Banking & Financial Markets

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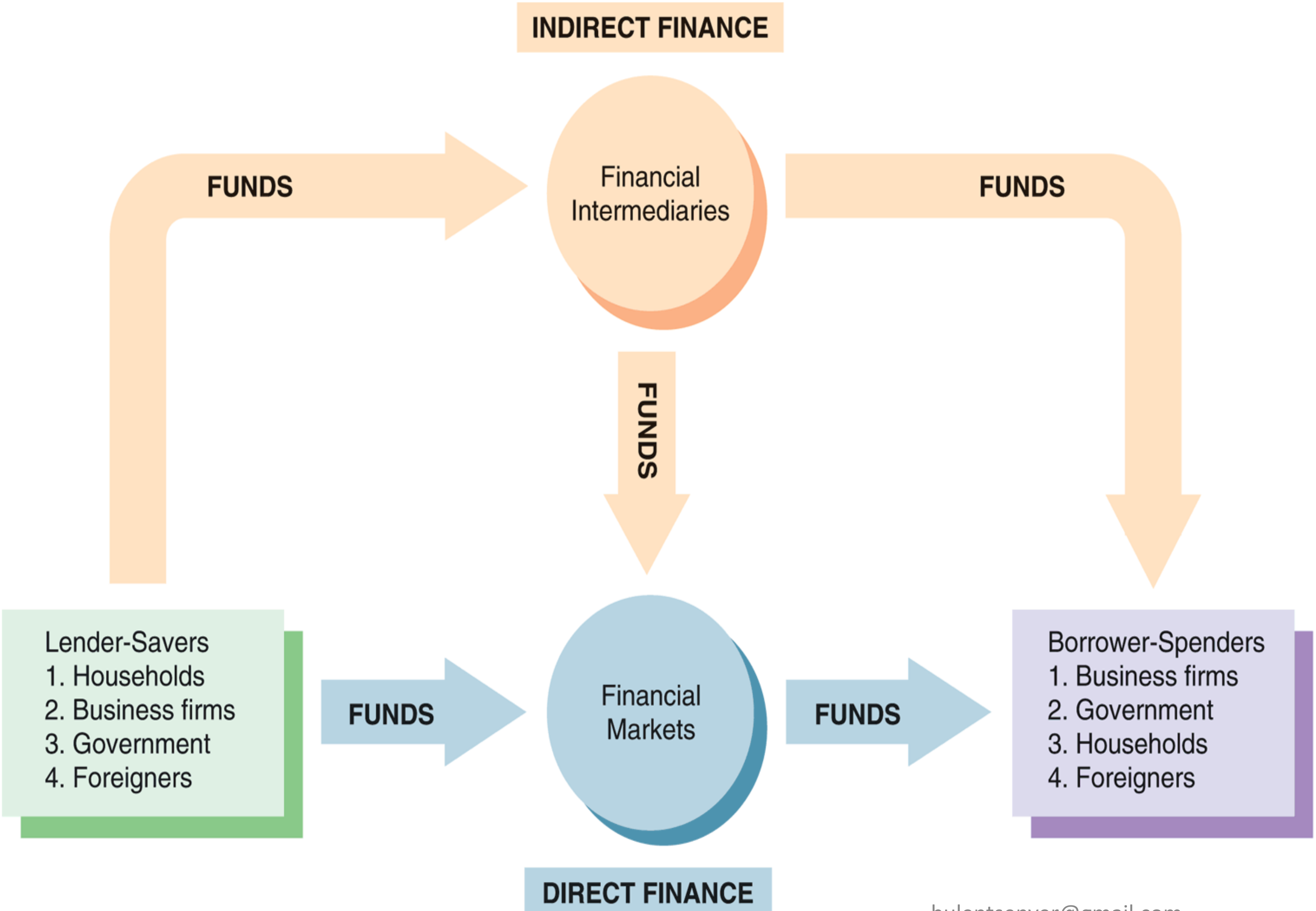
Function of Financial Markets



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Comercial Banking

LOANS

Give

DEPOSITS

Ge

t

Interest Income

Get

Interest Expense

Give

Comercial Banking

Interest Earning
Assets

LOANS
IEA

Interest Bearing
Liabilities

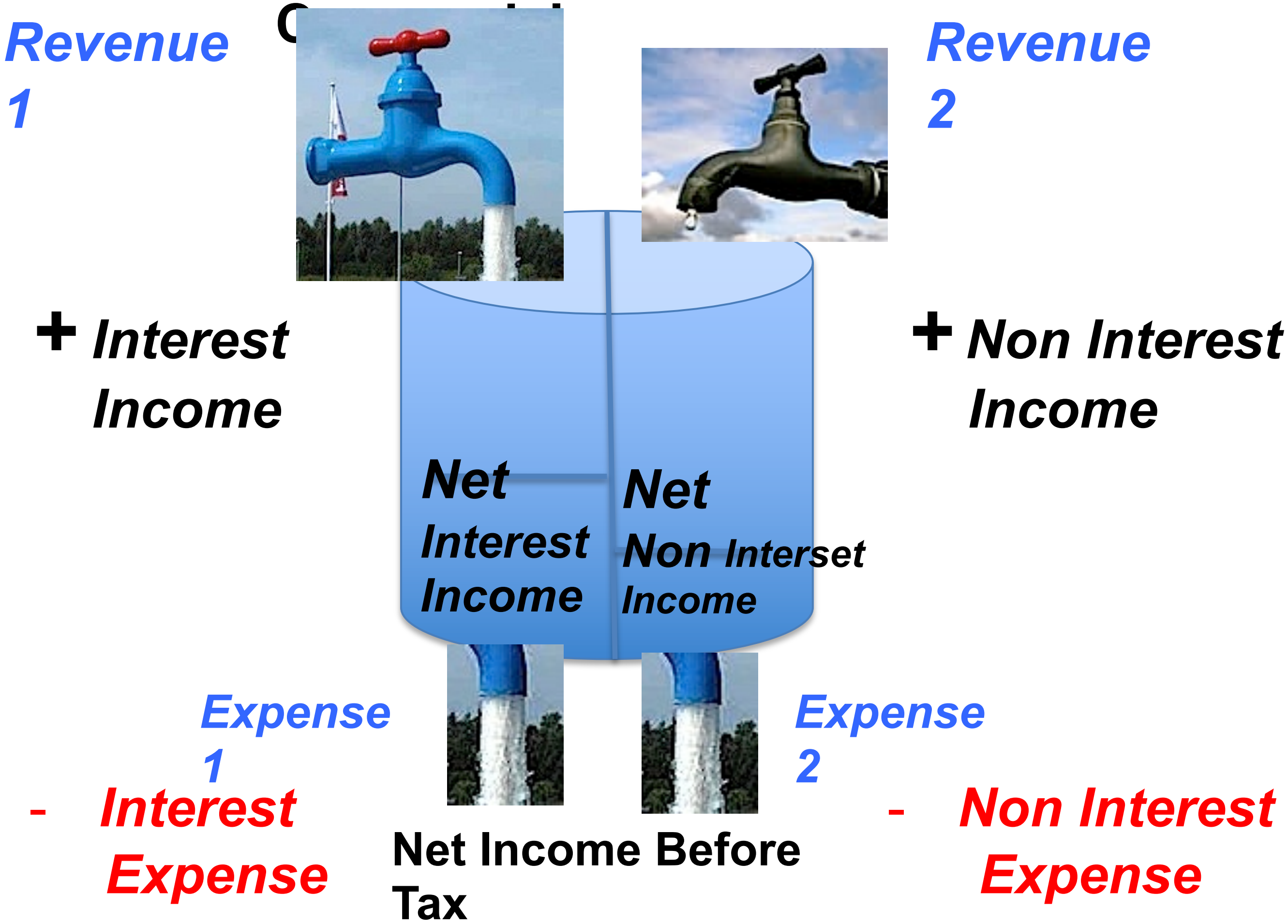
DEPOSITS
IBL

Interest Income

Net Interest Income

Interest Expense

Revenue Sourses of C



Bank Intermediation Services

- Intermediation:
- 1. Denomination
- 2. Currency
- 3. Maturity
- 4. Interest Rate
- 5. Interest Sensitivity
- 6. Security Collateral

- Related Risks:
- 1. Concentration R
- 2. Foreign Exchange Position
- 3. Liquidity R
- 4.Net Interest Income R
- 5. Sensitivity Gap R
- 6. Recoverability

Needs of Bank Customers

Needs:

- 1. Savings need
- 2. Borrowing need
- 3. Investment need
- 4. Security need
- 5. Trading need
- 6. Payment need
- 7. Advice & consulting need

Products:

- 1. Term Deposits
- 2. Loans
- 3. Securities, Government Bonds, Treasury Bills, Company Bonds, Mutual Funds, Certificate of Deposits, Commercial Papers, Mortgage Backed Securities, Asset Backed Securities,
- 4. Insurance products, Derivatives, Forwards, Swaps, Options, Hedging
- 5. Buy & sell Foreign Currencies & Capital Market Products
- 6. Cash, Cheques, Promissory Notes, Credit Cards, Debit Cards, ATM, POS, EFT, SWIFT
- 7. Asset management, Wealth Management, Investment Banking

Financial Intermediaries
Types of Banks

- Commercial Banks
- Investment Banks
- Merchant Banks
- Islamic Banks (participation banks)
- Development Banks
- Off Shore Banks
- Special Purpose Banks

Financial Intermediaries
Non Bank Financial Institutions

- Factoring
- Forfeiting
- Leasing
- Insurance
- Pension Funds
- Brokerage Houses
- Consumer Finance
- Angel Capital
- Venture Capital Fınds
- Investment Funds
- Mutual Funds
- Mortgage Funds
- Foreign exchange offices
- Money transfer companies
- Real Estate Property Funds

Classifications of Financial Markets

1. Debt Markets
   – Short-Term (maturity < 1 year) Money Market
   – Long-Term (maturity > 1 year) Capital Market

2. Equity Markets
   – Common Stock

Characteristics of Debt Markets Instruments

- Debt instruments
  - Buyers of debt instruments are suppliers (of capital) to the firm, not owners of the firm
  - Debt instruments have a finite life or maturity date
  - Advantage is that the debt instrument is a contractual promise to pay with legal rights to enforce repayment
  - Disadvantage is that return/profit is fixed or limited

Characteristics of Equity Markets Instruments

- Equity instruments (common stock is most prevalent equity instrument)
  - Buyers of common stock are owners of the firm
  - Common stock has no finite life or maturity date
  - Advantage of common stock is potential high income since return is not fixed or limited
  - Disadvantage is that debt payments must be made before equity payments can be made

Characteristics of Financial Markets

1. Debt Markets
   – Although less well-known by the average person, debt markets in U.S. are much larger in total dollars than equity markets, due to greater number of participant classes (households, businesses, government, and foreigners) and size of individual participants (businesses, and government)

Characteristics of Financial Markets

2. Equity Markets
   – Although U.S. markets are highly efficient, the world's largest, and more familiar to the average person, they are far smaller than the U.S. debt markets largely due to the fact that the only applicable participants are businesses

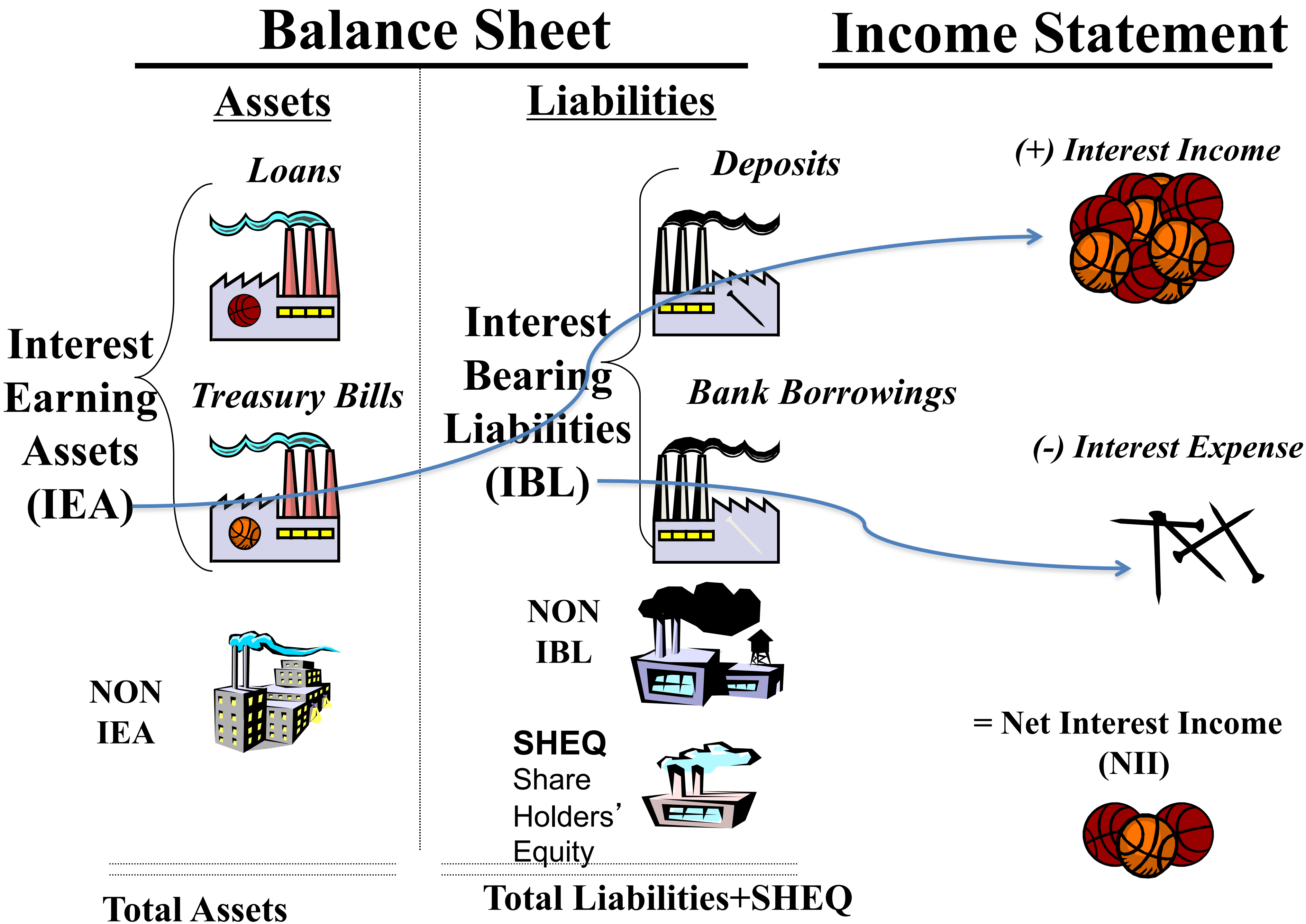
Classifications of Financial Markets

1. Primary Market
   – New security issues sold to initial buyers
2. Secondary Market
   – Securities previously issued are bought and sold

Classifications of Financial Markets

3. Exchanges
   – Trades conducted in central locations (e.g., New York Stock Exchange)
4. Over-the-Counter Markets
   – Dealers at different locations buy and sell

NYSE home page
http://www.nyse.com


Balance Sheet
Income Statement
Assets
Liabilities
Loans
Deposits
(+) Interest Income
Interest Earning Assets (IEA)
Treasury Bills
Interest Bearing Liabilities (IBL)
Bank Borrowings
(-) Interest Expense
NON IBL
NON IEA
SHEQ
Share Holders' Equity
= Net Interest Income (NII)
Total Assets
Total Liabilities+SHEQ

Balance Sheet Assets

- Interest Earning Assets (IEA)
- 1. Loans
- 2. Government Bonds
- 3. Treasury Bills
- 4. Company Bonds
- 5. Municipality Bonds
- 6. Commercial Papers
- 7. Interest Earning Derivatives

- Non Interest Earning Assets
- 1. Cash
- 2. Property Plant & Equipment
- 3. Reserve Deposits at Central Bank
- 4. Equity Participations
- 5. Share Certificates Trading Portfolio
- 6. Other non interest earning assets

Balance Sheet Liabilities

- Interest Bearing Liabilities (IBL)
- 1.Time Deposits
- 2. Bank Borrowings
- 3. Interbank Borrowing
- 4. Syndication Loans
- 5. Bonds issued
- 6. Commercial Paper Issued
- 7. Securitization of Assets
- 8. Mortgage Backed Securities issued

- Non Interest Bearing Liabilities
- 1. Demand Deposits
- 2. Utility Payments collected
- 3. Tax payments collected
- 4. Prepaid Card Liabilities
- 5. Other Non Interest Bearing Liabilities

Balance Sheet XYZ Bank
as of 31.12.2018

Balance Sheet of XYZ Bank as of 31.12.2010

ASSETS	2010
Liquid Assets	14.907
Securities Portfolio	76.352
Loans	57,443
Associates and Subsidiaries	731
Fixed Assets	826
Other Assets	901
TOTAL	151,160

LIABILITIES	
Deposits	125,796
Money Markets	5,003
Loans Borrowed	99
Marketable Securities Issued	0
Funds	3,525
Provisions	1.228
Other Liabilities	2,051
Shareholders' Equity	13,458
TOTAL	151,160

Income Statement Summary of a Bank

• Interest Income	100
• Interest expense	(60)
• Net Interest Income	40
• Non Interest Income	30
• Non Interest Expense	(25)
• Net Non Interest Income	5
• Income Before Tax	45
• Tax provision	(9)
• Net Income	36

Regulatory, Supervision, Audit, Bodies

- Central Bank (TCMB)
- Supervisory Authority (BDDK)
- Saving Deposit Insurance Fund (TMSF)
- Security Exchange Commission (SPK)
- Ministry of Finance (MB)
- Anti-Money Laundering Agency (MASAK)
- Independent External Auditors
- Internal Auditors

Central Bank Services given to Banks

- 1. Current Account service
- 2. Deposit Reserve Account service
- 3. Cheque Clearing House service
- 4. Interbank Market services
- 5. Bounced Cheques List
- 6. Protested Bills List

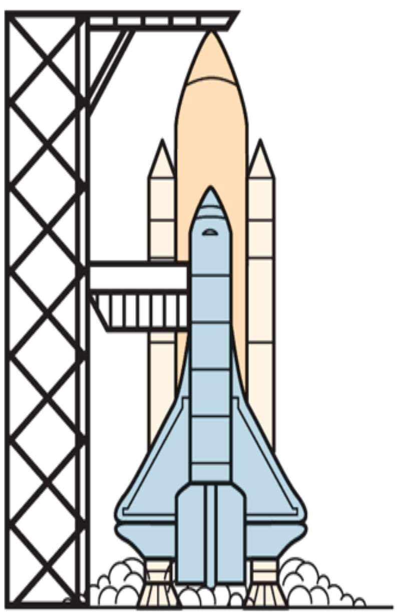
Central Bank Services given to Banks

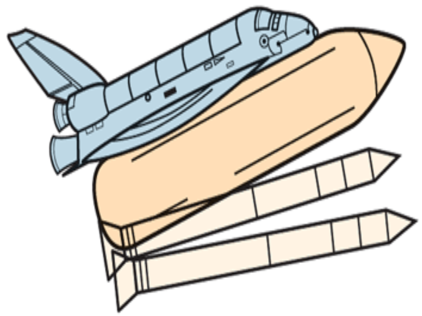
- 7. Determine indicative Interest Rates
- 8. Determine indicative Exchange Rates
- 9. Risk Centralization service
- 10. Hard Currency Supply (paper & coins)
- 11. REPO and Reverse REPO services
- 12. Rediscount Window Facility

Central Bank Strategy: Use of Targets

Tools of the Central Bank

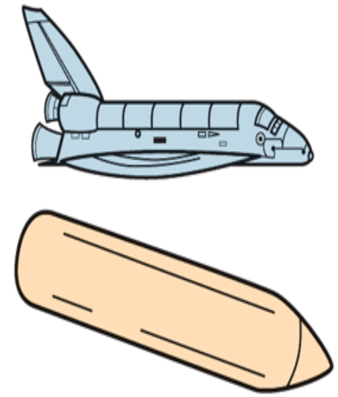
Open market operations
Discount policy
Reserve requirements





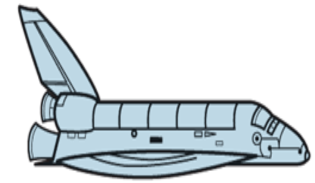
Operating Targets

Reserve aggregates (reserves, nonborrowed reserves, monetary base, nonborrowed base)
Interest rates (short-term such as federal funds rate)



Intermediate Targets

Monetary aggregates (M1, M2, M3)
Interest rates (short- and long-term)



Goals

High employment, price stability, financial market stability, and so on

Should the Fed (Central Bank) Be Independent?

- Every few years, the question arises in Congress as to whether the independence of the Fed should be reduced in some fashion. This is usually motivated by politicians who disagree with current
Fed policy.

- Arguments can be made both ways, as we outline next.

Case for Independence

- The strongest argument for independence is the view that political pressure will tend to add an inflationary bias to monetary policy. This stems from short-sighted goals of politicians. For example, in the short-run, high money growth does lead to lower interest rates. In the long-run, however, this also leads to higher inflation.

Case for Independence

- The notion of the *political business cycle* stems from the previous argument.
  - Expansionary monetary policy leads to lower unemployment and lower interest rates—a good idea just before elections.
  - Post-election, this policy leads to higher inflation, and therefore, higher interest rates—effects that hopefully disappear (or are forgotten) by the next election.

Case for Independence

- Other arguments include:
  - The Treasury may seek to finance the government through bonds purchased by the Fed. This may lead to an inflationary bias.
  - Politicians have repeatedly shown an inability to make hard choices for the good of the economy that may adversely affect their own well-being.
  - Its independence allows the Fed to pursue policies that are politically unpopular, yet in the best interest of the public.

Case Against Independence

- Some view Fed independence as “undemocratic”—an elite group controlling an important aspect of the economy but accountable in few ways.
- If this argument seems unfounded, then ask why we don’t let the other aspects of the country be controlled by an elite few. Are military issues, for example, any less complex?
- Indeed, we hold the President and Congress accountable for the state of the economy, yet they have little control over one of the most important tools to direct the economy.

Case Against Independence

- Further, the Fed has not always been successful in the past. It has made mistakes during the Great Depression and inflationary periods in the 1960s and 1970s.
- Lastly, the Fed can succumb to political pressure regardless of any state of independence. This pressure may be worse with few checks and balances
in place.

Central Bank Independence and Macroeconomic Performance Throughout the World

- Empirical work suggests that countries with the most independent central banks do the best job controlling inflation.
- Evidence also shows that this is achieved without negative impacts on the real economy.

BANKING RISKS

Risks

Banking Risks – CAMEL-OS

- **C**apital adequacy risk
- **A**sset quality risk
- **M**anagement quality risk
- **E**arnings, Efficiency, profitability risk
- **L**iquidity risk

- **O**perations risk
- **S**ensitivity risk

Banking Risks – Liquidity Risk

- Liquidity Risk:

- “The inability of a bank to fulfill its obligations when they became due and/or the inability of a bank to perform its daily banking operations after fulfilling its obligations due to lack of cash or liquid assets”

Types of Liquidity Risks

- 1. **Funding Risk**
- 2. **Time Risk**
- 3. **Call Risk**
- 4. **Excessive Asset Growth Risk**

Types of Liquidity Risks

- Liquidity Risks:
- 1. **Funding Risk** – FR is related with the Balance Sheet Liabilities of the bank. FR arises when there is unexpected early withdrawal of deposits before the maturity date (due date) or unexpected non-renewal of deposits at the maturity date.

Types of Liquidity Risks

- Liquidity Risks:
- 2. **Time Risk** - TR is related with the Balance Sheet Assets of the bank. TR arises when there is an unexpected non-payment of loan principal or interest amount (loan default) at the due date (maturity date) or when there is unexpected early payment of loan principal amount before its maturity date (closing the loan before the maturity date)

Types of Liquidity Risks

- Liquidity Risks:
- 3. **Call Risk** – CR is related with the Off-Balance Sheet items ”Contingent Liabilities & Commitments” of the bank. CR arises when there is an unexpected indemnification of a Contingent Liability or Commitment. The bank is force to make payment on behalf of its customer because of the guarantee given by the bank.

Types of Liquidity Risks

- Liquidity Risks:
- 4. **Excessive Asset Growth Risk** – EAG risk arises when a bank wants to grow its assets; especially grow its Loan Portfolio with such a high speed that the treasury department of the bank can not find sufficient funds with reasonable terms & conditions to give these loans.

Banking Risks – Interest Risk

- Interest Risk:

- “The risk of making losses by a bank due to the changes in Interest Income and/or Interest Expense of the bank arising from either changes in market conditions or changes in the interest characteristics of the bank’s Interest Earning assets and/or Interest Bearing Liabilities”

Banking Risks – Interest Risks

- 1. Interest Rate Risk
- 2. Interest Sensitivity Gap Risk
- 3. Basis Risk
- 4. Embedded Option Risk
- 5. Yield Curve Risk
- 6. Price Risk
- 7. Reinvestment Risk
- 8. Net Interest Position Risk

Interest Sensitivity Gap Strategy (IRSA-IRSL)

Strategy / Interest	Interest Rates expected to Increase	Interest Rates expected to Decrease
Positive IRS GAP	Yes	No
Negative IRS GAP	No	Yes

Loan Management-Loan Risk

- 1. Default Risk, collection, recoverability risk
- 2. Yield Risk, return risk
- 3. Concentration risk
- 4. Diminishing security risk
- 5. Ethical risk
- 6.Big Loan Risk
- 7.Country Risk
- 8.Sovereign Risk

Loan Management-Loan Risk

- 9.Compliance risk
- 10.Indemnification risk
- 11.Excessive Loan Growth risk
- 12.NPL Non Performing Loan growth risk
- 13.Maturity mismatch risk
- 14.Profitability, yield risk
- 15.Capital Adequacy need risk
- 16.Reputation Risk due to illegal loan pocess

Risks → Excessive Loan Growth ?

1. Loan Quality Risk
   Loan Quality Detoriates $\downarrow$
   Asset Quality $\downarrow$
2. NPL Amounts $\uparrow$
   NPL Risk
3. Liquidity Risk → Funding Risk
   Liability Quality.
4. Liquidy Missmatch Risk
5. Profitability Risk _ Lower NII
6. Average Loan Yield $\downarrow$ (Interest Income)
7. Increase Cost of Deposits $\uparrow$
   Liability Cost RISK
8. Securities of Loans doesdown $\downarrow$

Bond Ratings

TABLE 1 *Bond Ratings by Moody's and Standard & Poor's*

Rating			
Moody's	**Standard & Poor's**	**Description**	**Examples of Corporations with Bonds Outstanding in 2004**
Aaa	AAA	Highest quality (lowest default risk)	General Electric, United Parcel Service, Nestle
Aa	AA	High quality	3M, Koch Ind., Illinois Tool Works
A	A	Upper medium grade	Honeywell, Rockwell Intl., General Dynamics, Boeing
Baa	BBB	Medium grade	Itt Ind., Northrop, Goodrich, FedEx
Ba	BB	Lower medium grade	Westinghouse, Allied Waste Products, IKON Office Solutions
B	B	Speculative	Jacuzzi, Sabreliner Corp., American Airlines
Caa, Ca	CCC, CC, C	Poor (high default risk)	Delta Airlines, McDermott, Schutt Int.
C	D	Lowest grade	US Airways, United Airlines, Citation Corp.

Loan Management-Loan Types

- Borrower type:
  -Retail (individual) Loans
  -Corporate Loans

- Maturity type:
  -Short-term Loans
  -Medium-term Loans
  -Long-term Loans

Loan Management-Loan Types

- Currency type:
  - -Local Currency Loans
  - -Foreign Currency Loans
- Where used:

-Working capital Loans	-Consumer Loan
-Import Loans	-Mortgage Loan
-Export Loans	-Auto Loan
-Investment Loan	-Credit Card Loan

Loan Management-Loan Types

- Security type:
  -Secured Loans
  -Unsecured Loans
- Risk type:
  -Cash Loans (shown on balance sheet)
  -Non-Cash Loans (shown as off balance sheet item) e.g. Contingent Liabilities and Commitments

6 C’s of Loan Management

- 1. **Capacity**- The ability of a borrower to pay the loan back.
- 2. **Character**- Willingness of the borrower to pay the loan back
- 3. **Capital** – Is the borrower’s existing capital sufficient? Can the borrower’s share holders increase the capital of the company when needed?

6 C’s of Loan Management

- 4. **Collateral**- Can the borrower give to the bank proper collateral, guarantee to cover the loan in case there is a default in future?
- 5. **Conditions**- Is country, sector, holding, company & loan conditions suitable to give the loan?
- 6. **Compliance**- Does the bank & the borrower comply with laws, regulations & ethics?

5 P’s of Non Performing Loans

- How to control NPL?

- 1. Philosophy
- 2. Policies
- 3. Procedures
- 4. Pricing
- 5. People

Loan Life Cycle

- 1.Loan Product Development
- 2.Loan Marketing and Sales
- 3.Loan Application
- 4.Loan Quick Review, filtering
- 5.Loan Investigation
- 6.Loan Analysis
- 7.Loan Approval

Loan Life Cycle

- 7.Loan Approval
  Loan Approval Committees (LAC):
  - Board of Directors (LAC4)
  - Head Office Loan Approval Committee (LAC3)
  - Regional Office Loan Approval Committee (LAC2)
  - Branch Loan Approval Committee (LAC1)
- 8.Compliance to Loan Conditions
- 9.Loan Agreement
- 10.Loan Disbursement, Loan Utilization

Loan Life Cycle

- 11.Loan Follow Up and Supervision
- 12.Loan Interest Payment
- 13.Loan Principal Payment
- 14.Loan Default, Non Payment
- 15.Loan Closing

Loan Default Cycle

- 14.Loan Default Cycle
  - Investigate Default (temporary or permanent)
  - Start “Close Supervision”
  - Classify Loan as Non Performing Loans (NPL)
  - Reschedule the Loan, Change Terms & Conditions
  - Provide a Reserve for NPL (debit expense)

Loan Default Cycle

- 14.Loan Default Cycle

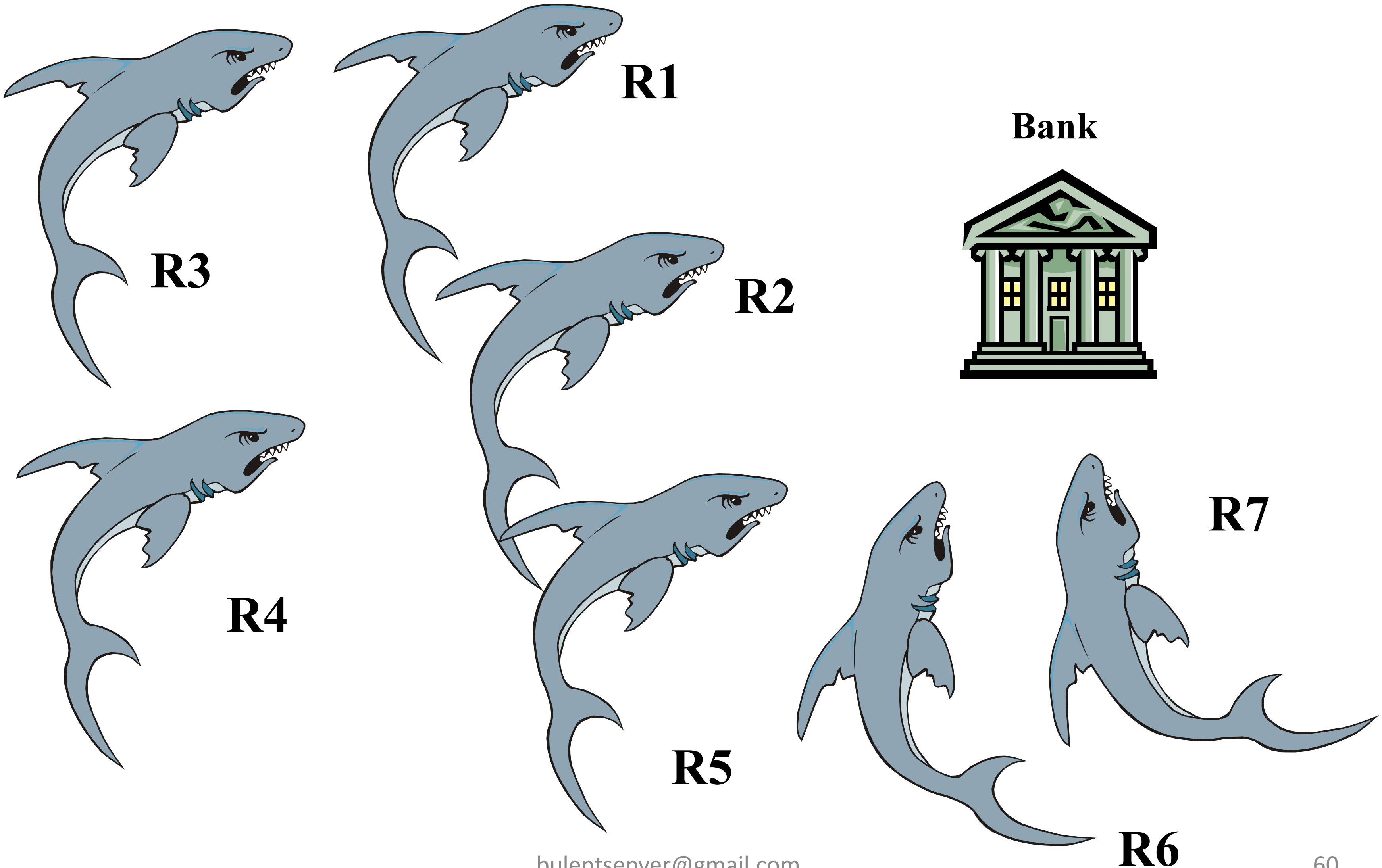
  – Classify NPL as Loans in Court
  – Start a Court Case
  – Sell Loan Collaterals, make collections
  – Get "Inability to Pay Court Certificate"
  – Loan Charge Off (remove loan & its reserves from accounts)

Types of Mortgage Loans

TABLE 5 ***Summary of Mortgage Types***

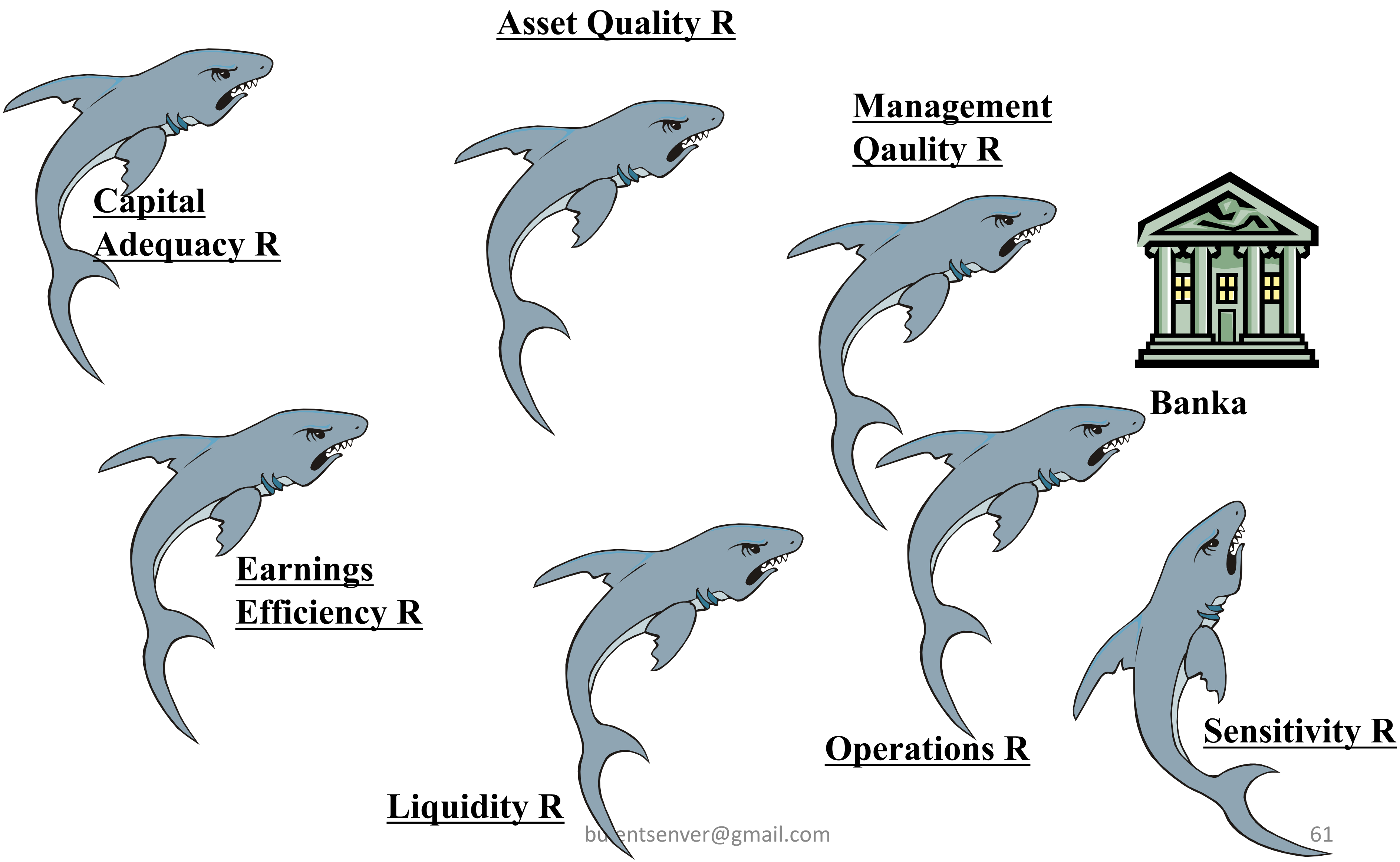
Conventional mortgage	Loan is not guaranteed; usually requires private mortgage insurance; 5% to 20% down payment
Insured mortgage	Loan is guaranteed by FHA or VA; low or zero down payment
Adjustable-rate mortgage (ARM)	Interest rate is tied to some other security and is adjusted periodically; size of adjustment is subject to annual limits
Graduated-payment mortgage (GPM)	Initial low payment increases each year; loan amortizes in 30 years
Growing-equity mortgage (GEM)	Initial payment increases each year; loan amortizes in less than 30 years
Shared-appreciation mortgage (SAM)	In exchange for providing a low interest rate, the lender shares in any appreciation of the real estate
Equity participation mortgage	In exchange for paying a portion of the down payment or for supplementing the monthly payments, an outside investor shares in any appreciation of the real estate
Second mortgage	Loan is secured by a second lien against the real estate; often used for lines of credit or home improvement loans
Reverse annuity mortgage	Lender disburses a monthly payment to the borrower on an increasing-balance loan; loan comes due when the real estate is sold

Risk Management in Banks



CAMEL OS Risks

CAMEL-OS



Banking Risks

- 1.Capital Adequacy R
- 2.Asset Quality R
- 3.Management Quality R
- 4.Earnings and Efficiency R
- 3.Liquidity Risks
  - Funding Risk
  - Time Risk
  - Call Risk
- 4.Liability Quality R
- 6. Loan Risk

Banking Risks

- 7. Interest Risks
  - Rate Sensitivity Gap or Mismatch Risk
  - Basis Risk
  - Yield Curve Risk
  - Embedded Options Risk
  - Pricing Risk
  - Reinvestment Risk
  - Net Interest Position Risk

Banking Risks

- 8.Foreign Exchange Risks
  - 1. F/X Position Risk
  - 2. F/X Availability Risk
  - 3. F/X Transaction Risk
  - 4. F/X Translation Risk

Foreign Exchange Risks

- **Translation Risk** – Foreign currency denominated assets & liabilities are converted to local currency (TL) using an F/X exchange rate. As a result of this translation the bank may make a loss or gain.
- **Transactions Risk** – Bank buy & sell foreign currency. Banks do banking transactions in foreign currencies. During these banking transactions the bank may make a transaction loss or gain.

Foreign Exchange Risks

- **Availability Risk** – When a bank has to make a foreign currency payment, first it has to find that specific foreign currency. Treasury department of the bank makes that foreign currency available for the bank. However sometimes that type of foreign currency may not be available in the financial markets. There were times in Turkey when US dollar was not available in the market and bank customers could not buy dollars from the banks. During such times "Black Market" works with high rates and prices.

Foreign Exchange Risks

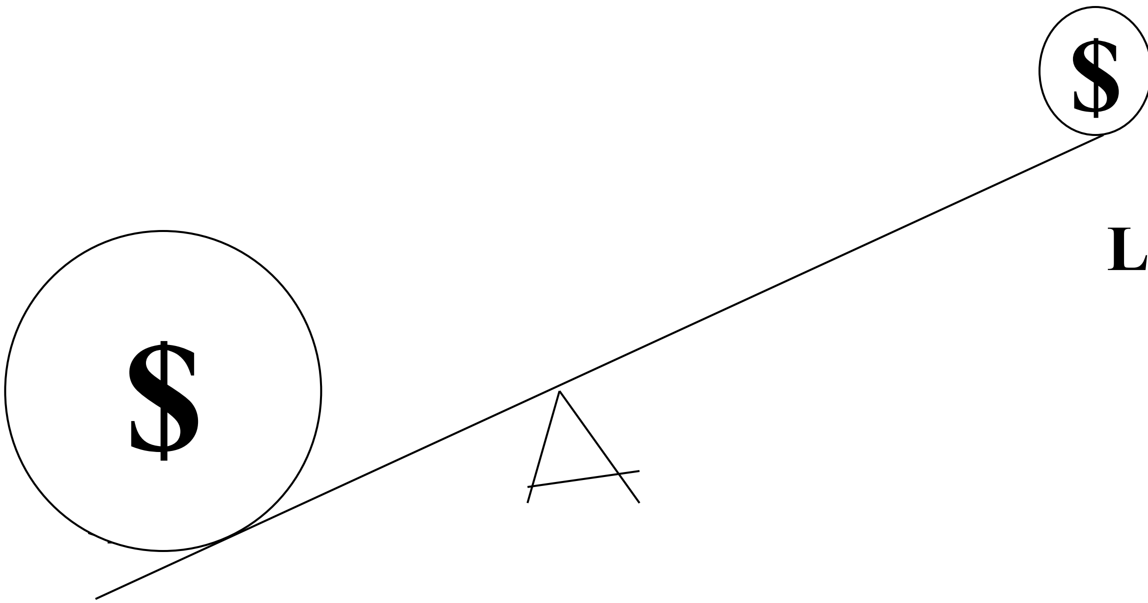
- **F/X Position Risk** – F/X Position is the difference between balance sheet assets and liabilities denominated in that specific foreign currency. Banks may make a loss or gain due to their F/X position.

The Foreign Exchange Market

- Definitions

  1. Spot exchange rate
  2. Forward exchange rate
  3. Cross exchange rate
  4. Appreciation
  5. Depreciation
  6. Arbitrage

Foreign Currency Position



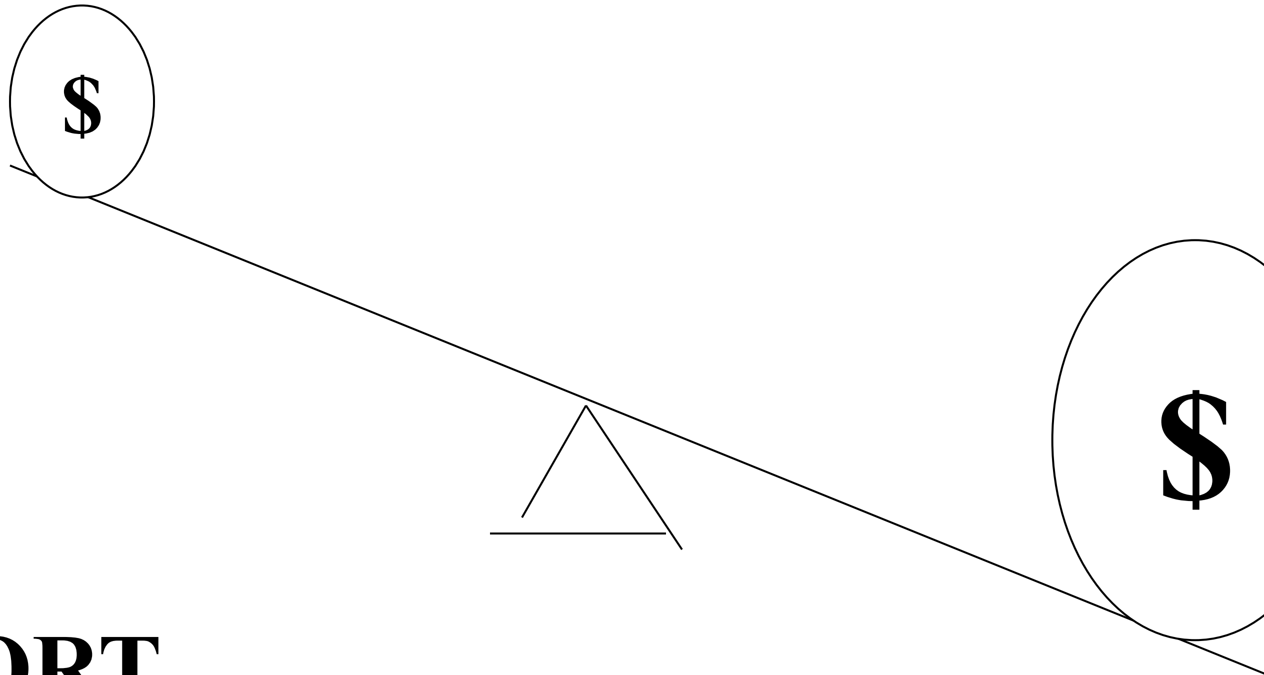
Liabilities

**Asset
s**

$ LONG Position

If Dollar rate expected to Increase

Foreign Currency Position

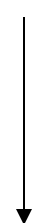


Assets

Liabilities

$ SHORT Position

If Dollar rate expected to Decrease



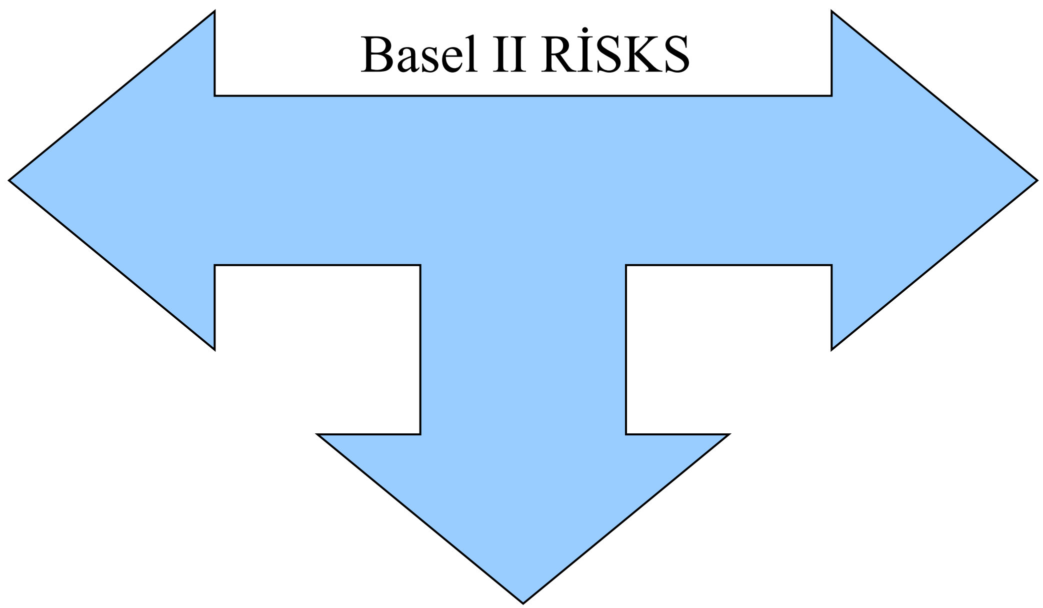
Foreign Exchange Position Strategy (F/Xassets-F/Xliability)

	If Foreign Currency Rate expected to Increase	If Foreign Currency Rate expected to Decrease
Long Position	Yes	No
Short Position	No	Yes

Banking Risks

- 9. Accounting and Reporting Risks
- 10. Thecnology Risks
- 11. Capital Markets Risks
- 12. Money Market Risks
- 13. Derivative Products Risk
- 14. Country Risk
- 15. Sovereign Risk
- 16. Pricing Risk
- 17. Concentration Risk
- 18. Market Risks

$$\frac{\text{Share Holders Equity}}{\text{Credit Risk + Market Risks + Operations Risk}} = 12\%$$

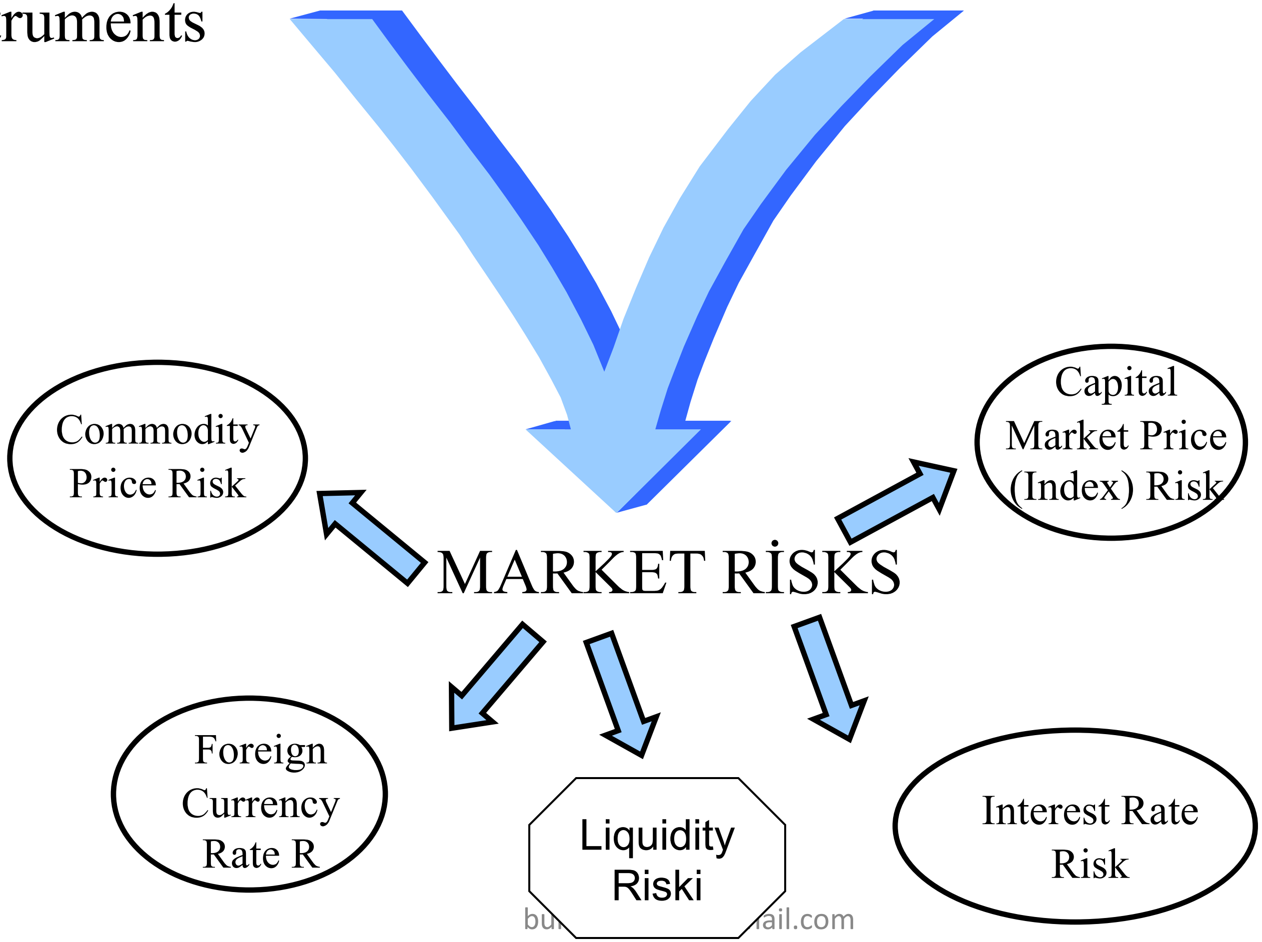


BASEL II

Market Risks

Market risks arising due to market financial instruments

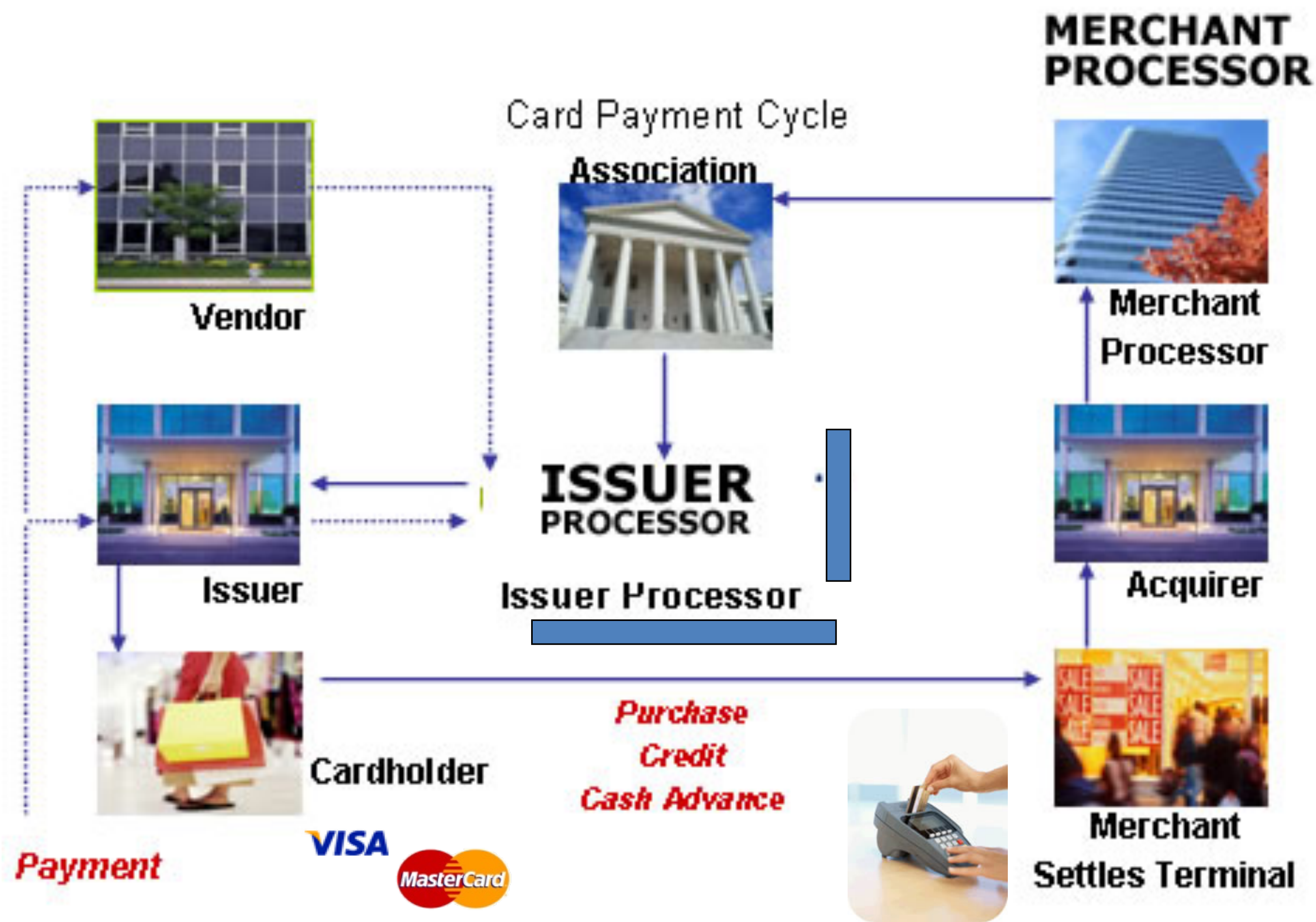
Market Risks arising due to Asset/Liability Maturşty Mismatch



Banking Risks

- 19.Competition Risk
- 20. Theft Riski
- 21. Fraud Risk
- 22. Defalcation Risk
- 23. Natural Disasters Risks
- 24. Strategy Risk
- 25. Fiduciary Business Risks
- 26. Error Wrong Transactions Risks
- 27. Laws and Regulations Compliance Risk

Plastic Card Payment Cycle



Types of Plastic Cards

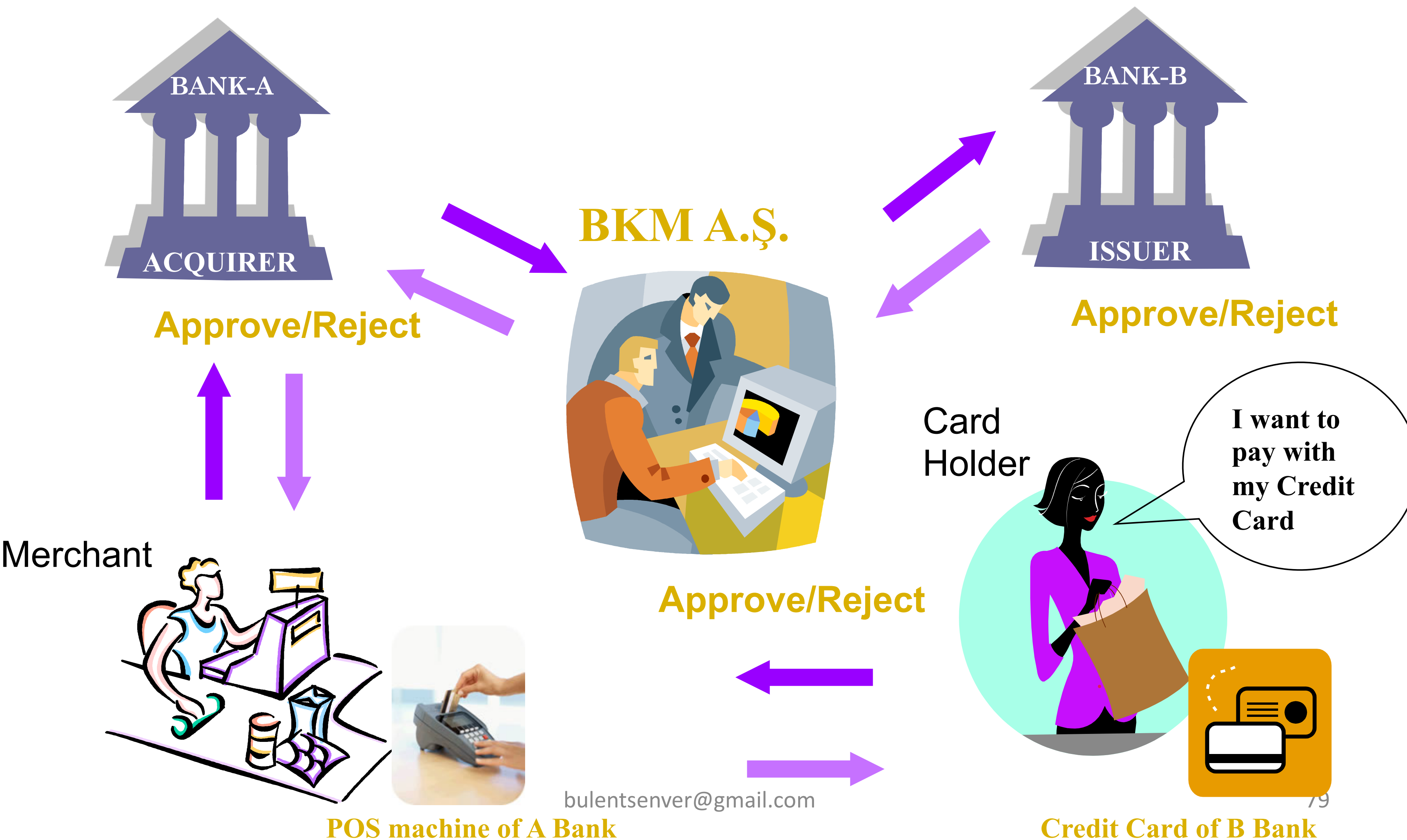
- Debit Card
- Charge Card
- Credit Card
- Prepaid Card
- Business Card
- Purchase Card
- Installment Card
- Co-Branded Card
- Loyalty Card
- Special Purpose Card

Plastic Card Technology

- Magnetic stripe card
- Chip card
- Contactless card
- NFC Near Field Communication card
- Virtual card
- Biometrics
- Mobile

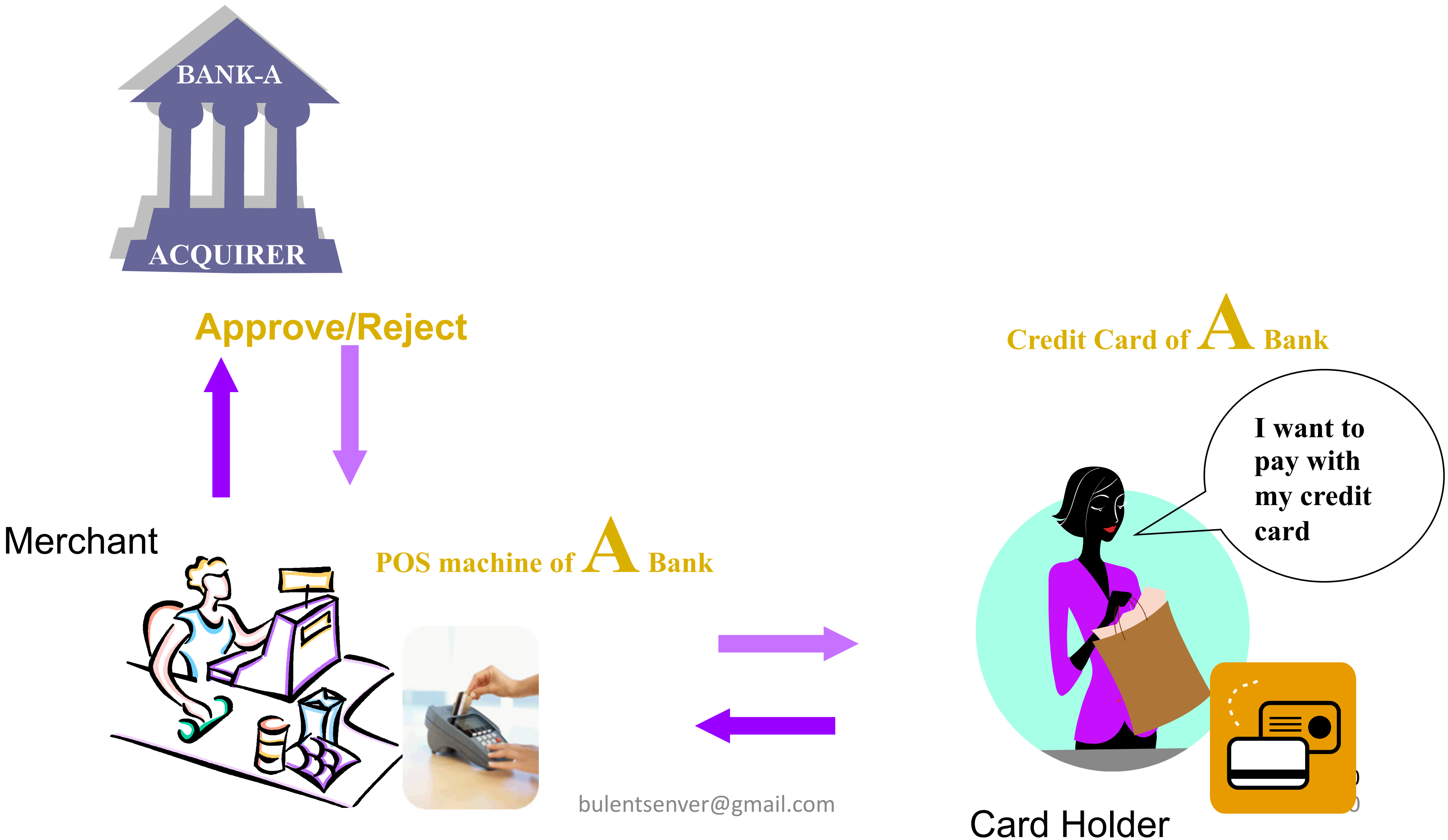
Local Card
used in Turkey

Credit Card On-Line Authorization



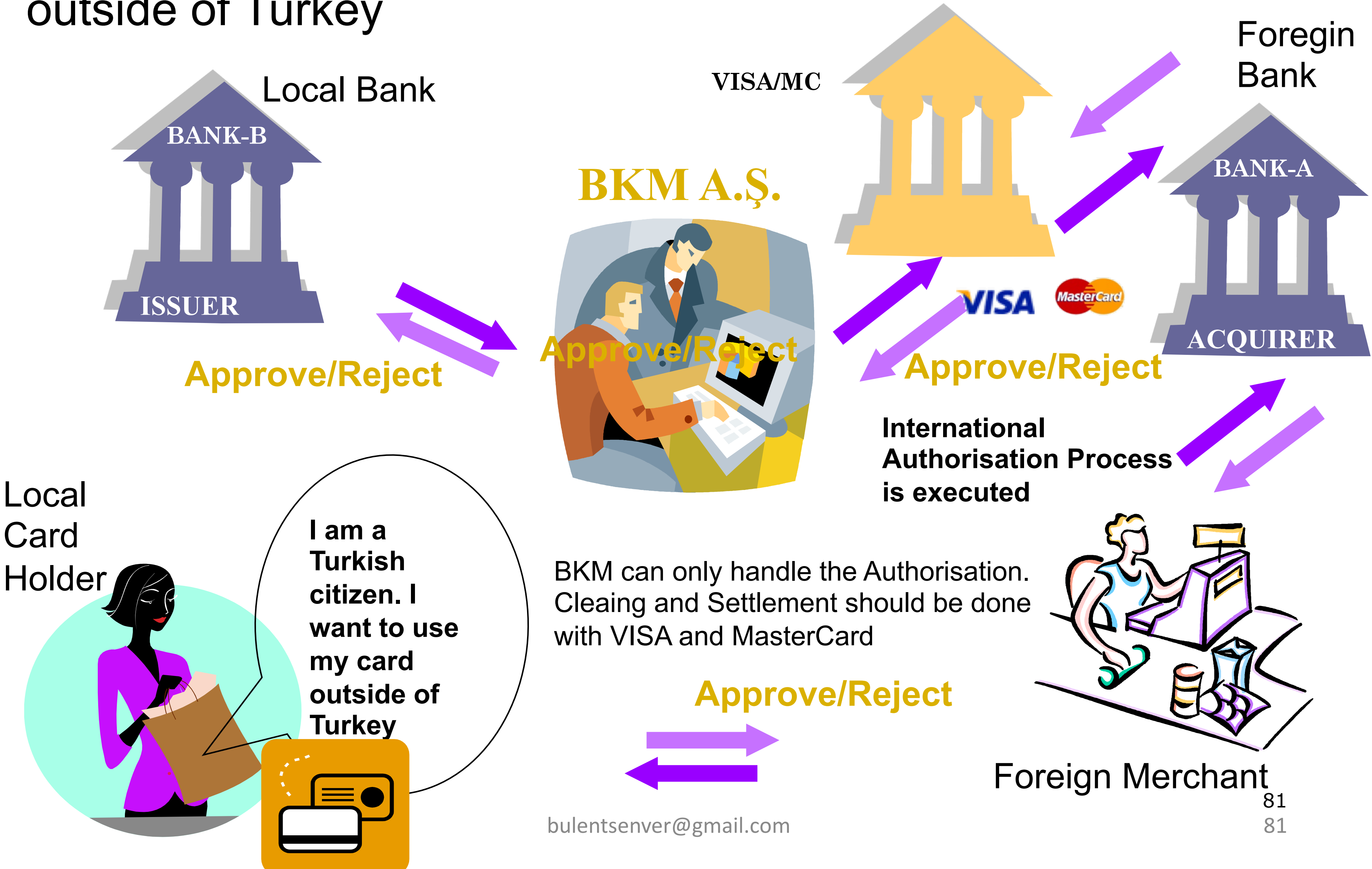
Local Card
used in Turkey

On-Us Transactions



Local Card used outside of Turkey

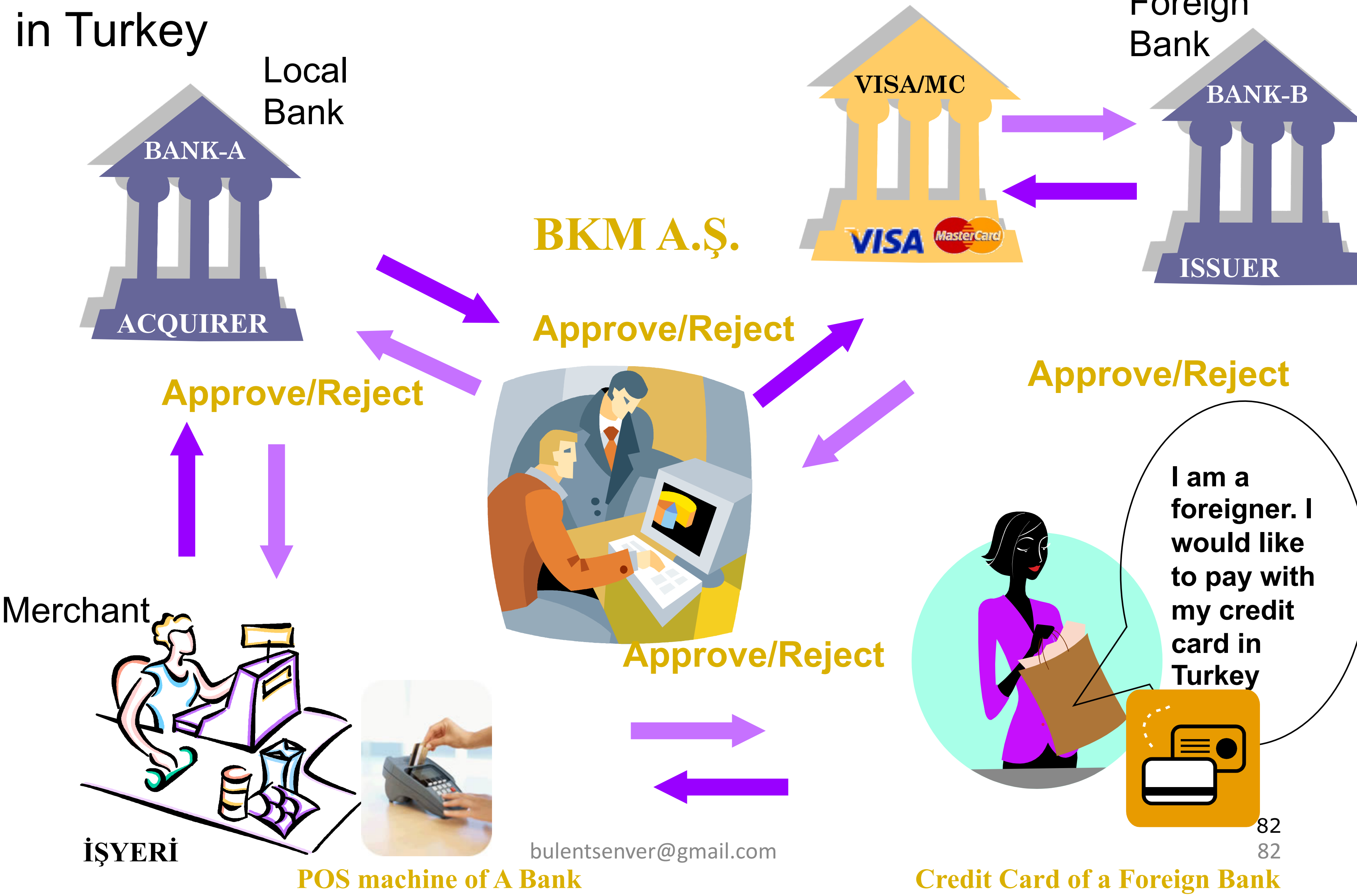
Issuing Bank routes it first toBKM and BKM routes it to Visa or MasterCard Method 1



Foreign Card used in Turkey

If Issuing Bank is not a Local Bank the Acquiring Bank routes it first toBKM and BKM routes it to Visa or MasterCard

Method 1



Banking Crises

- USA Crises:
- 1980 Savings Banks crises (S&L)
- 2007 sub-prime mortgage loans

- Turkey Crises:
- 2000 November – Interest risk – Demirbank
- 2001 March – Liquidity & Devaluation risk

Moral Hazard in Banking

People will take risks that they should not take if they have an incentive to do so. Risk versus Benefit. (eg. Bearings Bank, Lehman Brothers, İmar Bank)

- Business Ethics
- Conflict of Interest
- Non Compliance with Laws & Regulations
- Violation of Banking Rules & Practices

Future Trends in Banking

- 1.Disintermediation
- 2.Globalisation
- 3.Big emerging markets
- 4.Centralisation of operations
- 5.Use of outsourcing services
- 6.Consolidation
- 7.Mergers and Acquisitions

Future Trends in Banking

- 8.Decrease in Net Interest Income margins
- 9.Growth in Non Interest Income Business
- 10.Technology to play an important role in bank success
- 11.New business with new partnership agreements
- 12.New Distribution Channels
- 13. Open Banking

Future Trends in Banking

- 14.New competition non bank financial and non-financial institutions
- 15.Franchising of certain bank branch functions
- 16.Importance of Supervision and Audit of banks will increase
- 17.New Laws and Regulations to limit the risks taken by banks
- 18. Behavioural Biometrics (passive&active)