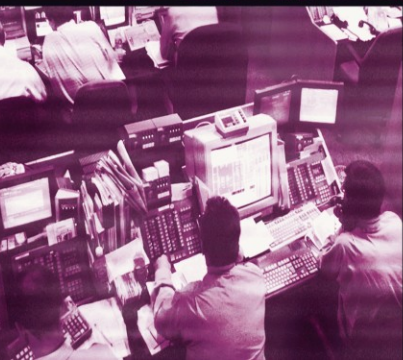


Czech Rep.	(Koruna)	36.5811	-0.1144	36.7790	36.6405
Denmark	(DKr)	7.4351	-0.0029	7.4428	7.4458
Greece	(Dr)	16.62	0.0510	16.62	16.62
Hungary	(Forint)	254.810	-0.1500	256.080	254.400

Commercial Banks



(R\$)	1.9789	-0.0324
(C\$)	1.5638	-0.0132
(Peso)	9.8707	-0.0504
(\$)	1.0563	-0.0037



1.0632	1.0550
2.0045	1.9740
1.5819	1.5650

The objectives of the chapter are to provide an understanding of:

- The trends in the banking sector.
- The implications of the financial modernization legislation.
- Bank reserve requirements and capital requirements.
- The use of technology in banking.
- The main risks banks face and how they manage each type of risk.

Banking Services and Products

- Traditional Services and Products:

- Deposits and loans (consumer and business)
- Currency exchanges
- Safekeeping of valuables
- Supporting government activities with credit
- Trust services
- Financial advising

- More Recent Services and Products:

- Cash management
- Equipment leasing
- Venture capital
- Insurance services
- Retirement plans
- Securities brokerage investment services
- Mutual funds and annuities
- Investment banking and merchant banking

Organizational Structures

- Independent bank
 - A bank that does not operate under the control of a multibank holding company
 - Typically conducts business in a local or regional community, although it may operate branches.
- Bank holding companies
 - A bank holding company owns and manages subsidiary firms as the parent organization, and the operating entities are the subsidiaries.

Functional Restrictions

- Glass-Steagall Act 1933 (Section 20)
 - A reaction to the Great Depression.
 - Prohibited the affiliation of Fed member banks with underwriting companies or in dealing in securities.
 - Bank subsidiaries can now deal in Tier 1 and Tier 2 securities.

Functional Expansion

- **Gramm-Leach-Bliley (GLB) Act of 1999**
 - Allows bank holding companies to engage in securities underwriting, dealing, or market-making activities through securities subsidiaries.
 - Allows banks, insurance companies, and securities firms to affiliate with each other and become financial services supermarkets.
 - Established a system of functional regulation in which banking regulators oversee banking activities, state insurance regulators supervise insurance activity, and securities regulators supervise securities activities.

Other Trends in the Banking Industry

- Consolidation of competitors
 - Due to technological progress, improvements in financial condition, excess capacity, international consolidation of markets, and deregulation of geographic or product restrictions
 - Low interest rates and high stock prices helped fuel the consolidation trend during the 1990s
- Savings Institutions
 - A gradual decline in the relative importance of savings institutions has occurred as equity capital has increased in banks.

Other Trends in the Banking Industry

- Credit Unions

- Nonprofit depository institutions established to provide banking services to their members.
- Members own and control credit unions, they do not issue shares in the public market.
- Types of credit unions
 - ❖ **Community development credit unions** serve primarily low-income members in distressed and financially underserved areas.
 - ❖ **Corporate credit unions** that act as a credit union for credit unions in providing investment, liquidity, and payment services.

Regulatory Environment

- Reserve Requirements
 - The percentage of deposits that a bank must hold either as vault cash or on deposit at a Federal Reserve Bank.
 - A bank's average reserves over the period ending every other Wednesday must equal the required reserves.

Reserve Requirements Example

- A bank has a reserve deficit of \$30 million and purchases that amount of federal funds at a rate of 4.82% to meet its reserve requirement for seven days. The cost to the bank will be:

$$\$30,000,000 \times \left(\frac{0.0482}{360} \right) \times 7 = \$28,116.67.$$

Capital Requirements for Credit Risk

- Risk-based capital standards
 - Protect against credit risk, or the risk that a bank will sustain a loss as a result of the default of a borrower or a counterparty.
 - Are the linkage between a bank's minimum capital requirement and the credit risk of its assets through a risk-weighted system.
 - Use a leverage ratio requirement that supplements the risk-based capital guidelines.

Components of Capital

- Tier 1 capital
 - Core capital elements
 - ❖ Common equity
 - ❖ Qualifying noncumulative perpetual preferred stock
 - ❖ Minority interest in the equity accounts of consolidated subsidiaries (less goodwill)
 - ❖ Unrealized holding losses in the available-for-sale equity portfolio
 - ❖ Other intangible assets that do not qualify within capital.
 - A bank must have a tier 1 leverage ratio of at least 3 percent (the ratio of tier 1 capital to total average assets).

Components of Capital

- Tier 2 capital
 - Supplemental capital
 - ❖ An allowance for loan and lease losses
 - ❖ Non-tier 1 perpetual preferred stock
 - ❖ Mandatory convertible securities and other hybrid capital instruments
 - ❖ Long-term preferred stock (original term of 20 years or more)
 - ❖ Term subordinated debt
 - ❖ Intermediate-term preferred stock
 - ❖ Unrealized holding gains on qualifying equity securities.

CAMELS Rating System

- The numerical (1-5) rating system that bank examiners use to assess the quality of a bank's operations.
 - **C**apital adequacy
 - **A**sset quality
 - **M**anagement quality
 - **E**arnings record
 - **L**iquidity position
 - **S**ensitivity to market risk
- A high rating means more examinations.

Capital Requirements for Market Risk

- Market risk rule
 - Sets the minimum capital standards for risk exposure to general and specific credit risk.
 - General market risk
 - ❖ The risk from movements in the general level of underlying market factors such as interest rates, foreign exchange rates, equity prices, and commodity prices.
 - Specific risk
 - ❖ The risk of an adverse movement in the price of individual debt and equity securities resulting from factors related to the security issuer.

Deposit Insurance

- Federal Deposit Insurance Corporation (FDIC)
 - Insures bank deposits up to \$100,000 per account.
 - Uses a risk-based system to assess deposit insurance premiums for the deposit insurance funds—the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF).
 - Assigns each institution to one of nine risk categories based on its capital ratios (the capital group assignment) and other relevant information (supervisory subgroup assignment).

Technology In Banking

- Telephone and PC Banking
 - Automated telephone transactions
 - Banking transaction software
- Check Imaging
 - Conversion of physical checks to digital images
- Internet Banking
 - 24/7 bank services and products availability
 - “Bricks and clicks” banks
 - Pure internet banks

Credit Risk Management

- Credit risk
 - The default risk associated with all credit exposures, including loans, receivables, lending commitments, derivative contracts, and foreign exchange contracts
- Management of consumer credit risk
 - Creating a model that projects credit quality and establishes credit-underwriting standards.
 - Diversifying risk exposures by obligator, risk grade, industry, product, and geographic location.

Credit Risk Management (cont'd)

- Credit risk is managed by:
 - Diversifying exposures by obligator, risk grade, industry, product, and geographic location.
 - Securitizing loans and selling off pieces to other investors.
 - Using credit default swaps to transfer each component risk to others best suited or most interested.
 - Using derivatives and foreign exchange contracts.

The Relationships Between Gaps, Interest Rates, and Interest Income

Net Gap	Change in Interest Rates	Change in Net Interest Income
Positive	Increase	Increase
Positive	Decrease	Decrease
Negative	Increase	Decrease
Negative	Decrease	Increase
Zero	Increase	None
Zero	Decrease	None

Liquidity Risk Management

- Liquidity risk
 - The risk that the bank may be unable to meet a financial commitment to a customer, creditor, or investor when due.
- Liquidity risk management
 - The mix of core and noncore deposits and capital to ensure funding for anticipated obligations and planned asset generation.

Liquidity Risk Management (cont'd)

- Sources of Liquidity

- Core deposits

- ❖ Stable deposits that are not highly rate sensitive: savings accounts, checking accounts, money market accounts, and time deposits.

- Commercial paper

- Medium-term notes

- Long-term debt

- Preferred and common stock.

Gap Analysis

- Representing the interest rate risk component of market risk by placing assets and liabilities in gap intervals based on their repricing dates.
 - The Fed requires banks to report repricing gaps for assets and liabilities with the following maturities:
 - ❖ One day
 - ❖ More than one day to three months.
 - ❖ More than three months to six months.
 - ❖ More than six months to twelve months.
 - ❖ More than one year to five years.
 - ❖ More than five years.

Relationships between Gaps, Interest Rates, and Shareholder Equity

Net Duration Gap	Change in Interest Rates	Change in Shareholder Equity
Positive	Increase	Decrease
Positive	Decrease	Increase
Negative	Increase	Increase
Negative	Decrease	Decrease
Zero	Increase	None
Zero	Decrease	None

Duration Gap Analysis

- Compares the price sensitivity of a bank's total assets with that of its total liabilities.
 - The differential impact between these two is the resulting change in the market value of shareholder equity.
- Calculating the gap:
 - D is duration, y the interest rate, P the initial price

$$- D \times [\Delta y / (1 + y)] \times P$$

Duration Gap Analysis

- The change in the bank's net worth for any given change in interest rate is:

➤ A is assets, L is liabilities, y the interest rate

$$\left(-D_A \times \frac{\Delta y}{(1+y)} \times A \right) - \left(-D_L \times \frac{\Delta y}{(1+y)} \times L \right)$$

$$\frac{-\Delta y}{(1+y)} \times A \times \left(D_A - D_L \times \frac{L}{A} \right)$$

Duration Gap Analysis Example

- A bank manager has calculated that the duration of assets is 5 years and the duration of liabilities is 4 years.
- The manager learns from the bank's economic forecast that interest rates should go up by 30 basis points, from 8.00 percent to 8.30 percent.
- The bank has total assets of \$500 million, liabilities of \$400 million, and shareholder equity of \$100 million.

Duration Gap Analysis Example (cont'd)

- The increase in interest rates will result in a decline in bank value of \$2.5 million:

$$\begin{aligned} & \frac{-\Delta y}{(1 + y)} \times A \times \left(D_A - D_L \times \frac{L}{A} \right) \\ = & \frac{-0.003}{(1 + 0.08)} \times \$500m \times \left(5 - 4 \times \frac{\$400m}{\$500m} \right) = -\$2.5m \end{aligned}$$

Market Risk Management

- Value-at-risk (VaR) measures
 - Interest rate VaR
 - Foreign exchange VaR
 - Commodities VaR
 - Equities VaR
- Estimating the VaR
 - Historical simulation
 - Parametric approach
 - Monte Carlo simulation

Operation Risk Management

- Types of operating risks
 - Fraud by employees
 - Unauthorized transactions by employees and customers
 - Errors related to computer or communications systems
- European Economic and Monetary Union
 - EU, EMU, and the Euro currency
- Year 2000

Commercial and Rural Banks in Indonesia

- Decreasing number of commercial banks
- Decreasing number of rural banks
- Increasing CAR for commercial banks
- Decreasing Non Performing Loan (NPL)
- Potentially increasing of BOPO
- Stable of Loan to Deposit Ratio (LDR)
- Most of Indonesia commercial banks owned by foreign holding banks

The objectives of the chapter are to provide an understanding of:

- The new market environment for investment banking.
- How investment banks underwrite a new security offering.
- The services investment bankers offer in mergers and acquisitions.
- The contributing factors behind the growth in financial engineering.

The objectives of the chapter are to provide an understanding of: (cont'd)

- The importance of research, sales, and trading to investment banking operations.
- Merchant banking and how it contributes to other areas of investment banking.
- The risks investment banks face and how they manage them.

Competitive qualities of leading banks

- **A strong product line, because clients are increasingly demanding a full-service provider.**
- **The ability to provide clients with an integrated solution to their financial needs.**
- **A strong global presence.**
- **Financial strength, which is necessary to retain the confidence of clients and maintain long-term relationships.**
- **Integrity and teamwork, which are essential to creating trust and providing superior service.**

Deregulation

- The Glass-Steagall Act of 1933
 - Prohibited banks, insurance companies, and securities firms from merging with each other or from offering products and services provided by the other types of firms.
 - Prevented the three main segments of the financial services industry—banks, securities firms, and insurers—from competing effectively in the global arena.

Deregulation (cont'd)

- **Gramm-Leach-Bliley Act of 1999**
 - Eliminated the Glass-Steagall restrictions.
 - Enabled investment banking houses to expand their activities and to offer a full menu of financial services to meet client demand.
- **One-Stop Shopping and Consolidation**
 - **Financial Supermarkets**
 - ❖ Money lending, retail and institutional fund management, trust services, trading and principal transactions, commissions, asset management, and securities services.

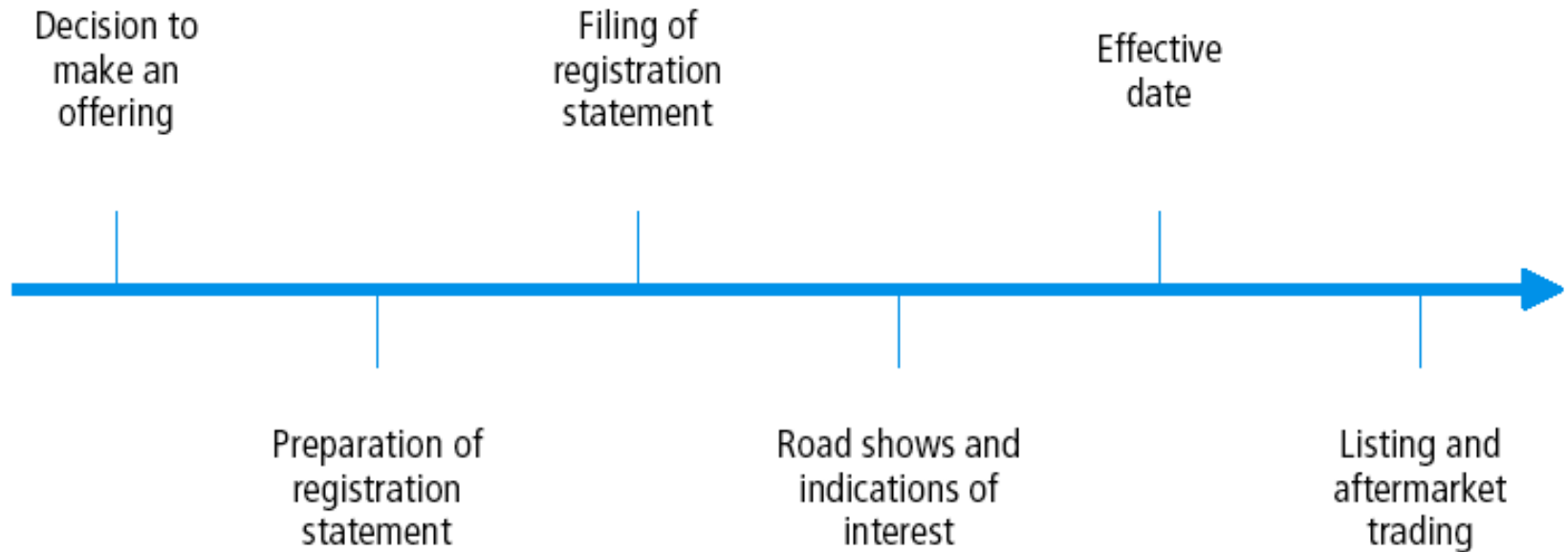
Globalization Trends in Investment Banking

- Globalization fueled by:
 - Information technology advances
 - Increased cooperation among regulators
 - More national markets open to outside investments
 - Increased access to and use of financial markets by pension funds and investors

Internet and Information Technology Effects on Investment Banking

- **Internet**
 - Reduced time and distance considerations in transactions
 - Extended trading in world markets
 - 24/7 employee and customer access to market data, research and services
 - Distribution of security offerings online
- **Information Technology**
 - Design and price complex contracts and derivatives
 - Analyze underlying risks

Share-issuing Process



Investment Banking and Initial Public Offerings (IPOs)

- Preparing a company to go public requires:
 - Establishing the best timing for the offering
 - Setting the size of the offering
 - Determining the optimal price of the transaction
 - Drafting the SEC registration statement

Investment Banking and Underwriting

- Underwriting
 - Ensures a broader distribution of the offering.
 - Provides impetus for brokerages to initiate trading and research coverage for the new public company.
 - Achieves broad recognition for the company through institutional interest and ownership that can contribute to retail interest in an offering.
 - Creates a strong aftermarket.

Underwriting Syndication

- Firm commitment underwriting
 - The underwriters buy all of the new shares at the offering price minus the underwriting discount and resell them to investors.
 - Green shoe option (overallotment): enables underwriters to purchase additional shares if there is strong demand for the new issue.
- Best-efforts underwriting
 - The underwriters agree only to use their best efforts to sell the security on the issuer's behalf without any guarantee.

Underwriting and the SEC

- New securities must be registered with the Securities and Exchange Commission
 - A registration statement that discloses various kinds of important information about the company and the security for investors to consider when deciding whether to invest in the company.
 - The SEC will declare the registration statement effective, meaning that the statement has been approved. Only then can the security be sold to investors.

The Prospectus

- Preliminary prospectus
 - Distributed before the effective date to brokers and prospective purchasers to arouse interest in the offering.
 - Omits offering price, underwriting discount, and other details that depend on the offering price.
- Final prospectus
 - After effective date, the offering price and effective date are to the prospectus.

Other Underwriting Activities

- Road Show
 - Key marketing event in which the firm's management meets with financial analysts and brokers to explain the firm's market position, discuss how the firm will execute its business plan, and show off the quality of the management team.

Other Underwriting Activities (cont'd)

- Due Diligence

- A meeting held to reduce the risk of liability associated with the SEC filing by ensuring that all material matters have been fully and fairly disclosed in the registration statement.
- Review and authenticate the articles of incorporation, bylaws, and patents; the completeness and accuracy of minutes; and verify the corporate existence.

Aftermarket Support

- Underpricing

- Is setting an offering price lower than the aftermarket value.
- Is a means of soliciting institutional investor interest.
- Helps the underwriter by reducing the risk of underwriting.
- Reduces the possibility of shareholder lawsuits, which may be filed if there is a sharp decline in price.

Aftermarket Research

- SEC's new ethics rules (May 2002)
 - Securities firms must provide detailed disclosure of conflicts.
 - Securities firms must give lawyers and ethics officers at the firm a leading role in acting as gatekeepers between analysts and investment bankers.
 - Analysts must disclose whether they or their firms hold stock in the companies under review.
 - Analysts must provide a chart of their ratings and price targets for a stock.
 - Analysts cannot trade in the companies that they cover for thirty days before and five days after the publication of their research report.

Underwriting Risks

- Floating risk
 - Waiting risk from changes in the market environment
 - Pricing risk is the risk that the market will decline after the signing of the underwriting agreement.
 - Marketing risk is the possibility that the offering will not sell as anticipated.
- Rule 415 (Shelf Registration)
 - Filing a single registration document indicating that it intends to sell a certain amount of securities at one or more times within the next two years.

Mergers And Acquisitions (M&A)

- Investment banks frequently act as finders and/or financial advisers in M&As.
 - Are knowledgeable about potential sellers or buyers.
 - Are familiar with the terms of recent transactions.
 - Are adept at creating financing structures, arranging or providing bridge loans.
 - Can offer fairness opinions, and conduct divestiture auctions.

M&A Valuation Techniques

- Estimating the value of a business by:
 - Discounted cash flow
 - Comparable transactions
 - Comparable company
 - Breakup valuation
 - Target stock price history
 - Leveraged buyout analysis
 - Multiple of revenues
 - Book value
 - Multiple of earnings
 - Liquidation analysis

M&A Valuation Techniques (cont'd)

- Discounted cash flow (DCF) technique
 - Uses a future-oriented approach in projecting of the target's sales and operating profits.
 - Determines a firm's value by evaluating the target company's cash flow projections and discounting those projections to the present value.

M&A Valuation Techniques (cont'd)

- **Comparable transactions analysis**
 - Focuses on recent transactions involving companies in the target company's industry or similar industries.
 - Uses comparable sales, earnings, cash flow, or other financial measures to estimate the value at which the target would likely trade.
 - Is most effective when the availability of data on truly comparable transactions is not an issue.

M&A Valuation Techniques (cont'd)

- Comparable company approach
 - Compares the value of the potential acquisition candidate with the market prices of publicly traded companies with similar characteristics.
 - Is similar to the comparable transactions approach in that it identifies a pricing relationship and applies it to the candidate's earnings or cash flow or book value.
 - Works well when there are good comparables for the target and accounting policies do not differ substantially from one company to another.

M&A Valuation Techniques (cont'd)

- Breakup valuation technique
 - Involves analyzing each of the target's business lines and summing these individual values to arrive at a value for the entire company.
 - Compares total value to acquisition cost, and then a calculation of the rate of return if value exceeds cost.
 - Provides the required guidance under a hostile bid.

M&A Valuation Techniques (cont'd)

- Target stock price history analysis
 - Examines the trading range of the target's stock over some time frame.
 - Compares target stock price performance against a broad market index and comparable company stock performances to create an offering price from the price index plus some premium.

M&A Valuation Techniques (cont'd)

- Leveraged buyout (LBO) analysis
 - Determining the highest price (floor price) an LBO group would pay to acquire a firm through debt.
 - Sets the upper value for the target if a corporate buyer cannot be located.
 - Includes cash flow projections, tax effects, and rates of returns to capital providers.
 - Can be materially affected by temporary changes in financing conditions.

M&A Valuation Techniques (cont'd)

- Multiple of revenues (price-to-sales ratio)
 - The firm's value is a multiple of the sales the target generates.
 - Implicitly assumes that there is some relatively consistent relationship between the business's sales and its profits.
 - May be useful when acquiring a private company where gross sales are the only reliable data available.

M&A Valuation Techniques (cont'd)

- Book value approach

- Is an accounting-based concept and may not represent the company's earnings power.
- Is affected by alternative depreciation and inventory methods and the value of intangible assets that is reflected in the balance sheet.
- Does provide an initial estimate of goodwill in a transaction.

M&A Valuation Techniques (cont'd)

- Multiple of earnings method
 - Involves taking the past or future income per share and multiplying that figure by earnings multiple, derived from publicly traded companies in the same industry.
 - May err in using a multiple that does not reflect control premiums.
 - Does not account for the effect that income does not necessarily represent cash flow from operations.

M&A Valuation Techniques (cont'd)

- Liquidation analysis
 - Can be used to establish a floor for valuation.
 - Is valid if a business is a target for acquisition for its underlying assets rather than for its going-concern value.

Financial Engineering

- Financial engineering
 - The development of new financial instruments has become an integral part of investment banking.
 - Example: derivative contracts using sophisticated mathematical and statistical models and computer technology
 - ❖ **Credit derivatives: financial contracts whose payoffs depend on a reference credit.**

Financial Engineering (cont'd)

- Factors leading to financial engineering
 - Risk management
 - New funding sources
 - Lower funding costs
 - Reduction in transaction costs
 - Tax and regulatory changes
 - Advances in computer technology and quantitative finance

Research, Sales, and Trading

- Investment research
 - Affects a firm's ability to hold a competitive position in debt and equity underwriting and to generate commission revenues.
 - Enhances the firm's understanding of markets and its ability to serve clients.
- Types of analysts
 - Fundamentalists
 - Quantitative
 - Technical

Research, Sales, and Trading (cont'd)

- Sales

- Provide clients with financial products tailored to suit specific needs.
- Ensure that clients receive their confirmations and settlements on time.
- Provide clients with market information to ensure that they are fully informed of market developments.
- Generate commission revenues from transactions in listed, over-the-counter securities, mutual funds, futures, and options.

Research, Sales, and Trading (cont'd)

- Trading desk
 - Ensures an orderly market for the firm's financial products.
 - Engages in market making which provides clients with the necessary access to the market for transactions at the current market price when they want them.
 - Processes information so that traders can better position themselves.

Basic Approaches to Trading

- **Fundamental analysis**
 - Focus is on corporate and economic fundamentals.
- **Relative value (convergence trading)**
 - Taking a long position in one asset and a short position in another, earning a profit based on convergence in the relative values of the two assets.
- **Technical analysis**
 - Assumes that securities prices move in pricing and volume trends that can be used to predict future price movements and to time the markets.

Asset Management And Merchant Banking

- **Private Client Services**
 - An investment bank's private client services target pension plans, endowments, charitable organizations, and wealthy individuals.
 - A private client financial consultant allocates a client's assets to different classes of assets based on the client's objectives and risk tolerance.
- **Merchant Banking**
 - Invests in corporate and real estate assets by committing bank and clients' capital to long-term equity investment opportunities.

Securities Services

- Prime Brokerage
 - Offers clients the capability of trading with many brokers through a single firm.
- Securities Lending
 - Involves lending securities to borrowers who may sell them short or use them to satisfy an obligation to deliver those particular securities to another party.
 - In return for lending its securities, the lender receives a fee that may amount to a few basis points a year.

Securities Services (cont'd)

- Repurchase (repo) agreement:
 - A transaction in which a money market participant acquires funds by “selling” securities and agreeing to “repurchase” the same securities after a specified time at a given price.
- Repo book
 - A combination of repos and reverse repos
- Matched book
 - A repo and a reverse repo in the same security have the same terms to maturity.

Risk Management

- Market risk
 - The risk that a change in the level of market prices, rates, indices, volatility, correlation, or other market factors, such as liquidity, will result in losses for a specified position or portfolio.
- Managing market risk
 - Diversifying exposures
 - Controlling position sizes
 - Establishing hedges in related securities or derivatives

Risk Management (cont'd)

- Credit Risk
 - Represents the loss that could occur if a counterparty or an issuer of financial instruments the firm holds fails to meet its contractual obligations.
- Reducing credit risk
 - Establish limits for credit exposures.
 - Enter into netting agreements with counterparties that permit the bank to offset receivables and payables with such counterparties.
 - Maintain collateral and continually assess the creditworthiness of counterparties and issuers.

Risk Management (cont'd)

- Operating and reputation risk
 - Financial loss, regulatory risk, or damage to a bank's reputation in the event of an operational failure or error.
- Managing operating and reputation risk
 - Maintain backup facilities
 - Use up-to-date technology
 - Employing experienced personnel
 - Maintain internal controls.
 - Stress integrity and professionalism

Risk Management (cont'd)

- Legal risk
 - The risk that a firm will fail to comply with applicable legal and regulatory requirements and the risk that counterparty's obligations may be unenforceable.
- Managing legal risk
 - Establish procedures addressing regulatory requirements and operational activities
 - Examine the counter-party's legal position, the adequacy of legal documentation, and the permissibility of a transaction under applicable law.

Risk Management (cont'd)

- Funding risk
 - The risk of not having ready access to funds
- Ways to reduce funding risk
 - Maintain a cash position
 - Borrow large sums in the debt markets
 - Secure access to the repo and securities lending markets