

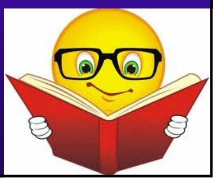
## Exercise 2 – Problem 3

| Input Area: | |
|---|---|
| | |
| Total interest income | $140 |
| Total interest expenses | $100 |
| Total noninterest income | $15 |
| Total noninterest expenses | $35 |
| Provision for loan losses | $5 |
| Income taxes | $5 |
| Increases in bank's undivided profits | $6 |

| Output Area: | |
|---|---|
| | |
| Net interest income | ? |
| Net noninterest income | |
| Pretax net operating income | ? |
| Net income after taxes | |
| Total operating revenues | …… |
| Total operating expenses | |
| Dividends to common stockholders | |

## Summary

- Carefully reading F.S of banks and competitors we learn more about the services these institutions provide and how their financial condition changes with time



## Multiple Choice Question

1. Financial firms can increase net income by increasing the net yield on each asset held, or by redistributing earning assets toward those assets with higher yields :

a. True

b. False

## Multiple Choice Question

2. Income statements are report of financial outflows and inflows over time :

a. True

b. False

## MCQ-Answers

1. A
2. A

## Terminologies

Miscellaneous : linh tinh