



Information Economies:

Transaction costs:

Banks traditionally differ from other financial intermediaries for two main reasons;

1. Bank liabilities (deposits) are accepted as a means of Exchange.
2. Banks are the only intermediaries that can vary the level of deposits and can create and destroy credit.

Banks:

- √ Benefits from economies of scale in transaction technologies.
- √ Able to carry out a rational diversification technology of risks.
- √ Most bank assets are illiquid (non-negotiable) which can be explained by asymmetric information.

Economies of scale and Economies of scope

Financial intermediaries:

- √ reduce transaction, information and costs mainly by exploiting **Economies of scale.**



By increasing the volume of transactions, the cost per unit of transaction decreases.

- √ By focusing on growing in size; be able to draw standardized contracts and monitor customers so that to enforce these contracts.
- √ Train high quality staff to assist in the process of finding and monitoring suitable units in deficit (borrower).
- √ Reduce risk by ‘pooling’ individual risks so that in normal circumstances, surplus units will be depositing money as deficit units (borrowers) make withdrawals. This enables banks to collect relatively liquid deposits and invest most of them in long-term assets.

Economies of scope: the joint costs of producing two complementary outputs are less than combined costs of producing the two outputs separately. An economies of scope is subject when outputs are share the same inputs. Ex: banking services where capital (actual building the bank occupied) and labour (bank management) needed such as Foreign exchange and Insurance services.

Asymmetries information:

- √ Not everyone has the same information
- √ Everyone has less than perfect information
- √ Some parties to a transaction have 'inside' information which is not made available to both sides of the transaction.

= **This is why regulations are introduced to help reduce mismatches in information. EX: SONY's Equity.....**

- √ Information asymmetries can generate; **adverse selection and moral hazard.**

Adverse selection: is a problem at search verification stage of the transaction.

Ex: expected loan price and expected return

Adverse selection is sometimes referred to as the '**Lemon**' problem.

Lemon market:

Possible solution to the adverse selection problem;

- √ Signalling: to offer a warranty to be viewed as a signal of quality. (action of the informed party in an adverse selection process.)
- √ Screening: The actions carried out by less informed party to determine the missing information.

Ex:

Moral hazard: arises when a contract or financial arrangement creates incentives for parties to behave against the interest of others.

Ex: risk for automobile insurance provider

Moral hazard also arises in a **Principle-agent problem** (one party acts against on behalf of another party.

Ex: manager & shareholder

Solution for principle-agent problem is providing financial contracts having details on investments about the returns for future, the amount of loan repayments to a bank.

Free-rider problem; occur when people who do not pay for an information take advantage of the information that other people have paid for.

Ex:

Sometimes government provide 'free of charge' information which is sometimes politically difficult and also never eliminates the problem.

Relationship and transaction banking

Adverse selection + agency problem = relationship contract

Relationship contract is an informal agreement between the bank and the borrowers sustained by the value of future relations.

Relationship with bank and customer = competitive advantage

Ex: Long time relationship between bank and borrower.

Why do banks exist?

5 theories

1. Delegated monitoring
2. Information production
3. Liquidity transformation
4. Consumption smoothing
5. Commitment mechanism

1. Delegated monitoring:

An intermediary (such as bank) is delegated the task of costly monitoring of loan contracts written with firms who borrow from it. It has a gross cost advantage in collecting this information because the alternative is either duplication of effort if each lender monitors directly or a free-rider problem in which case no lender monitors. Financial intermediation theories are generally based on some cost advantage for the intermediary. Schumpeter assigned such as delegated monitoring role to banks.

Diamond (1984, P.393)

Diamonds' approach is essentially developed around two interconnected factors;

- √ Diversification among different investment projects increases the number of bank loans which makes higher economies of scale than an individual.
- √ The size of delegated intermediary that can finance a large number of borrowers.

2. Information production:

Information production means providing information about possible investment opportunities. Most of the economic experts should find it because it is too worthwhile to produce this information.

- economies of scale,

3. Liquidity transformation:

Liquidity transformation by diversification of portfolio.

4. Consumption smoothing:

Financial intermediaries provide assets via lending and also to help smooth consumption, patterns for individuals.

ex: offering insurance against shocks to a consumer's consumption path.

5. Commitment mechanisms:

It is argued that bank deposits (demand deposits) have evolved as a necessary device to discipline bankers. To control the risk-taking propensity of banks, demand deposits have evolved because changes in the supply/demand of these instruments will be reflected in financing costs and this commits banks to be careful.

The Benefits of Financial Intermediation

The benefits to ultimate lenders (surplus units):

- √ Greater liquidity
- √ Less risky
- √ Marketable securities
(CD) is a type of deposit where the bank issues a certificate that deposit had been made. The certificate can be sold in the market whenever an individual/firm needs cash.
- √ Transaction costs. (▼)
- √ The lending decision is simplified (simpler procedure).

The benefits to ultimate borrowers:

- √ Loans for longer time periods
- √ Larger amounts of loans than borrowers from a single lender,
- √ Interest rates. (▼). (economies of scale)
-minimization of information costs + diversification of risk
- √ Loans available when required.

The benefits to society as a whole:

- √ More efficient utilisation of funds
- √ Cause higher level of borrowing/lending
- √ Improvement of availability of funds to higher-risk ventures.

Source: Introduction to Banking
(Casu, Girardone, Molyneux)



TYPES OF BANKING

Learning outcomes:

- **Difference between traditional and modern banking**
- **The difference between commercial and investment banking**
- **The main features of mutuality**
- **The differences between private and corporate banking**
- **The main aspects of Islamic banking**

Traditional versus Modern banking:

Universal Banking Model: a definition of what constituted banking business throughout Europe established with the implementation of the EU's 1988 Second Banking Directive in 1992. Under the universal banking model, banking business is broadly defined to include all aspects of financial service activity; including securities operations, insurance, pensions, leasing and so on.

Traditional banking

Products and services: LIMITED

- √ **Loans**
- √ **deposits**

Income resources:

- √ **Net interest income**

Competitive environment:

- √ **Restricted**

Strategic focus:

- √ **Assets size and growth**

Customer focus:

- √ **Supply led**

Modern banking

Products and services: UNIVERSAL

- √ **Loans**
- √ **Deposits**
- √ **Insurance**
- √ **Securities/investments banking**
- √ **Pensions**
- √ **Other financial services**

Income resources:

- √ **Net interest income**

Competitive environment

- √ **High competition**

Strategic focus:

- √ **Returns to shareholder**
- √ **Creating shareholder value**
(ROE > cost of capital)

Customer focus:

- √ **Demand led**
- √ **Creating value for customers**

Universal Banking and the Bancassurance trend (READ)

Retail or Personal Banking:

Retail or Personal banking relates to financial services provided to consumers and its usually small-scale in nature (payment services such as current account with cheque facilities, credit transfers, standing orders, direct debits and plastic cards and other services such as; savings, loans, mortgages, insurance, pensions ...etc...)

A variety of different types of banks offer personal banking services which includes;

1. Commercial banks
2. Saving banks
3. Co-operative banks
4. Building societies
5. Credit unions
6. Finance houses

1. Commercial banks: They are the main providers of credit to the household and corporate sector and operate the payment mechanism.

Commercial banks deal both retail and corporate customers; have well diversified deposit and lending books.

The largest banks in most countries are commercial banks and they include household names such as CITIBANK, HSBC, BARCLAYS...

2. Saving banks: Saving banks main difference relates to their ownership features. Saving banks have mutual ownerships, being owned by their 'members' or 'shareholders' who are the depositors or borrowers.

Ex: German saving banks are public institutions owned by Federal or local governments who underwrite potential losses.

Ex: Calyon Bank Turk (foreign owned saving bank in Turkey)

3. Co-operative banks: had mutual ownership and typically offered retail and small business banking services. Use deposited funds of members and lend fund to members.

Ex: Rabobank in Netherland

4. Building societies: similar to saving and co-operative banks as they have mutual ownership and focus primarily on retail deposit-taking and mortgage lending.

A building society is a mutual institution. This means that most people, who have a saving account, or a mortgage, are members and have certain rights to vote and receive information, as well as to attend and speak at meetings. Each member has one vote, regardless of how much money they have invested or borrowed or how many accounts they may have. Each building society has a board of directors who direct the affairs of the society and who are responsible for setting its strategies, building

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societies are different from banks, they do not have external shareholders requiring dividends, are not companies which enables them to run on lower costs and offer cheaper mortgages and better rates of interest on savings than their companies.

5. Credit unions: these are non-deposit institutions that are owned by their members. Member deposits are used to offer loans to the members.
6. Finance houses: provide finance to individuals and also companies by making consumer, commercial and other types of loans. They differ from banks because they typically do not take deposits and raise funds by issuing commercial paper, bonds or stocks.

Private Banking:

Private banking concerns the high-quality provision of a range of financial and related services to wealthy clients, principally individuals and their families.

Services = retail banking services + up-market investment-related-services.

Key components of private banking:

- √ Individual client requirements
- √ Anticipating of client needs
- √ Long-term relationship orientation
- √ Personal contact
- √ Discretion

EX: HSBC private bank
Merrill Lynch

Corporate Banking:

Services provided for companies and large firms.

1. Banking services used by small firms
 - Payment services
 - Debt finance
 - Equity finance
 - Special financing

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2. Banking services for mid-market and large corporate clients

Mainly by commercial banks, investment banks, asset finance firms.

The core banking products and services typically focus on the following range of needs.

- Cash management and transaction services: controlled disbursement accounts, account reconciliation services, funds concentration, electronic fund transfer (overnight wholesale payments), cheque deposit services, treasury management software, online corporate advisory and risk management services.
- Credit and other debt financing facilities: loans, overdrafts, syndicated loans, commercial paper,
- Commitments and guarantees
- Foreign exchange and interest rate-related transactions
Forward foreign exchange transactions
Currency futures
Currency options
Interest rate caps and collars
- Securities underwriting and fund management services.
- Repurchase agreements (REPO)

3. Investment banking

The main role of investment banks is to help companies and government raise funds in the capital market either through the issue of stock as equity. The activities cover all these areas;

- Financial advisory
- Underwriting of security issues
- Trading and investing in securities on behalf of the bank or for clients
- Asset management
- Other securities services- brokerage, financing services and securities lending.

Islamic Banking:

Islamic banking has to produce product and services that do not charge or pay interest. Depositors earn a return instead of interests and borrowers repay loans.

Islamic banking law prohibits the payment of 'riba' or interest but does encourage entrepreneurial activity.

So how they gain profit....?

- Their solution is to offer various profit-sharing-related products whereby depositors share in the risk of the bank's lending.

Ex: Murabaha

Musharakali contract:

- All partners contribute both capital and management.
- In case of loss it has to be shared proportion to capital contribution
- The profit if the enterprise can be distributed in any proportion by mutual consent
- The liability of the all partners is unlimited.



BANK REGULATIONS AND SUPERVISIONS

The financial sector is one of the most heavily regulated sectors in the economy and banking is by far the most heavily regulated industry.

In chapter 1 we discuss some reasons why banks are considered as 'special'; outlined the existence of market imperfections(such as information asymmetries, moral hazard, adverse selection) and discussed how banks eliminates those problems.

Before discussion the banking regulations you should know some term definitions;

- **Regulation:** relates to the setting of specified rules of behaviour that firms have to abide by. These may be set through legislations (laws) or be stipulated by the relevant regulatory agency.
- **Monitoring:** regulations should be monitored. Monitoring those regulations refers to the process whereby the relevant authority assesses financial firms to evaluate whether these rules are being obeyed.
- **Supervision (control, manage):** is a broader term used to refer to the general failure to notice of the behaviour of financial firms.

The Rational for Regulations:

Financial systems are prone to periods of instability. However, the financial services industry is a politically sensitive one and largely relies on public confidence. Because of the nature of their activities (illiquid assets and short-term liabilities) banks are more prone to troubles than other firms.

Bank contagion: because of the interconnectedness of banks, the failure of one institution can immediately affect other.

- Bank contagion may lead to bank runs. Banking systems are defenceless to systematic (Interest rates, recession and wars all represent sources of systematic risk because they affect the entire market and cannot be avoided through diversification. Whereas this type of risk affects a broad range of securities); which is the risk that problems in one bank will spread through the whole sector.

Bank runs: Bank runs occur when a large number of depositors, fearing that their bank is unsound and about to fail, try to withdrawal their savings within a short period of time. A bank run starts when the public begins to suspect that a bank may become insolvent. This creates a problem because banks keep only a small fraction of deposits in cash; they lend out the majority of deposits to borrowers or use the funds to purchase other interest-bearing assets. When a bank is faced with a sudden increase in

withdrawals, it needs to increase its liquidity to meet depositor's demands. Banks reserves may not be sufficient to cover the withdrawals and banks may be forced to sell their assets. Banks assets(loans) are highly illiquid in the absence of a secondary market and of banks have financial difficulties they may be forced to sell loans at loss (known as fire-sale prices in the US) in order to obtain liquidity. However, excessive losses made on such loan sales can make the bank insolvent and bring about bank failure.

Types of regulations:

It is possible to identify 3 different types of regulations;

1. Systematic regulation
2. Prudential regulation
3. Conduct of business regulation

1. Systematic regulation:

Charles Goodhart et al. (1998) define systematic regulation as regulation concerned mainly with the safety and soundness of the financial system. All public policy regulation designed to minimise the risk of bank runs that goes under the name of the government safety net.

In particular, this safety net encompasses two main features;

- **Deposit insurance;** is a guarantee that all or part of the amount deposited by savers in a bank will be paid in the event that a bank fails. The guarantee may be wither explicitly given in law or regulation, offered privately without government backing or may be inferred implicitly from the verbal promises and/or past actions of the authorities.
- **The lender of last resort(LOLR);** functions is one of the main functions of a central bank. The central bank, or other central institution, will provide funds to banks that are in financial difficulty and are not able to access any other credit channel.

2. Prudential:

Prudential regulation is mainly concerned with consumer protection. It relates to the monitoring and supervision of financial systems, with particular attention paid to asset quality and capital adequacy (satisfaction). The case of prudential regulation is that consumers are not in a position to judge the safety and soundness of financial institutions due to the imperfect consumer information and agency problems associated with the nature of the intermediation business.

3. Conduct of business regulation:

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Conduct of business focuses on how banks and other financial institutions conduct their business. This kind of regulation relates to information disclosure, fair business practices, competence, honesty and integrity of financial institutions and their employees. Overall, it focuses on establishing rules and guidelines to reduce the likelihood that;

- Consumer receive bad advice (possible agency problem)
- Supplying institutions become insolvent (fail) before contracts mature
- Contracts turn out to be different from what the customer was anticipating;
- Fraud and misrepresentation takes place
- Employees of financial intermediaries and financial advisors act incompetently.

Limitations of regulations:

So far, we have highlighted the case for financial regulation, which depends mainly on various market imperfections and failures (information asymmetries, agency problems, etc.) which in the absence of regulation, would produce sub-optimal results and reduce consumer welfare.

- The ‘safety-net’ arrangements create **moral hazard**. Deposit insurance and the LOLR can cause people to be less careful than they would be otherwise. For example with 100 percent deposit insurance, depositors will not be concerned about the behaviour of their banks. Similarly, the belief that LOLR will eventually bail out troubled banks may encourage institutions to take greater risks of lending.
- Other examples of the moral hazard caused by the government safety net are known as the ‘too big to fail’ (TBTF) or ‘too important to fail’ (TITF) cases. Because the failure of large and important bank poses significant risks to other financial institutions and to the financial system at a whole, policymakers may respond by protecting bank creditors from all or some of the losses they otherwise would face. If managers of large or important banks believe that they will be bailed out by the authorities if they get into financial difficulty then this increases the moral hazard incentives for big banks, resulting in banks taking on even greater risks and expecting an eventual bail out.
- Banks may also benefit from regulatory forbearance (patience). Regulatory forbearance is an example of time inconsistency. Time inconsistency refers to the problem that it may not be optimal ex-post (after an event occur) to implement regulations that were optimal ex-ante (before the event occurred). When financial intermediaries are in trouble, there may be pressures not to apply existing regulations. For example, to impose higher capital or liquidity requirements. This is because it could drain the deposit insurance fund. Furthermore, publicity surrounding a bank facing difficulties may worry the public; who may be induced to withdraw their savings, thereby aggravating the bank’s problems (with a domino effect on other institutions leading to further bank failures).

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- There are some benefits of forbearance. First, not publicising the bank's problems may help avoiding systematic risk caused by bank run. In addition, the bank may be worth more as a 'going concern', that is, remaining in operation rather than going out of business and liquidating its assets. To stay operational, a bank must be able to generate enough resources.
- There are, however, costs associated with forbearance. First, it may cause moral hazard: forbearance, in one case may lead to expectations of similar behaviour in future case, causing other financial institutions to observe regulations less and also result with a loss of public confidence.
- Regulation can create problems of **agency capture** that is the regulatory process can be 'captured' by producers and used in their own interest rather than in the interest of consumers.
- Regulation is a costly business and the **cost of compliance** with the regulatory process will be passed on to consumers, resulting in higher costs of financial services and possibly less intermediation business.

Moral hazard and government safety net arrangements

Financial regulation and supervision are needed moral hazard can be associated with government safety net arrangements that are designed to protect the banking and financial system. For example, banks that face liquidity problems and cannot borrow from other banks in the market may approach the regulators to act as a 'lender of last resort' in order to provide emergency liquidity assistance. This, in principle, seems a good thing as the authorities have a mechanism for providing liquidity to the banking system at times of crises. However, the moral hazard arises in that if banks all believe they have access to the 'lender of last resort' they may be inclined to take on excessive risks knowing that in the event of trouble they will be bailed out by the authorities.

- √ To mitigate this moral hazard problem, the authorities need to establish a regulatory framework that promised access to the lender of last resort facility is by no means guaranteed for banks. Linked to this 'too big to fail' argument whereby the largest banks are viewed as being too big to be allowed to fail and therefore they must have guaranteed access to the lender of last resort-which could cause moral hazard problem. No financial regulatory authority will ever provide guaranteed access to the lender of last resort financing, although history does tell us that large banks are likely to be bailed out more than small banks.

It is important to note that regulation can never eliminate all information asymmetries, but it can be formulated in order to minimise the potential adverse effects of such market failure.

Table: Bank regulation: key concept

Objective	Reasons	Rationale	Costs
Sustain systematic stability	Key position of banks in the financial system	Market imperfections and failures	Moral hazard
Maintain the safety and soundness of financial institutions	Consumer demand	Potential systematic problems	Agency capture
Protect consumers		✓ Monitoring of financial firms ✓ Ensuring consumers' confidence	✓ Compliance costs ✓ Cost of entry/exit ✓ Control over products/activities/prices

Causes of regulatory reform:

- **The increased international activity of financial firms means that foreign institutions play an increasing role in many domestic financial sectors. The increased presence of foreign financial firms raised issues relating to how they should be regulated. The main issue relates to who is ultimately responsible if a foreign bank faces difficulties in an overseas market..should it be the host or home country regulator? Generally for large complex banks the host regulator will supervise foreign subsidiary activity but it is the home country that is ultimately responsible.**
- **Another factor affecting regulatory reform is the globalisation phenomenon. The growth in international activities and trade of multinational corporations has increased the demand for services from financial institutions that operate cross-border firms continue to expand their international presence. (ex: HSBC)
As a result banks are increasingly exposed to risks originating from abroad and risks to financial stability are less contained to national border.**

The UK Financial Services Authority (FSA)

The FSA is an independent non-governmental body, it is a limited company financed by levies on the industry. The FSA is accountable to Treasury minister and to Parliament. The overall FSA policy is set out by the board, which consist of the chairman, three executive directors and eleven non-executive directors.

The FSA exercise its statutory powers under the Financial Services and Market Act (FSMA). The FSMA assign the FSA four main objectives;

- To maintain confidence in the UK financial systems
- To promote public understanding of the financial system
- To secure an appropriate degree of protection for consumers while recognising their own responsibilities
- To reduce the scope for financial crime.

Main responsibilities of the FSA	
Authorisation	FSA admits firms to the regulatory system
Setting standards	Prudential and Conduct of business Standards
Supervision	FSA monitors firms delivery of standards
Enforcement	FSA takes action against firms where serious problems arise
Financial Ombudsman Service and Financial Services' Compensation Scheme	Independent arrangements for resolving complaints against firms and for paying compensation if firms collapse



Near East University

Asset-Liability Management: Determining and Measuring Interest Rates and Controlling Interest-Sensitive and Duration Gaps.

Banks and many of their financial-service competitors today are highly complex organizations, offering multiple financial services through multiple departments and divisions, each staffed by specialists in making different kinds of financial decisions. Thus, different groups of individuals inside each modern financial firm usually make the decisions about which customers are to receive credit, which securities should be added to or subtracted from the financial institution's portfolio, which terms should be offered to the public on loans, deposits, investment advice and other services, and which sources of capital the institution should draw upon.

In a well managed financial institution all of these diverse management decisions must be coordinated across the whole institution in order to insure that they do not clash with each other, leading to inconsistent actions that damage earnings and net worth.

This type of coordinated and integrated decision making is known today as **asset-liability management (ALM)**.

Asset management:

This view held the amount and kinds of deposits a bank held and the volume of other borrowed funds it was able to attract were largely determined by its customers. Under this view, the public determined the relative amounts of checkable deposits, saving accounts, and other sources of funds available to depository institutions. The key decision area for management was not deposits and other borrowings but assets. The banker could exercise control only over the allocation of incoming funds by deciding who was to receive the scarce quantity of loans available and what the terms on those loans would be.

Liability management:

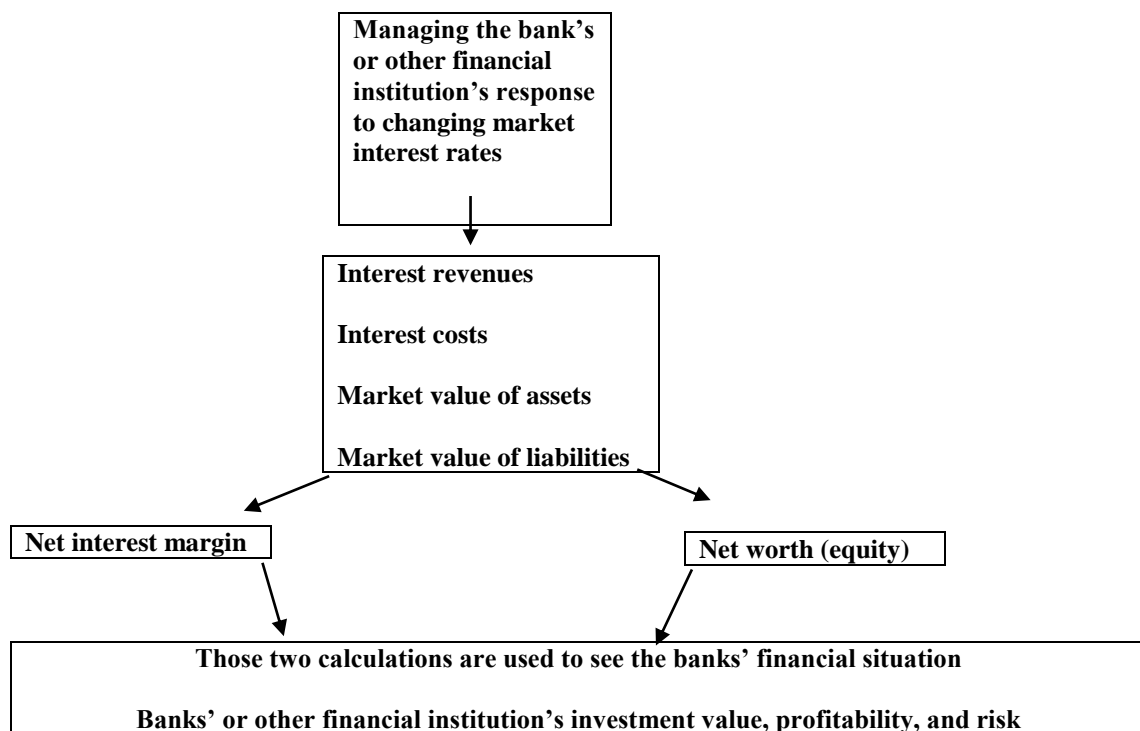
Its goal was simply to gain control over funds sources comparable to the control financial managers had long exercised over their assets. The key control level was price, the interest rate and other terms banks and their competitors could offer on their deposits and borrowings to achieve the volume, and able funds could simply raise the

offer rate on its deposits and money market borrowings relative to its competitors, and funds would flow in.

Funds Management Strategy:

This view is a much more balanced approach to asset-liability management that stresses several key objectives:

- Management should exercise much control as possible over the volume, mix, and return or cost of both assets and liabilities in order to achieve the financial institution's goals.
- Management's control over assets must be coordinated with its control over liabilities so that asset management and liability management are internally consistent and do not pull against each other.



Interest Rate Hedging (limiting)

In order to protect profits against adverse interest rates changes, then management seeks to hold fixed the financial firm's **net interest margin (NIM)**, expressed as follows.

For example, suppose a large international bank records £4 billion in interest revenues from its loans and security investments and £2.6 billion in interest expenses paid out to attract deposits and other borrowed funds. If this bank holds £40 billion in earning assets, its net interest margin is;

If the interest cost of borrowed funds rises than income from loans and securities, a bank's NIM will be squeezed. In other words, yield curves do not usually move in parallel fashion over time, so that the yield spreads between borrowing costs and interest revenues is never perfectly constant. Management must struggle continuously to find ways to ensure that borrowing costs do not rise significantly relative to interest income and threaten the margin of a bank or other financial intermediary.

Interest-Sensitive Gap Management:

The most popular interest rate hedging strategy in use today is often called interest sensitive gap management. Gap management techniques require management to perform analysis of the maturities and repricing opportunities associated with interest-bearing (including) assets and with deposits and other borrowings. If management feels its institution is excessively exposed to interest rate risk, it will try to match as closely as possible the volume of assets that can be repriced as interest rates change with the volume of deposits and the liabilities whose rates can also be adjusted with market conditions during the same period.

Dollars amount of repriceable (interest-sensitive assets) = dollar amount of repriceable (interest-sensitive liabilities)

So what is a repriceable asset?

- The most familiar example are loans that are about to mature or are coming up for renewal. If interest rates have risen since these loans were first made, the

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lender will renew them only if can get an expected yield that approximates the higher yields currently expected on other financial instruments of comparable quality.

So what is a repriceable liability?

- Include a depository institution about to mature or to be renewed, where the financial firm and its customers must negotiate a new deposit interest rate to capture current market conditions; floating-rate deposits whose yields move automatically with market interest rates and money-market borrowings whose rates are often adjusted daily to reflect the latest market development.

What happens when the amount of repriceable assets does not equal the amount repriceable liabilities?

Clearly a gap exists between these interest sensitive assets and interest sensitive liabilities. The gap is the portion of the balance sheet affected by interest rate risk.

Interest-sensitive gap = interest sensitive assets – interest sensitive liabilities

In interest sensitive assets in each planning period (day, week, month, etc) exceed the volume of interest-sensitive liabilities subject to repricing, the financial firm is said to have a positive gap and to be asset sensitive. Thus;

Asset sensitive (positive)gap = interest sensitive assets- interest sensitive liabilities >0

For example suppose a commercial bank with interest-sensitive assets of \$500 million and interest sensitive liabilities of \$400 million is asset sensitive with a positive gap of \$100 million. If interest rates rise, this bank's net interest margin will increase because the interest revenue generated by assets will increase more than the cost of borrowed income.

If opposite situation, suppose an interest sensitive bank's liabilities are larger than its interest sensitive assets.

Liability sensitive

(negative)gap = interest sensitive assets – interest sensitive liabilities <0

Falling interest rates will generate a higher interest margin and probably greater earnings as well, because borrowing costs will decline by more than interest revenues.

<p>Eliminating an interest sensitive Gap</p>	<p><u>With positive gap</u> Interest sensitive assets > interest sensitive liabilities (asset sensitive)</p>	<p><u>The risk</u> Loses if interest rates fall because the net interest margin will be reduced.</p>	<p><u>Possible management responses</u></p> <ol style="list-style-type: none"> 1. Do nothing (perhaps interest rates will rise or to be stable) 2. Extend asset or shorten liability maturities. 3. Increase interest sensitive liabilities or reduce interest sensitive assets
	<p><u>With negative gap</u> Interest sensitive assets < interest sensitive liabilities (liability sensitive)</p>	<p><u>The risk</u> Loses if interest rates rise because the net interest margin will be reduced.</p>	<p><u>Possible management responses</u></p> <ol style="list-style-type: none"> 1. Do nothing (perhaps interest rates will fall or to be stable) 2. Shorten asset maturities or lengthen liability maturities 3. Decrease interest sensitive liabilities or increase interest sensitive assets.



The Financial Statement of Banks and Some of Their Closest Competitors

Key Topics:

- **An overview of Bank Balance Sheets and Income Statement**
- **The Bank's Balance Sheet**
- **Bank Assets**
- **Bank Liabilities**
- **Components of the Income Statement**

Financial statement: The particular services that each bank and each nonbank financial firm chooses to offer and the overall size of each financial-service organization are reflected in its financial statements. Financial statements are literally a 'road map' telling us where a bank or other financial firm has been in the past where it is now, and, where it is headed in the future.

The two main financial statements that bank managers, customers (particularly large depositors not fully protected by deposits insurance), and the regulatory authorities look at are;

- Balance sheet (report of condition)
- Income statement (report of income)

The Balance Sheet (Report of Condition)	
Financial outputs	Financial inputs
Cash and deposits in other institutions	Deposits from the public
Investments in Securities	Non-deposit borrowings
Loans and Leases	Equity capital from stockholders
(Total sources of banks funds must be equal to total uses of banks funds)	

Balance sheet shows the amount and composition of funds sources (financial inputs) the bank has drawn upon to finance its lending and investment activities and how much has been allocated to loans, securities, and other funds uses (financial outputs) at any given point in time.

The Income Statement (Report of Income)	
Financial outputs	Financial inputs
Loan income	Deposits costs (interest paid)
Security income	Cost of non-deposit borrowing
Income from deposits in other institutions	Employee costs (
Fee income from various services	Overhead expenses
	taxes

The income statement shows the inputs and outputs that how much it has cost the bank to acquire its deposits and other fund sources and to generate revenues from the uses the bank has made of those funds.

The Bank's Balance Sheet (Report of Condition)

The Principal Types of Accounts:

The basic balance sheet identity; $Assets = Liabilities + Equity\ capital$

The Key Items on Bank Financial Statement

The Balance Sheet (Report of Condition)	
Assets (accumulated uses of funds)	Liabilities and Equity (accumulated sources of funds)
Cash Investment securities: the liquid portion Investment securities: the income-generating portion Loans: <ul style="list-style-type: none"> • Consumer • Real estate • Agriculture • Financial institutions • various loans (building, equipment) and leases 	Deposits: <ul style="list-style-type: none"> • demand • NOWs • Money market • Savings • Time Non-deposits borrowings Equity capital: <ul style="list-style-type: none"> • Stock • Surplus • Retained earnings (un-dividend profits)

Income Statement or Statement of earnings and expenses (report of income)
Revenues (revenues from the bank's services) <ul style="list-style-type: none"> • Loan income • Investment income • Noninterest sources of income (such as deposit services fees) Expenses (cost of bank's inputs of resources needed to produce its services) <ul style="list-style-type: none"> • Interest paid on deposits • Interest paid on non-deposit borrowings • Salaries and wages (employee compensation (rewards)) • Provisions for loan losses (allocating to the reserve for possible losses on any made) • Other expenses • Income before taxes and securities transactions • Taxes • Gains or losses from trading in securities • Net income after taxes and securities gains or loans

The bank's balance sheet identity can be written as follows:

$$C + S + L + MA = D + NDB + EC$$

C: cash assets are designed to meet the bank's need for liquidity in order to meet deposit withdrawals, customer demands for loans and other unexpected needs for cash

S: security holding are backup source of liquidity and provide another source of income.

L: loans are made principally to supply income,

MA: Miscellaneous (various) Assets (MA) are usually dominated by the fixed assets owned by the bank (its plants and equipment) and investments in subsidiaries (if any).

D: deposits are typically the main source of funding for banks.

NDB: Non-deposit borrowing (NDB): are carried out mainly to supplement deposits and provide the additional liquidity that cash assets and securities cannot provide. (Buying notes, equities and directly use that money for an investment to gain profit)

EC: equity capital supplies the long-term, relatively stable base of financial support upon which the bank will rely to grow and to cover any extraordinary losses it occurs.

Components of the Income Statement (Report of Income)

The difference between all revenues and expenses is net income. Thus;

$$\text{Net income} = \text{Total revenue items} - \text{Total expense items}$$

How to increase the net warnings (income).....?

1. increase the net yield on each asset held
2. redistribute earning assets toward those assets that carry higher yield
3. increase the volume of services that provide fee income
4. increase the fees associated with various services
5. shift their funding sources toward less costly deposits and other borrowings
6. Find ways to reduce their employee overhead (income/expense), loan loss (customer not making payment)
7. Reduce their taxes owed through improved tax management practices.

Principal types of non-interest (fee) income received by banks and competing financial firms today:

Fees arising from credit transactions:

- Charges for membership in a credit card plan
- Charges for late loan payment
- Charges for exceeding credit limits
- Servicing fees for collecting mortgage payments for another lender

Fees arising from deposit transactions:

- Checking account maintenance fees
- Checking account overdraft fees
- Fees for writing excessive checks
- Saving account overdraft fees
- Fees for stopping payment of checks

Fees arising from securities transactions:

- Security brokerage commissions
- Commissions for sales of annuities and mutual funds
- Commissions and fees for underwriting the sale of new stocks and bonds

Fees arising from fiduciary activities:

- Fees for managing and protecting a customer's property
- Fees for record keeping for corporations
- Fees for managing corporate and individual pensions and retirement plans

Fees for miscellaneous financial services:

- Data processing service fees
- Advisory services fees for managing
- Mergers and acquisitions