Banking and the Management of Financial Institutions

See the balance sheet of commercial banks.

The balance sheets of commercial banks demonstrate the role of asset transformation: hold short-term liabilities (deposits) and using the proceeds to buy assets (loans). That is, the bank borrows short and lends long.

1 Bank Management

1.1 Liquidity Management

Required reserves are a legal requirement and the shortfall of required reserves must be covered by changing other parts of its balance sheet.

Excess reserves are insurance against the costs of making changes in other parts of its balance sheet associated with deposit outflows.

Monetary authority also requires banks to maintain a *required liquidity ratio*.

The costs include

(1) Higher interest rate paid on the borrowed funds (interbank loan market, Repos, commercial papers).

(2) Fire-sale of its securities held (including other transaction costs).

(3) Borrowing from the Fed (discount rate).

(4) Reduction of loans is the most costly way of acquiring reserves: Call in loans or sell off loans (Calling in loans disrupts long-term relationship with its customers; Other banks may only agree to purchase loans at a substantial discount)

Note: Do not confuse sell off loans and loan-sale. The latter is an off-balance sheet activity.

1.2 Asset Management

(1) Lend to customers: higher interest rate vs. lower possibility of defaulting
(2) Diversification in asset holding
(3) Purchase securities with low returns and low risk vs. high returns and high risk.

1.3 Liability Management

(1) Expansion of overnight interbank loan markets (federal funds rate, LIBOR) and new financial instruments (such as Repos and negotiable CDs)
(2) Checkable deposits have decreased in importance as source of bank funds

1.4 Capital Adequacy Management

(1) Bank capital helps alleviating moral hazard and adverse selection problems, and thus helps preventing bank failure.

(2) The amount of capital affects return for the owners (equity holders) of the bank: the higher the bank capital relative to bank asset, the lower the return on equity (ROE).

(3) Capital Adequacy Requirement (Basel Accord) – See Chapter 11.

2 Credit Risk

(1) Screening and information collection

(2) Specialization in lending: sometimes banks may focus on certain industries due to their expertise in information production for these industries

(3) Monitoring and enforcement of restrictive covenants

(4) Long-term customer relationships

(5) Loan commitments (line of credit)

(6) Collateral and compensating balances

(7) Credit rationing

(a) Refuse to lend even if the borrower is willing to pay a higher interest rate: to alleviate adverse selection problem.

(b) Limit the amount of loans to a borrower: to alleviate moral hazard problem (This is equivalent to ask for the borrower to contribute enough their own capital to the investment so that the borrower will not invest in highly risky project).

3 Interest-rate Risk

If a bank has more rate-sensitive liabilities than assets, a rise in interest rates will reduce bank profits and a decline in interest rates will raise bank profits

3.0.1 Gap Analysis and Duration Analysis

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4 Off-Balance-Sheet Activities

4.1 Loan sales (Loan brokerage, secondary loan participation)

Loans are sold off to other financial institutions when originated, and are removed from the bank's balance sheet. This greatly increases liquidity of banks. This is usually the first step of securitization. Also, by selling off these loans (sold without recourse), banks no longer have to hold capital against those loans (Note that loans sold with recourse are still guaranteed by the bank in case of default). The bank may continue to be responsible for servicing the loan, enforcing loan covenants, monitoring, and handling problems in case of default. The bank makes profit from collecting origination and service fees.

4.2 Generation of fee income

Banks also generate fee incomes from trading foreign exchanges for their customers, servicing mortgage-backed security by collecting interest and principal payments, guaranteeing debt securities (banker's acceptance), providing backup line of credit (loan commitments for firms, credit lines for consumers).

Note: a banker's acceptance is a bank draft (like a check) issued by a firm, payable at some future, and guaranteed for a fee by a bank.

4.3 Trading activities and risk management techniques

(a) To reduce interest rate, banks trade in futures, options, interest-rate swaps, and foreign exchanges.

(b) All these transactions are off-balance sheet activities. But financial institutions participate in these markets not only for hedging risk, but also engaging in speculation. This speculation can be extremely highly risky (e.g., The Barings bank and Nick Leeson) and the traders have an incentive to take on excess risk by betting others' money. To reduce this Principal-Agent problem, corporate governance is primarily important (Internal Controls, Separation of trading activities and bookkeeping, Limits on exposure, Value-at-risk, Stress testing)